

A.5.1.1.4

N6 Galway City Outer Bypass Detailed Design Ground Investigation

September to November 2006

A.5.1.1.4

CONTRACT: GCOB
 Client: Galway County Council
 Engineer: Ryan Hanley WSP

Schedule: tp1, bh1, bh2
 Date: 11-Oct-06
 Scheduled By: FV

BH/TP No.	Sample Type	Sample Depth	Classification						Earthworks					Settlement			Strength			Chemical				Remarks/Loading				
			MC (%)	Atterbe rg Limits	Bulk Density	PSD	Hydro	5-point MCV	CBR 1 point	MCV 1 Point	5 Point Comp only	5 Point Comp with CBR	Consol (Oed)	Triaxial (Q-U)	Triaxial (Con-U)	Lab Vane	Shear Box	SO3 (total acid sol)	pH	Chloride	Organic Content							
BH 896	B	0-1.0																		1							Loss on Ignition / Von Post Classification	
BH 911A	B	0.5-1.0																									Loss on Ignition / Von Post Classification	
BH 911A	B	1.5-2.0				1		0												1	1							
BH 911B	W	1.50																										
BH 911B	B	0.5-1.0				1														1	1					1	Loss on Ignition / Von Post Classification	
BH 915	B	0.5-1.0																										
BH 915	B	3.5-4.0						1	1																			Loss on Ignition / Von Post Classification
BH 915	B	3.5-4.0																								1	Drained SB : 50, 100, 150kPa	
BH 915	B	4.0-5.0						1	1	0																0	NOT POSSIBLE	
BH 934	D	1.00																										
BH 934	D	3.00																										
BH 934	D	5.00																										
BH 934	D	0.0-0.5																										
BH 934	B	0.5-1.0																										Loss on Ignition / Von Post Classification
BH 934	U/B	3.5-3.95				1		1	1											1	1							Loss on Ignition / Von Post Classification
BH 934A	B	3.5-4.5				1		1	1																			
BH 939	D	2.00																										
BH 939	D	3.00																										
BH 939	U	1.5-1.95																		1								Loss on Ignition X2 Von Post Classification UITXL : 25kPa too soft
BH 939	B	2.5-3.0				1		1	1																			
BH 943a	D	1.00																										
BH 943a	D	2.50																										
BH 943a	D	7.50				1		1	0																			Too Organic for Hyd
BH 943a	D	8.50				1																						Drained SB : 80, 160, 240kPa
BH 943a	D	11.50																										
BH 943a	P	4.0-5.0																		1								Loss on Ignition Von Post Classification UITXL : 20kPa too soft

CONTRACT: GCOB
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Schedule **tp1, bh1, bh2**
 Date 11-Oct-06
 Scheduled By: FV

BH/TP No.	Sample Type	Sample Depth	Classification					Earthworks					Settlement/Strength					Chemical				Remarks/Loading			
			MC (%)	Atterbe rg Limitis	Bulk Density	PSD	Hydro	5-point MCV	CBR point	MCV 1 Point	5 Point Comp only	5 Point Comp with CBR	Consol (Oed)	Triaxial (Q-U)	Triaxial (Con-U)	Lab Vane	Shear Box	SO3 (total acid sol)	pH	Chloride	Organic Content				
BH 943a	P	6.5-7.5	1																						
BH 1003	B	0.0-0.8	1			1																			
BH 1014	D	1.00	1																						
BH 1014	D	2.00	1																						
BH 1014	B	1.0-1.5					1																		
BH 1024	D	0.50	1																						
BH 1024B	D	1.00	1																						
BH 1024B	D	2.00	1																						
BH 1049	D	1.00	1				1																		
BH 1049	D	2.00	1																						
BH 1049	D	0.0-0.5	1																						
BH 1231	D	1.00	1																						
BH 1231	D	2.00	1																						
BH 1231	B	1.0-1.5					1																		
BH 1234	D	1.00	1																						
BH 1234	D	2.00	1																						
BH 1234	D	3.00	1																						
BH 1234	B	1.0-1.5					1																		
BH 1278	D	1.00	1																						
BH 1278	B	0.0-1.0					1																		
BH 1290	D	0.6	1																						
BH 1290	B	0.0-0.6					1																		
RC936	C	17-18					1																		
RC936	C	24-25					1																		
RC936	C	34-35					1																		
RC936	C	40-41					1																		
RC936	C	46-47					1																		
RC936	C	51-52					1																		
RC936	C	55.5-56.5					1																		
RC936	C	6.0-7.0					1																		
RC937	C	11.0-12.0					1																		
RC937	C	16-17					1																		

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Schedule: tp1, bh1, bh2
 Date: 11-Oct-06
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BH/TP No.	Sample Type	Sample Depth	Classification					Earthworks					Settlement/Strength				Chemical				Remarks/Loading
			MC (%)	Atterbe rg Limits	Bulk Density	PSD	Hydro	5-point MCV	CBR 1 point	MCV 1 Point	5 Point Comp only	5 Point Comp with CBR	Consol (Oed)	Triaxial (Q-U)	Triaxial (Con-U)	Lab Vane	Shear Box	SO3 (total acid sol)	pH	Chloride	
RC937	C	19-20		1	1	1	1	1													Oed : 200, 400, 800, 1600, 800, 400
RC937	C	26-27		1	1	1	1	1													60X60SB 400, 600kPa 200, 400, 800, 1600, 800, 400
RC937	C	32-33		1	1	1	1	1													Oed : 200, 400, 800, 1600, 800, 400
RC937	C	36-37		1	1	1	1	1													60X60SB 300, 600, 900kPa
RC937	C	49-50		1	1	1	1	1													
RC937	C	9.0-10.0																			
RC940	C	10.0-11.0		1	1	1	1	1													1
RC940	C	14-15		1	1	1	1	1													Oed : 200, 400, 800, 1600, 800, 400
RC940	C	19-20		1	1	1	1	1													60X60SB 200, 400, 600kPa
TP 502	J	0.0-0.35		1																	1
TP 503	J	0.0-0.55		1																	1
TP 506	J	0.0-0.5		1																	1
TP 509	J	0.0-0.5		1																	1
TP 512	J	1		1																	1
TP 512	J	0.8-1.3		1																	1
TP 514	J	0.0-0.2		1																	1
TP 516	J	0.0-0.5		1																	1
TP 525	J	0.0-0.5		1																	1
TP 525	B	0.5-1.4		1																	1
TP 525	B	1.4-1.8		1																	1
TP 559	J	0.25		1																	1
TP 559	B	0.70		1																	1
TP 559	B	1.5		1																	1
TP 560	J	0.3		1																	1
TP 560	J	1.00		1																	1
TP 560	J	2.00		1																	1
TP 560	J	2.30		1																	1
TP 577	J	0.3		1																	1
TP 577	B	0.80		1				0													TOO ORGANIC
TP 577	J	0.8		1																	1
TP 588	J	0.50		1																	1
TP 588	J	1.5		1																	1

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BH/TP No.	Sample Type	Sample Depth	Classification				Earthworks					Settlement/Strength					Chemical				Remarks/Loading			
			MC (%)	Atterbe rg Limits	Bulk Density	PSD	Hydro	5-point MCV	CBR 1 point	MCV 1 Point	5 Point Comp only	5 Point Comp with CBR	Consol (Oed)	Triaxial (Q-U)	Triaxial (Con-U)	Lab Vane	Shear Box	SO3 (total acid sol)	pH	Chloride		Organic Content		
TP 690	J	0.2	1																					
TP 690	J	1.00	1																					
TP 691	J	0.15	1																					
TP 693	B	0.35		0						1													too fibrous	
TP 693	J	0.35	1																					
TP 695	J	0.2	1																					
TP 695	B	0.3	1				1																	
TP 695	J	0.3	1																					
TP 698	J	1.00	1				1																	
TP 698	b	1.6																						
TP 699	B	0.7					1	0																
TP 699	J	0.7	1																					
TP 699	J	1.5	1																					
TP 699	J	0.6	1																					
TP 701	B	1.00	1				1	1																
TP 701	J	1.00	1																					
TP 701	W	1.5																						
TP 709	J	0.5	1																					
TP 709	W	0.5																						
TP 709	B	1.3					1	0																
TP 709	J	1.3	1																					
TP 710	B	1.00																						
TP 710	J	1.00	1				1	0																
TP 710	J	1.6	1																					
TP 711	J	0.3	1	1																				
TP 713	J	0.15	1																					
TP 714	J	0.2	1	1																				
TP 716	B	0.7																						Loss on Ignition / Von Post Classification
TP 716	J	0.7	1																					
TP 716	B	1.6					1	0																
TP 716	J	1.6	1																					
TP 716	J	2.5	1																					
TP 717	B	0.7					1	0																
TP 717	J	0.7	1																					
TP 717	J	1.9	1																					
TP 717	W	2.2	1																					
TP 718	J	0.5	1																					

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BH/TP No.	Sample Type	Sample Depth	Classification					Earthworks					Settlement/Strength					Chemical			Remarks/Loading	
			MC (%)	Atterberg Limits	Bulk Density	PSD	Hydro	5-point MCV	CBR point	MCV 1 Point	5 Point Comp only	5 Point Comp with CBR	Consol (Oed)	Triaxial (Q-U)	Triaxial (Con-U)	Lab Vane	Shear Box	SO3 (total acid sol)	pH	Chloride		Organic Content
TP 718	J	1.5	1			1																Loss on Ignition / Von Post Classification
TP 718	B	2.5					1	1														
TP 718	J	2.5	1																			Loss on Ignition / Von Post Classification
TP 719	J	0.3	1																			
TP 719	J	1.6	1				1	0														Loss on Ignition / Von Post Classification
TP 719	W	1.6																				
TP 719	J	2.5	1																			
TP 720	J	0.5	1																			
TP 720	B	1.2					1	0														too coarse
TP 720	J	1.2	1																			Loss on Ignition / Von Post Classification
TP 721	B	0.5																				
TP 721	J	0.5	1																			Loss on Ignition / Von Post Classification
TP 721	B	1.5					1	0														too coarse
TP 721	J	1.5	1																			
TP 721	J	2.2	1																			
TP 722	J	0.8	1				1															
TP 722	J	1.6	1																			
TP 730	J	0.4	1																			
TP 730	B	1.00					1			1												Loss on Ignition / Von Post Classification
TP 732	B	1	1																			Loss on Ignition / Von Post Classification
TP 732a	J	0.15	1																			
TP 732b	J	0.2	1																			Loss on Ignition / Von Post Classification
TP 732c	J	0.4	1																			
TP 732c	J	1.00	1																			
TP 732c	W	1.25																				
TP 733	J	0.8	1																			
TP 733	B	1.6					1															
TP 733	J	1.6	1							1												
TP 733b	J	0.5	1																			Loss on Ignition / Von Post Classification
TP 733b	J	1.00	1																			
TP 733c	B	0.4	1				1	0														
TP 733c	J	0.4								1												
TP 737	B	0.7					1															

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Schedule: tp1, bh1, bh2
 Date: 11-Oct-05
 Scheduled By: FV

BH/TP No.	Sample Type	Sample Depth	Classification				Earthworks					Settlement/Strength				Chemical			Remarks/Loading Loss on Ignition / Von Post Classification				
			MC (%)	Atterberg Limits	Bulk Density	PSD	Hydro	5-point MCV	CBR point	MCV 1 Point	5 Point Comp only	5 Point Comp with CBR	Consol (Oed)	Triaxial (Q-U)	Triaxial (Con-U)	Lab Vane	Shear Box	SO3 (total acid sol)		pH	Chloride	Organic Content	
TP 870	J	0.5	1																		1	Loss on Ignition / Von Post Classification	
TP 870	J	1.5	1																				
TP 870	W	2.5																			1	1	
TP 870	B	2.9		1																	1	1	
TP 870	J	2.9																					
TP 870	J	3.2																					
TP 876	J	0.4																					
TP 876	J	1.4																					
TP 876	B	1.9		1																			
TP 876	J	1.9																					
TP 876	B	2.2																					
TP 887	J	0.5		1																			
TP 887	B	1.7																					
TP 887	J	1.7																					
TP 887	J	2.1																					
TP 894	J	2.5																					
TP 894	B	3.1		1																			
TP 894	J	3.1																					
TP 908	B	0.5		1																			
TP 908	J	0.5																					
TP 908	J	1.5																					
TP 909	J	0.5																					
TP 909	J	1.5																					
TP 909	B	2.0																					
TP 909A	B	1.0																					
TP 913	J	0.5																					
TP 913	B	1.6																					
TP 922	J	0.5																					
TP 922	J	2.5																					
TP 922	B	2.7		1																			Loss on Ignition TOO ORGANIC
TP 932	J	2.7																					
TP 932	J	1.00																					
TP 932	J	2.00		1																			
TP 932	B	2.5																					
TP 932	J	3.00																					
TP 935	J	0.5		1																			
TP 935	B	1.5																					

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Schedule: tp1, bh1, bh2
 Date: 11-Oct-06
 Scheduled By: FV

BH/TP No.	Sample Type	Sample Depth	Classification			Earthworks					Settlement/Strength			Chemical			Remarks/Loading						
			MC (%)	Atterbe rg Limits	Bulk Density	PSD	Hydro	5-point MCV	CBR point	MCV 1 Point	5 Point Comp only	5 Point Comp with CBR	Consol (Oed)	Triaxial (Q-U)	Triaxial (Con-U)	Lab Vane		Shear Box	SO3 (total acid sol)	pH	Chloride	Organic Content	
TP 935	J	2.5	1	1																			
TP 935	B	3.00	1	1																			
TP 935	J	3.4	1	1																			
TP 941	J	0.2	1	1																			
TP 941	B	0.5	1	1																			too coarse
TP 941	J	1.00	1	1																			
TP 941	W	1.5	1	1																			
TP 941	J	1.6	1	1																			
TP 941	J	0.5	1	1																			
TP 941a	J	2.00	1	1																			Loss on Ignition
TP 941a	B	3.00	1	1																			
TP 941a	J	3.5	1	1																			
TP 944	J	0.3	1	1																			
TP 944	B	0.5	1	1																			
TP 944	J	1.00	1	1																			
TP 945	J	0.3	1	1																			
TP 945	J	1.00	1	1																			
TP 945	B	1.4	1	1																			
TP 945	J	1.4	1	1																			
TP 945	J	0.3	1	1																			
TP 951	B	1.00	1	1																			too coarse
TP 951	J	1.3	1	1																			
TP 962	J	0.2	1	1																			
TP 962	B	0.6	1	1																			
TP 964	J	0.25	1	1																			
TP 967	J	0.1	1	1																			
TP 969	J	0.1	1	1																			
TP 969	B	0.7	1	1																			
TP 969	J	0.7	1	1																			
TP 971	J	0.3	1	1																			
TP 971	B	1.0	1	1																			
TP 971	J	1.0	1	1																			
TP 971	J	1.0	1	1																			
TP 978	B	0.4	1	1																			
TP 978	J	0.4	1	1																			
TP 983	J	0.1	1	1																			
TP 984	J	0.15	1	1																			
TP 992	J	0.2-0.4	1	1																			
TP 996	J	0.20	1	1																			
TP 996	J	0.80	1	1																			

CONTRACT: GCOB
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Schedule: tp1, bh1, bh2
 Date: 11-Oct-06
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BH/TP No.	Sample Type	Sample Depth	Classification				Earthworks					Settlement/Strength				Chemical				Remarks/Loading		
			MC (%)	Atterbe rg Limits	Bulk Density	PSD	Hydro	5-point MCV	CBR 1 point	MCV 1 Point	5 Point Comp only	5 Point Comp with CBR	Consol (Oed)	Triaxial (Q-U)	Triaxial (Con-U)	Lab Vane	Shear Box	SO3 (total acid sol)	pH		Chloride	Organic Content
TP 996	J	1.50	1	1		1											1	1				
TP 997	B	0.50	1	1																		
TP 1055	B	0.6	1	1		1												1	1			
TP 1065	B	0.4	1																			
TP 1074	B	0.5	1	1																		
TP 1079	J	0.15	1																			
TP 1079	B	0.3	1	1		1												1	1			
TP 1079	J	0.3	1																			
TP 1081	J	0.15	1	1																		
TP 1081	J	0.5	1	1																		
TP 1085	J	0.15	1																			
TP 1085	B	0.5	1			1												1	1			
TP 1085	J	0.5	1																			
TP 1086	J	0.15	1																			
TP 1086	B	0.6	1			1																
TP 1086	J	0.6	1																			
TP 1088	B	0.5	1																			
TP 1091	B	0.4	1	1		1												1	1			
TP 1091	J	0.4	1																			
TP 1093	J	0.5	1																			
TP 1093	B	1.5	1	1		1												1	1			
TP 1093	J	1.5	1																			
TP 1093	J	2.5	1																			
TP 1100	J	0.15	1																			
TP 1100	J	0.5	1																			
TP 1100	B	1.00	1	1		1																TOO ORGANIC
TP 1100	J	1.00	1																			
TP 1100	J	2.00	1																			
TP 1100	J	0.15	1																			
TP 1111	B	1.00	1																			
TP 1111	J	1.00	1																			
TP 1111	J	2.00	1	1		1																
TP 1111	J	3.00	1																			
TP 1111	B	4.00	1	1		1																
TP 1111	J	4.00	1																			
TP 1132	B	1.00	1	1		1																
TP 1134	J	0.05	1	1		1																

CONTRACT: GCQB
 Client Galway County Council
 Engineer Ryan Hanley WSP

Schedule: tp1_bh1_bhz
 Date: 11-Oct-06
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BH/TP No.	Sample Type	Sample Depth	Classification				Earthworks					Settlement				Strength			Chemical			Remarks/Loading
			MC (%)	Atterberg Limits	Bulk Density	PSD	Hydro	5-point MCV	CBR 1 point	MCV 1 Point	5 Point Comp only	5 Point Comp with CBR	Consol (Oed)	Triaxial (Q-U)	Triaxial (Con-U)	Lab Vane	Shear Box	SO3 (total acid sol)	pH	Chloride	Organic Content	
TP 1270	B	0.50	1	1	1	1	1	1	1	1												
TP 1402	J	0.2	1																			Loss on Ignition
TP 1402	J	0.75	1																			Loss on Ignition
TP 1406	J	0.0-1.0	1																			Loss on Ignition
TP 1406	J	1.0-1.7	1																			Loss on Ignition
TP 1407	J	0.0-1.0	1																			Loss on Ignition
TP 1407	J	1.0-2.0	1																			Loss on Ignition
TP 1407	J	2.0-3.0	1																			Loss on Ignition
TP 1411	B	0.4-1.0	1						0													Loss on Ignition
TP 1411	J	0.4-1.0	1																			Loss on Ignition
TP 1411	B	1.0-1.4	1																			Loss on Ignition
TP 1411	J	1.0-1.4	1																			Loss on Ignition
TP 1412	B	0.5-0.74	1						0													too coarse
TP 1412	J	0.5-0.74	1																			too coarse
TP 1413	B	0.5-1.2	1																			Loss on Ignition
TP 1413	J	0.5-1.2	1																			Loss on Ignition
TP 1416	J	0.7-0.8	1																			Loss on Ignition
TP 1417	B	1.0-1.85	1																			Loss on Ignition
TP 1417	J	1.0-1.85	1																			Loss on Ignition
TP 1417	B	1.85-2.1	1																			Loss on Ignition
TP 1417	J	1.85-2.1	1																			Loss on Ignition
TP 1419	J	0.0-5	1																			Loss on Ignition
TP 1422	B	1.6-2.1																				Loss on Ignition
TP 1423	B	0.9-1.3																				Loss on Ignition
TP 1424	B	0.5-1.0																				Loss on Ignition
TP 1427	B	0.7-1.0																				Loss on Ignition
TP 1428	B	0.5-1.0																				Loss on Ignition
TP 1428	B	1.1-1.6																				Loss on Ignition
TP 1428	J	1.1-1.6																				Loss on Ignition
TP 1428	J	1.9-2.3																				Loss on Ignition
TP 1430	J	0.5-1.0																				Loss on Ignition
TP 1430	B	1.3-1.5																				Loss on Ignition
TP 1431	J	0.5-1.0																				Loss on Ignition
TP 1431	B	1.0-1.5																				Loss on Ignition
TP 1432	B	1.0-1.1																				Loss on Ignition
TP 1432	J	1																				Loss on Ignition
TP 1435	J	0.48-1.0																				Loss on Ignition
TP 1436	B	0.48-1.0																				Loss on Ignition
TP 1436	J	0.48-1.0																				Loss on Ignition
TP 1436	B	1.0-2.1																				Loss on Ignition

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Schedule: tp1, bh1, bh2
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 Scheduled By: FV

BH/TP No.	Sample Type	Sample Depth	Classification						Earthworks					Settlement/Strength					Chemical			Remarks/Loading						
			MC (%)	Atterbe rg Limits	Bulk Density	PSD	Hydro	5-point MCV	CBR 1 point	MCV 1 Point	5 Point Comp only	5 Point Comp with CBR	Consol (Oed)	Triaxial (Q-U)	Triaxial (Con-U)	Lab Vane	Shear Box	SO3 (total acid sol)	pH	Chloride	Organic Content							
TP 1436	J	1.0-2.1	1																									
TP 1439	J	0.7	1																									
TP 1439	J	1.7	1																									
TP 1439	J	2.5	1																									
TP 1439	J	3.1	1																									
TP 1440	J	0.1	1																									
TP 1440	B	0.7					1																					
TP 1440	J	0.7	1																									
TP 1441	J	0.2	1																									
TP 1441	J	0.8	1				1																					
TP 1441	J	1.7	1																									
TP 1442	J	0.2	1																									
TP 1442	B	0.5					1																					
TP 1442	J	0.5	1																									
TP 1443	J	0.2	1																									
TP 1443	J	0.5	1				1																					
TP 1443	J	1.2	1																									
TP 1444	J	0.15	1																									
TP 1444	J	0.45	1				1																					
TP 1444	J	1.3	1																									
TP 1445	J	0.2	1																									
TP 1445	B	0.8					1																					
TP 1445	J	0.8	1																									
TP 1446	J	0.1	1																									
TP 1446	B	0.45					1																					
TP 1446	B	1.3	1																									
TP 1447	J	0.3	1																									
TP 1447	B	1.00	1				1																					
TP 1447	B	2.85	1																									
TP 1452	B	1.0-2.0					1																					
TP 1453	J	0.3	1																									
TP 1456	B	0.5					1																					
TP 1456	J	0.8	1																									
TP 1458	B	0.5	1				1																					
TP 1460	B	1.6					1																					
TP 1461	J	0.5	1																									
TP 1461	B	1	1																									

IRISH DRILLING LTD.
Loughrea Co. Galway.

Contract: Galway City Outer Bypass
Client: NRA
Engineer: John Barnett & Associates

Tel: (091)841274 Fax: (091) 847687

Date: 25/10/2006
Tested By: DD Checked: DJ

Summary of Soil Classification Tests

BS1377: Part 2: 1990

Borehole/ Trialpit	Type	Depth m	Bulk Density Mg/m3	Moisture Content %	Particle Density Mg/m3	Liquid Limit %	Plastic Limit %	Plasticity Index %	% passing 425 micron %	Description of fraction passing 425 Silt - Intermediate Plasticity cron sieve.
BH 0824		0.5-1.0		30		59	49	10	26	Silt - High Plasticity
BH 0826		0.0-0.5		17.3		56	42	14	29	Silt - High Plasticity
BH 0826		1.5-2.0		12.2		32	18	13	35	Clay - Low Plasticity
BH 0826 A		0.5-1.0		24.8						
BH 0826 A		2.5-3.0		8.9		24	17	7	45	Clay - Low Plasticity
BH 0829 A		0.5-1.0		9.7						
BH 0829 A		1.5-2.0		9.2		25	16	9	57	Clay - Low Plasticity
BH 0829 A		2.5-3.0		7.6						
BH 0829 A		4.5-5.0		7.2		22	15	8	51	Clay - Low Plasticity
BH 0829 B		0.5-1.0		14.4		64	52	12	22	Silt - High Plasticity
BH 0831		0.5-1.0		14.1		35	26	9	36	Silt - Intermediate Plasticity
BH 0831		1.5-2.0		9.5						
BH 0831		2.5-3.0		9.5		19	14	5	33	Silt - Low Plasticity
BH 0832		0.5-1.0		13						
BH 0832		1.5-2.0		12.5		23	16	7	49	Clay - Low Plasticity
BH 0832		2.5-3.0		13.6						
BH 0832		4.5-5.0		11.9						
BH 0832		5.5-6.0		14.4						
BH 0832		6.5-7.0		12.4						
BH 0841		1.0-1.5		17.4		25	18	7	69	Clay - Low Plasticity
BH 0841		2.0-2.5		12.6						
BH 0864 A		2.5-3.5		136.7		124	82	42	70	Organic Silt - Extremely High Plasticity
BH 0864 A		4.5-5.0		51.4						
BH 0888		3.5-4.5		186		147	96	51	62	Organic Silt - Extremely High Plasticity
BH 0888		5.5-6.0		14.5					17	
BH 0911 A		1.5-2.0		5.2						
BH 0911 B		0.5-1.0		57.8						
BH 0915		3.5-4.0		7.3						
BH 0915		4.5-5.0		2			NON PLASTIC		18	NON PLASTIC
BH 0934		1		297.5						
BH 0934		3		217.4						
BH 0934		5.0		134.8						
BH 0934		0.0-0.5		254.7						
BH 0934		3.5-4.0		131.9		129.8	84.8	45		Organic Silt - Extremely High Plasticity
BH 0934 A		3.5-4.0		119.9		86	53.1	32.9		Silt - Very High Plasticity
BH 0939		2.0		229.9						
BH 0939		3.0		350.8						
BH 0939		2.5-3.0		92.5		101	66	35		Silt - Extremely High Plasticity
BH 0943 A		1.0		510.5						
BH 0943 A		2.5		730.2						
BH 0943 A		8.5		71.1						
BH 0943 A		6.5-7.5		356		286	243	43	83	Organic Silt - Extremely High Plasticity
BH 0943 A		11.5		15.4						
BH 1003		0.0-0.8		16.3						
BH 1049		1.0		14.7		47	37	10		Silt - Intermediate Plasticity
BH 1049		2.0		19.1						
BH 1049		0.0-0.5		218.9						

Borehole/ Trialspit	Type	Depth m	Bulk Density Mg/m3	Moisture Content %	Particle Density Mg/m3	Liquid Limit %	Plastic Limit %	Plasticity Index %	% passing 425 micron %	Description of fraction passing 425 Silt - Intermediate Plasticity silt - Intermediate Plasticity
BH 1149		1.0-1.5		40.8		52	31	22	84	Silt - High Plasticity
BH 1174		0.0-1.0		337.2						
BH 1174		2.0-2.5		11.5		27	17	11	41	Clay - Low Plasticity
BH 1174		3.0-3.5		7.8						
BH 1175 A		1.0-1.5		22.5		33	21	12	72	Clay - Low Plasticity
BH 1177		1.0-1.5		51.4						
BH 1182		0.0-1.0		503.8						
BH 1182		1.0-1.5		351						
BH 1182		2.0-2.5		115.6						
BH 1182		3.0-3.5		13.8		22	15	7	72	Clay - Low Plasticity
BH 1188		1.0-1.5		128.8		134	96	38	81	Silt - Extremely High Plasticity
BH 1189		0.0-1.0		74.4						
BH 1189		1.0-1.5		26.7		44	28	16	81	Silt - Intermediate Plasticity
BH 1231		1.0		24.1						
BH 1231		2.0		16.1						
BH 1231		1.0-1.5		15.2		36	27	9	33	Silt - Intermediate Plasticity
BH 1234		1.0		23.7						
BH 1234		2.0		9.5						
BH 1234		3.0		10.3						
BH 1234		1.0-1.5		12.5		22	14	8	60	Clay - Low Plasticity
BH 1235		1.0-1.3				58	42	16		Silt - High Plasticity
BH 1235		1.3-1.5		9.4		23	15	7	58	Clay - Low Plasticity
BH 1235		3.0-3.5		10.1						
BH 1235		5.0-5.5		11.2		20	16	4	37	Silt - Low Plasticity
BH 1248		0.0-1.0		15.2						
BH 1248		1.0-1.5		11.6		24	15	9	67	Clay - Low Plasticity
BH 1248		2.0-2.5		11.1						
BH 1278		1.0		35		51	NON PLASTIC		77	NON PLASTIC
BH 1290		0.6		29.7		49	37	12	58	Silt - Intermediate Plasticity
TP 0502		0.1		26.3						
TP 0503		0.2		27.2						
TP 0506		0.3		45						
TP 0506		0.3		45.9						
TP 0509		0.2		195.1						
TP 0512		1.0		26.3						
TP 0514		0.1		52.9						
TP 0516		0.2		154.4						
TP 0525		0.3		819.5						
TP 0525		1.0		974.8						
TP 0525		1.5		37.9						
TP 0557		0.3		757.9						
TP 0557		0.8		745		760	572	188	76	Silt - Extremely High Plasticity
TP 0559		0.3		436.9						
TP 0559		0.7		923.6						
TP 0559		1.5		811.5						
TP 0560		0.3		628.9						
TP 0560		1.0		886.4						
TP 0560		2.0		1089.1						
TP 0560		2.3		170.4						
TP 0588		0.5		806.7						
TP 0588		1.5		1075.7						
TP 0600		0.2		543.2						
TP 0600		1.0		882		556	368	188	68	Organic Silt - Extremely High Plasticity
TP 0611		0.2		749.7						
TP 0611		0.8		844		910	744	166	77	Organic Silt - Extremely High Plasticity

Borehole/ Trialpit	Type	Depth m	Bulk Density Mg/m3	Moisture Content %	Particle Density Mg/m3	Liquid Limit %	Plastic Limit %	Plasticity Index %	% passing 425 micron %	Description of fraction passing 425 Silt - Intermediate Plasticity cycron sieve.
TP 0619		1.6		15						
TP 0620		0.2		589.4						
TP 0629		0.3		699						
TP 0629		1.0		1095		928	672	256	43	Organic Silt - Extremely High Plasticity
TP 0639		0.5		709.8						
TP 0639		1.2		1283		NON PLASTIC			39	NON PLASTIC
TP 0657		0.2		488.6						
TP 0657		0.9		690.7						
TP 0658		0.2		575.2						
TP 0658		0.6		323.3						
TP 0669		0.2		1357.6						
TP 0669		0.8		1175.8						
TP 0669		1.8		748.3						
TP 0669		2.2		40						
TP 0669		3.2		9.5						
TP 0670		0.2		226.6						
TP 0674		0.5		113.9						
TP 0684		0.2		613.8						
TP 0684		0.9		485.1						
TP 0684		1.9		351.5						
TP 0684		2.8		186.6						
TP 0685		0.2		599.4						
TP 0685		0.7		670.1						
TP 0685		1.5		385.5						
TP 0686		0.2		585.6						
TP 0686		0.9		617.8						
TP 0686		1.9		437.6						
TP 0688		0.2		219.1						
TP 0690		0.2		357.1						
TP 0690		1.0		257.6						
TP 0691		0.2		268.3						
TP 0693		0.35		233					33	
TP 0695		0.3		29.1						
TP 0698		1		14.2						
TP 0699		0.7		14.6						
TP 0699		1.5		11						
TP 0701		0.6		13.1						
TP 0701		1		10.8						
TP 0709		0.5		12.3						
TP 0709		1.3		5.7						
TP 0710		1		19.4						
TP 0710		1.6		11.4						
TP 0711		0.3		22.8		71	51.3	19.7		Silt - Very High Plasticity
TP 0713		0.15		30.6						
TP 0714		0.2		20.1		75	60	15		Silt - Very High Plasticity
TP 0716		0.7		88.1						
TP 0716		1.6		17.1						
TP 0716		2.5		9.9						
TP 0717		0.7		15.9						
TP 0717		1.9		13.3						
TP 0718		0.5		68.1						
TP 0718		1.5		116.8						
TP 0718		2.5		59.8						

Borehole/ Trialpitt	Type	Depth m	Bulk Density Mg/m3	Moisture Content %	Particle Density Mg/m3	Liquid Limit %	Plastic Limit %	Plasticity Index %	% passing 425 micron %	Description of fraction passing 425 Silt - Intermediate Plasticity cycron sieve
TP 0719		0.3		379.8						
TP 0719		1.6		10.2						
TP 0719		2.5		5.9						
TP 0720		0.5		351						
TP 0720		1.2		20.1						
TP 0721		0.5		392.5						
TP 0721		1.5		24.3						
TP 0721		2.2		25						
TP 0722		0.8		11.3						
TP 0722		1.6		6						
TP 0732		1		525.4						
TP 0732 A		0.15		37.1						
TP 0732 B		0.2		45.9						
TP 0732 C		0.4		10.9						
TP 0732 C		1		56.3						
TP 0733		0.8		447.3						
TP 0733		1.6		167						
TP 0733 B		0.5		242						
TP 0733 B		1		23						
TP 0733 C		0.4		37.2		166	120	46	24	Organic Silt - Extremely High Plasticity
TP 0737		0.7		11.8						
TP 0740		0.5		683.8						
TP 0740		1.9		11.5					60	
TP 0754 A		0.5		595.2						
TP 0754 A		2.3		17.9						
TP 0754 B		0.5		10.3						
TP 0754 B		0.5		11.5						
TP 0754 C		0.5		357.3						
TP 0754 D		0.2		40.2						
TP 0754 D		1.5		220					59	
TP 0760		0.4		26.2						
TP 0789		0.6		20.2						
TP 0795		1.1		790.4						
TP 0796		0.5		766.1						
TP 0796		1.6		924.4						
TP 0798		0.6		9.7						
TP 0798		1.6		14.9						
TP 0801		0.5		2						
TP 0802		0.4				66	NON PLASTIC			NON PLASTIC
TP 0803		2		9						
TP 0807		0.7		14.4						
TP 0807		1.7		9.3						
TP 0810		0.5		13.3						
TP 0812		0.1		21.6						
TP 0816		0.5		15.6						
TP 0820		0.5		23.8						
TP 0823		0.5		17.9						
TP 0823		1.5		27.9		20	16	4	48	Silt - Low Plasticity

Borehole/ Tnalpit	Type	Depth m	Bulk Density Mg/m3	Moisture Content %	Particle Density Mg/m3	Liquid Limit %	Plastic Limit %	Plasticity Index %	% passing 425 micron %	Description of fraction passing 425 Silt - Intermediate Plasticity cron sieve
TP 0825		0.5		13.5						
TP 0825		1.5		10.7		20	13	7	50	Clay - Low Plasticity
TP 0825		2.5		8.8						
TP 0833		1.3		12.6						
TP 0834		0.6		11.2		20	14	6	63	Clay - Low Plasticity
TP 0834		1.6		11.5						
TP 0837		0.8		13.7						
TP 0837		1.8		10.6		40	30	11	36	Silt - Intermediate Plasticity
TP 0838		0.5		14.1		22	14	8	65	Clay - Low Plasticity
TP 0838		2.3		10.2						
TP 0840		1.7		10.5		20	16	4	61	Silt - Low Plasticity
TP 0857		0.5		452.9						
TP 0857		1.2		131.8		136	91	45	66	Organic Silt - Extremely High Plasticity
TP 0870		0.5		471.8						
TP 0870		1.5		103.4						
TP 0870		2.9		139.4		134	83	51	37	Organic Silt - Extremely High Plasticity
TP 0870		3.2		58.9						
TP 0876		0.4		436.6						
TP 0876		1.4		498.4						
TP 0876		1.9		136.3		117	80	37	99	Silt - Extremely High Plasticity
TP 0876		1.9		91						
TP 0876		2.2		7.1						
TP 0887		0.5		764.3						
TP 0887		1.7		67.6		137	86	51	67	Organic Silt - Extremely High Plasticity
TP 0887		2.1		36.3						
TP 0894		2.5		817.7						
TP 0894		3.1		142		173	108	65	96	Organic Silt - Extremely High Plasticity
TP 0895		1.0-1.5		11.6		23	15	8	57	Clay - Low Plasticity
TP 0895		2.0-2.5		264.5						
TP 0897		0.2-0.8		18		30	20	10	54	Clay - Low Plasticity
TP 0897		1.5-2.0		215.9						
TP 0897		2.0-2.5		14						
TP 0899		1.2		7.6						
TP 0899		0.1-1.0		24.6		46	24	22	71	Clay - Intermediate plasticity
TP 0901		0.1-0.5		18.2		53	31	22	51	Silt - High Plasticity
TP 0901		0.5-0.6		204						
TP 0901		1.0-1.3		2.9						
TP 0902		0.5		75.1						
TP 0902		0.5-0.8		5.9		17	10	7	51	Clay - Low Plasticity
TP 0902		0.8-1.0		23.9						
TP 0902		2.0-2.3		10.9						
TP 0904		1.0-1.5		7.3						
TP 0904		3.0-3.5		8.9						
TP 0905		1.0-1.5		16.3		31	19	12	56	Clay - Low Plasticity
TP 0906		1.0-1.2		424.6						
TP 0906		2.1-2.3		112		119	76	43	78	Silt - Extremely High Plasticity
TP 0906		3.5-3.7		44.4						
TP 0907		0.4-0.6		8						
TP 0907		1.0-1.2		418.7						
TP 0907		2.5-2.9		113		127	110	17	76	Organic Silt - Extremely High Plasticity
TP 0908		0.5		9.9		17	12	5	67	Silt - Low Plasticity
TP 0908		1.5		9.2						
TP 0909		0.5		442						
TP 0909		1.5		571.5						
TP 0909		2		16.6						
TP 0909 A		1		37.7						
TP 0913		0.5		401.2						
TP 0913		1.6		8.5						

Borehole/ Tnalpit	Type	Depth m	Bulk Density Mg/m3	Moisture Content %	Particle Density Mg/m3	Liquid Limit %	Plastic Limit %	Plasticity Index %	% passing 425 micron %	Description of fraction passing 425 Silt - Intermediate Plasticity cron sieve.
TP 0922		2.5		296						
TP 0922		2.7		686		239	215	24	56	Organic Silt - Extremely High Plasticity
TP 0922		0.2-0.4		763.4			32			
TP 0932		1		482.2						
TP 0932		3		105.2						
TP 0932		2.0-2.5		138.8		140	75	65	61	Organic Silt - Extremely High Plasticity
TP 0935		0.5		1031.5						
TP 0935		1.5		225		177	128	49	54	Organic Silt - Extremely High Plasticity
TP 0935		2.5		235.6						
TP 0935		3.0		118.2		111	49	61	74	Organic Silt - Extremely High Plasticity
TP 0935		3.4		189						
TP 0941		0.2		72.5						
TP 0941		0.3		16.9						
TP 0941		0.5		32.2		57	39	18	41	Silt - High Plasticity
TP 0941		1		15.2						
TP 0941		1.5		13						
TP 0941 A		0.5		830.8						
TP 0941 A		2		757.6						
TP 0941 A		3.0-3.5		262		320	228	92	57	Organic Silt - Extremely High Plasticity
TP 0944		0.3		28.9						
TP 0944		0.5		14.4		36	16	20	31	Clay - Intermediate Plasticity.
TP 0944		1		11.1						
TP 0945		0.3		8.8						
TP 0945		1		14.3						
TP 0945		1.4		30.5			88		20	
TP 0951		0.3		17						
TP 0951		1.0		9.9						
TP 0951		1.3		8.6						
TP 0953		0.1		27.1						
TP 0962		0.2		29.7						
TP 0962		0.6		10.6		30	21	9	52	Clay - Low Plasticity
TP 0964		0.25		36.7						
TP 0969		0.1		183.1						
TP 0969		0.7		24.2		42	22	19	83	Clay - Intermediate Plasticity.
TP 0971		1		10.3		24	17	7	56	Clay - Low Plasticity
TP 0983		0.1		56.5						
TP 0984		0.15		255			66		40	
TP 0992		0.2-0.4		18.1					26	
TP 0997		0.2-0.5		27.7		49	30	19	69	Silt - Intermediate Plasticity
TP 1013		0.5-1.0		10.3		32	19	13	56	Clay - Low Plasticity
TP 1013		2.5-3.0		7.3						
TP 1023		1.0-1.5		232						
TP 1023		2.0-2.5		20.2						
TP 1042		1.0-1.5		15.5		32	18	14	86	Clay - Low Plasticity
TP 1046		1.0-1.5		12.2						
TP 1052		0.3-0.6		287.9						
TP 1052		0.6-1.0		15		32	20	12	48	Clay - Low Plasticity
TP 1055		0.6		15.6		32	19	14	98	Clay - Low Plasticity
TP 1065		0.4		28.2						
TP 1068		1.0-1.3		4.6						
TP 1070		1.0-1.5		8		19	11	8	50	Clay - Low Plasticity
TP 1074		0.5		14.1		33	22	11	39	Clay - Low Plasticity
TP 1076		0.5-1.0		4.4						

Borehole/ Triapit	Type	Depth m	Bulk Density Mg/m3	Moisture Content %	Particle Density Mg/m3	Liquid Limit %	Plastic Limit %	Plasticity Index %	% passing 425 micron %	Description of fraction passing 425 Silt - Intermediate Plasticity cron sieve.
TP 1079		0.2		59.8						
TP 1079		0.3		21.2		86	63	23	23	Silt - Very High Plasticity
TP 1081		0.2		15.1						
TP 1085		0.5		13.3						
TP 1086		0.2		59.6						
TP 1086		0.6		7.4						
TP 1088		0.2		50.2						
TP 1088		0.5		8						
TP 1091		0.4		30.1		53	26	27	65	Clay - High Plasticity
TP 1093		0.5		23.2						
TP 1093		1.5		12.9		25	20	5	58	Silt - Low Plasticity
TP 1093		2.5		13.1						
TP 1100		0.2		89.7						
TP 1100		0.5		371.2						
TP 1100		1.0		305		337	279	58	75	Organic Silt - Extremely High Plasticity
TP 1100		2.0		40.2						
TP 1111		0.2		177						
TP 1111		1.0		15.5						
TP 1111		2.0		17.8		24	16	8	64	Clay - Low Plasticity
TP 1111		3.0		17.4						
TP 1111		4.0		11.3		21	11	10	62	Clay - Low Plasticity
TP 1134		0.1		397.8		146	118	28		Organic Silt - Extremely High Plasticity
TP 1137		0.2		18.3		55	44	11	40	Silt - High Plasticity
TP 1150		0.2		41.1						
TP 1150		0.4		10.8		20	12	8	63	Clay - Low Plasticity
TP 1160		0.4		10.6						
TP 1160		1.4		8.9						
TP 1160		2.4		14.9		40	23	17	31	Clay - Intermediate plasticity
TP 1162		0.2		206.2						
TP 1162		1.0		14.4		25	15	10	77	Clay - Low Plasticity
TP 1196		0.2		139.3						
TP 1202		0.3		28.6		44	31	13	63	Silt - Intermediate Plasticity
TP 1203		0.15		54.9						
TP 1205		0.3-0.7		10		24	14	9	51	Clay - Low Plasticity
TP 1216		0.5-0.8		5.6						
TP 1217		0.4-0.8		8.5						
TP 1220		0.9		10.7						
TP 1227		0.5-1.0		6.4						
TP 1228		0.5-1.0		5.5						
TP 1230		1.6		7.1		16	12	4	58	Silt - Low Plasticity
TP 1232		1.5		8.3		18.4	11.4	7		Clay - Low Plasticity
TP 1233		1.0-1.5		10.8		20	12.5	7.5	66	Clay - Low Plasticity
TP 1236		0.5-0.8		9.4		21	13	8	55	Clay - Low Plasticity
TP 1238		0.3		40.9						
TP 1241		0.4		33.4						
TP 1242		0.4		19.5						
TP 1243		0.2		15.4						
TP 1243		0.5		17.4		26	16	10	61	Clay - Low Plasticity

Borehole/ Tnalpit	Type	Depth m	Bulk Density Mg/m3	Moisture Content %	Particle Density Mg/m3	Liquid Limit %	Plastic Limit %	Plasticity Index %	% passing 425 micron %	Description of fraction passing 425 Silt - Intermediate Plasticity cron sieve.
TP 1247		0.5		12.2		25	19	5	57	Silt - Low Plasticity
TP 1247		2.2		11.2					56	
TP 1250		0.7		10.5		21	13	8	66	Clay - Low Plasticity
TP 1256		0.2		41.3						
TP 1257		0.5		11.3						
TP 1257		1		9.8						
TP 1257		1.7		10.2		20	13	7	71	Clay - Low Plasticity
TP 1258		0.2		31.5						
TP 1258		0.5		15.8		27	17	10	46	Clay - Low Plasticity
TP 1260		0.3		36.7						
TP 1260		0.5		13.8		21	15	7	64	Clay - Low Plasticity
TP 1262		0.4		62.4		88	78	10	87	Silt - Very High Plasticity
TP 1263		0.2		22.3						
TP 1263		0.5		11.7		22	18	4	61	Silt - Low Plasticity
TP 1263		0.6		11.3						
TP 1265		0.5		33.6						
TP 1270		0.5		12.7		26	20	7	54	Clay Low Plasticity
TP 1275		0.3		26.6						
TP 1275		0.5		15.3		25	16	9	66	Clay - Low Plasticity
TP 1277		0.5		20.6						
TP 1282		0.4		21.9					76	
TP 1286		0.4		23.9		38	30	7		Silt - Intermediate Plasticity
TP 1287		0.4		34.5						
TP 1288		0.4		22.1						
TP 1288		0.6		12.2		28	19	9	67	Clay - Low Plasticity
TP 1288		0.8		13.8						
TP 1289		0.5		20.8						
TP 1291		0.3		23.8						
TP 1291		0.6		27.1						
TP 1293		0.3		27.5						
TP 1295		0.4		28.5						
TP 1298		0.8		9.3		25	17	8	59	Clay - Low Plasticity
TP 1300		0.3		24.4						
TP 1301		0.2		26.8						
TP 1301		0.5		8.2		23	15	8	47	Clay - Low Plasticity
TP 1303		0.4		27.9						
TP 1303		1.0		10.9		24	14	10	67	Clay - Low Plasticity
TP 1303		1.5		11.2						
TP 1402		0.3		27.8		107	87	20		Silt - Extremely High Plasticity
TP 1402		1.0		24.4						
TP 1406		0.5		932.9						
TP 1406		1.5		1218						
TP 1407		0.3		719.5						
TP 1407		1.5		1199.8						
TP 1407		2.4		967.1						
TP 1411		0.8		28		100	70.2	29.8		Silt - Extremely High Plasticity
TP 1411		1.2		9		NON PLASTIC			8	
TP 1412		0.5		26.7		121	92.5	28.5		Silt - Extremely High Plasticity
TP 1413		0.5-1.2		10		NON PLASTIC			5	
TP 1416		0.7		828.6						

Borehole/ Trialpit	Type	Depth m	Bulk Density Mg/m3	Moisture Content %	Particle Density Mg/m3	Liquid Limit %	Plastic Limit %	Plasticity Index %	% passing 425 micron %	Description of fraction passing 425 Silt - Intermediate Plasticity clay sieve.
TP 1417		1.5		38						
TP 1417		2.0		17.9						
TP 1419		0.3		788						
TP 1422		1.6-2.1		9.6						
TP 1423		0.9-1.3		15.7						
TP 1424		0.5-1.0		4.1						
TP 1427		0.7		3.5						
TP 1428		0.5		30.4		33	25	8	64	Clay - Low Plasticity
TP 1428		1.1		11.1		19	13	6	54	Clay - Low Plasticity
TP 1428		1.9		8.8						
TP 1429		0.0-0.3		218.2						
TP 1429		2.2-2.4		8.9		14	12	3	53	Silt - Low Plasticity
TP 1430		1.3		25.5						
TP 1430		0.5-1.0		1076.1						
TP 1431		0.5		500.9						
TP 1431		1.0		13						
TP 1432		1.0		13.6						
TP 1435		1.0		883.5						
TP 1436		1.0		10.9		21	13.3	7.7		Clay - Low Plasticity
TP 1436		1.5		9.9		19	13	6		Clay - Low Plasticity
TP 1439		0.7		708.9						
TP 1439		1.7		868.3						
TP 1439		2.5		583.4						
TP 1439		3.1		714.6						
TP 1440		0.1		43.1						
TP 1440		0.7		7.7		25.2	21.2	4		Silt - Low Plasticity
TP 1441		0.2		21.1						
TP 1441		0.8		10.4		25	15	9	54	Clay - Low Plasticity
TP 1441		1.7		9.3						
TP 1442		0.5		15.3		37.7	25.9	11.8		Silt - Intermediate Plasticity
TP 1443		0.2		22.5						
TP 1443		0.5		10.7		43	27	16	18	Silt - Intermediate Plasticity
TP 1443		1.2		8.3						
TP 1444		0.2		17.6						
TP 1444		0.5		17.7		47	32.2	14.8		Silt - Intermediate Plasticity
TP 1444		1.3		12.2						
TP 1445		0.2		27.8						
TP 1445		0.8		12.7		38	33	4	24	Silt - Intermediate Plasticity
TP 1446		0.1		122.2						
TP 1446		0.5		14		22	14	8	21	Clay - Low Plasticity
TP 1446		1.3		40.6						
TP 1447		0.3		765						
TP 1447		1.0		940		935	680	255	70	Organic Silt - Extremely High Plasticity
TP 1447		2.9		165.3		151	109	42	93	Organic Silt - Extremely High Plasticity
TP 1452		1.0-2.0		8.4						
TP 1453		0.3		19.7						
TP 1456		0.5		12.1		23	15	7	28	Clay - Low Plasticity
TP 1456		0.8		10.6						
TP 1458		0.5		16		33	23	10	35	Clay - Low Plasticity
TP 1460		1.6		12.8		23	15	8	55	Clay - Low Plasticity
TP 1461		0.5		24.8						
TP 1461		1.0		9.1						
TP 1462		0.2		16.8						

National Materials Testing Laboratory Ltd.

SUMMARY OF TEST RESULTS

Borehole No.	Depth m	Moisture %	<425um %	LL %	Index Properties			Density Mg/m ³	Cell Pressure kPa	Undrained Triaxial Tests		Cu kPa	Mode of Failure
					PL %	PI %	Compressive Stress kPa			Strain at Failure %			
BH1014	1.00	42.2											
BH1014	2.00	15.3											
BH1024	0.50	631.6											
BH1024B	1.00	618.5											
BH1024B	2.00	213.3											
TP1132	1.00	11.6	58.9	23	13	10							
TP1142	1.00	11.1	69.4	17	12	5							
TP713	0.15	26.4											
TP730	0.40	707.2											
TP740	0.50	849.1											
TP754A	1.50	790.3											
TP754B	0.20	48.5											
TP754C	0.50	348.5											
TP777	0.50	704.2											
TP777	1.8	494.7											
TP779	0.5	37.5											
TP795	0.3	713.0											
TP841B	0.2	120.9											
TP841B	0.8	17.9	77.8	29	17	12							
TP841B	1.9	14.6	62.0	18	11	7							
TP841B	2.7	10.8											
NMTL	Notes:												Table
	1. All BS tests carried out using preferred (definitive) method unless otherwise stated.												1
	Job ref No.	NMTL 249											
	Location	GCOB-Galway County Council											

National Materials Testing Laboratory Ltd.

SUMMARY OF TEST RESULTS

Borehole No.	Depth m	Moisture %	<425µm %	LL %	Index Properties			Density Mg/m ³	Cell Pressure kPa	Undrained Triaxial Tests			Mode of Failure	
					PL %	PI %				Compressive Stress kPa	Strain at Failure %	Cu kPa		
TP870	0.50	22.1												
TP870	2.90	7.9	8.9	non plastic										
TP967	0.10	30.4												
TP978	0.40	32.1	74.4	54	28	26								
TP996	0.20	20.9												
TP996	0.80	8.3												
TP996	1.50	8.7	32.7	21	13	8								
TP1219	0.60m	10.0	48.3	non plastic										
NMTL	Notes :													
		1. All BS tests carried out using preferred (definitive) method unless otherwise stated.									Job ref No.	NMTL 249		Table 1
											Location	GCOB-Galway County Council		

IRISH DRILLING LTD.

Loughrea Co. Galway.

Contract N6 Galway City Outer Bypass

Client:

Engineer:

Date: November 2006

Tested By DD

Check DJ

Tel: (091)841274 Fax: (091) 847687

Summary of Von Post Classification

Borehole/ Trialpit	Type	Depth m	Moisture Content %	Plant Type Term	Humification Term	Water Content Classification	Fibre Content F/R/W/N	Organic Content LOI	Tensile Strength	Smell	Plasticity	Acidity
BH 0864		0.0-0.5			H3	B0	F3 R2 W0 N1		TV0 TH1	A0	P1	
BH 0888		1.5-2.0	Peat mixed with pieces of damp firm brown-grey SILT / CLAY.									
BH 0888		1.5-2.0			H4	B1	F3 R2 W0 N1		TV1 TH0	A1	P1	
BH 0911 A		0.5-1.0			H3	B1	F3 R2 W0 N1		TV1 TH1	A0	P0	
BH 0911 B		0.5-1.0			H3	B1	F3 R2 W0 N1		TV1 TH0	A0	P0	
BH 0915		0.5-1.0			H3	B2	F3R2W0N0		TV0 TH1	A0	P0	
BH 1182		0.0-1.0			H3	B0	F2 R2 W0 N0		TV0 TH1	A0	P0	
BH 1189		0.0-1.0	Topsoil : soft damp dark brown slightly gravelly sandy SILT / CLAY with some roots.									
BH0 896		0.0-1.0			H2	B1	F3 R3 W0 N0		TV3 TH3	A0	P0	
TP 0693		0.4			H2	B0	F3 R2 W0 N0		TV2 TH3	A0	P0	
TP 0716		0.7	Soft damp brown slightly gravelly sandy SILT / CLAY.									
TP 0718		1.5			H6	B1	F2 R1 W0 N1		TV0 TH0	A0	P1	
TP 0721		0.5			H4	B1	F3 R2 W0 N1		TV0 TH1	A0	P1	
TP 0721		0.5			H4	B1	F3 R2 W0 N1		TV0 TH1	A0	P1	
TP 0732 B		0.2			H4	B0	F3 R2 W0 N0		TV0 TH0	A0	P1	
TP 0733 B		0.5			H3	B1	F3 R2 W0 N0		TV0 TH2	A0	P0	
TP 0754 A		0.5			H4	B0	F3 R1 W0 N1		TV1 TH1	A0	P1	
TP 0754 C		0.5			H8	B0	F0 R0 W0 N0		TV0 TH0	A0	P1	
TP 0754 C		0.5	Soft damp dark brown slightly sandy SILT / CLAY topsoil, rich with organic matter.									
TP 0833		1.3	Damp dense light brown gravelly silty SAND.									
TP 0840		1.7	Damp firm light brown mottled orange slightly gravelly sandy SILT / CLAY. Contains a few white shells									
TP 0857		1.2	Damp soft light brown mottled white SILT / CLAY with abundant white shells.									
TP 0870		0.5			H2	B1	F3 R1 W0 N1		TV1 TH1	A0	P0	
TP 0870		2.9	Damp soft grey SILT / CLAY with abundant fibres and high organic content.									
TP 0876		1.4			H8	B0	F3 R1 W0 N1		TV0 TH0	A0	P1	
TP 0876		1.9	Damp soft light brown mottled white SILT / CLAY with a few white shells.									
TP 0894		3.1	Soft damp grey-brown mottled white SILT / CLAY. Contains abundant white shells and fibres.									
TP 0895		2.0-2.5			H3	B3	F3 R1 W0 N0		TV2 TH1	A1	P1	
TP 0897		1.5-2.0			H3	B3	F3 R1 W0 N0		TV2 TH1	A0	P1	
TP 0906		1.0-1.2			H4	B1	F3 R1 W0 N1		TV1 TH0	A0	P1	
TP 0907		1.0-1.2			H2	B1	F2 R1 W2 N1		TV2 TH2	A0	P1	
TP 0907		1.8-2.0			H2	B1	F3 R1 W0 N1		TV2 TH2	A1	P0	
TP 0941 A		2.0			H7	B1	F3 R1 W1 N1		TV0 TH0	A1	P1	
TP 1023		1.0-1.5			H5	B4	F4 R0 W0 N0		TV0 TH1	A0	P1	
TP 1429		1.0-1.2			H6	B1	F3 R1 W0 N1		TV0 TH0	A0	P1	

Project Name: GCOB	Date received: 12/1/2006	K4 SOILS 
Client: Irish Drilling	Date sampled: 1/4/2007	
Project No: GCOB	Date tested: 20-30/01/2007	
Our job/report no: 4949	Date reported: 2/5/2007	

Borehole No:	Sample No:	Depth (m)	Description	Moisture content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 0.425 mm (%)	Remarks
RC936		6.00	Grey clayey sandy very silty GRAVEL	2.1	21	13	8	39	
RC936		40.00	Grey slightly sandy clayey SILT	32	61	41	20	98	
RC936		46.00	Dark grey slightly sandy clayey SILT	39	76	43	33	92	
RC936		51.00	Dark grey slightly gravelly very sandy clayey SILT	24	49	28	21	68	
RC936		55.50	Grey clayey silty very sandy GRAVEL	5.6	23	18	5	40	
RC937		11.00	Dark grey very sandy silty CLAY	11	31	16	15	98	
RC937		16.00	Dark grey slightly gravelly very sandy clayey SILT	18	30	15	15	87	
RC937		19.00	Dark grey slightly gravelly very sandy clayey SILT	40	84	52	32	97	
RC937		26.00	Dark grey slightly sandy clayey SILT	29	73	44	29	93	
RC937		32.00	Dark grey slightly sandy clayey SILT	31	69	44	25	97	
RC937		36.00	Dark grey slightly gravelly slightly sandy clayey SILT	29	59	34	25	95	
RC937		49.00	Dark grey slightly sandy clayey SILT	14	52	24	28	97	
RC940		10.00	Dark grey brown slightly sandy clayey SILT	38	68	41	27	94	
RC940		14.00	Dark grey slightly sandy clayey SILT	32	59	37	22	100	
RC940		19.00	Dark grey clayey very silty SAND	31	57	37	20	99	

	Summary of Test Results	Checked and Approved
	BS 1377 : Part 2 : Clause 4.3 : 1990 Determination of the liquid limit by the cone penetrometer method.	Initials: kp
	BS 1377 : Part 2 : Clause 5 : 1990 Determination of the plastic limit and plasticity index.	Date: 2/5/2007

Test Report by K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU

Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) Bhavika R.(Qual.Mgr)

All samples connected with this report, incl any on 'hold' will be stored and disposed off according to Company policy. A copy of this policy is available on request.

MSF-11/R2

IRISH DRILLING LTD.

Loughrea Co. Galway.

Contract N6 Galway City Outer Bypass

Client:

Engineer:

Date: November 2006

Tested By DD

Check DJ

Tel: (091)841274 Fax: (091) 847687

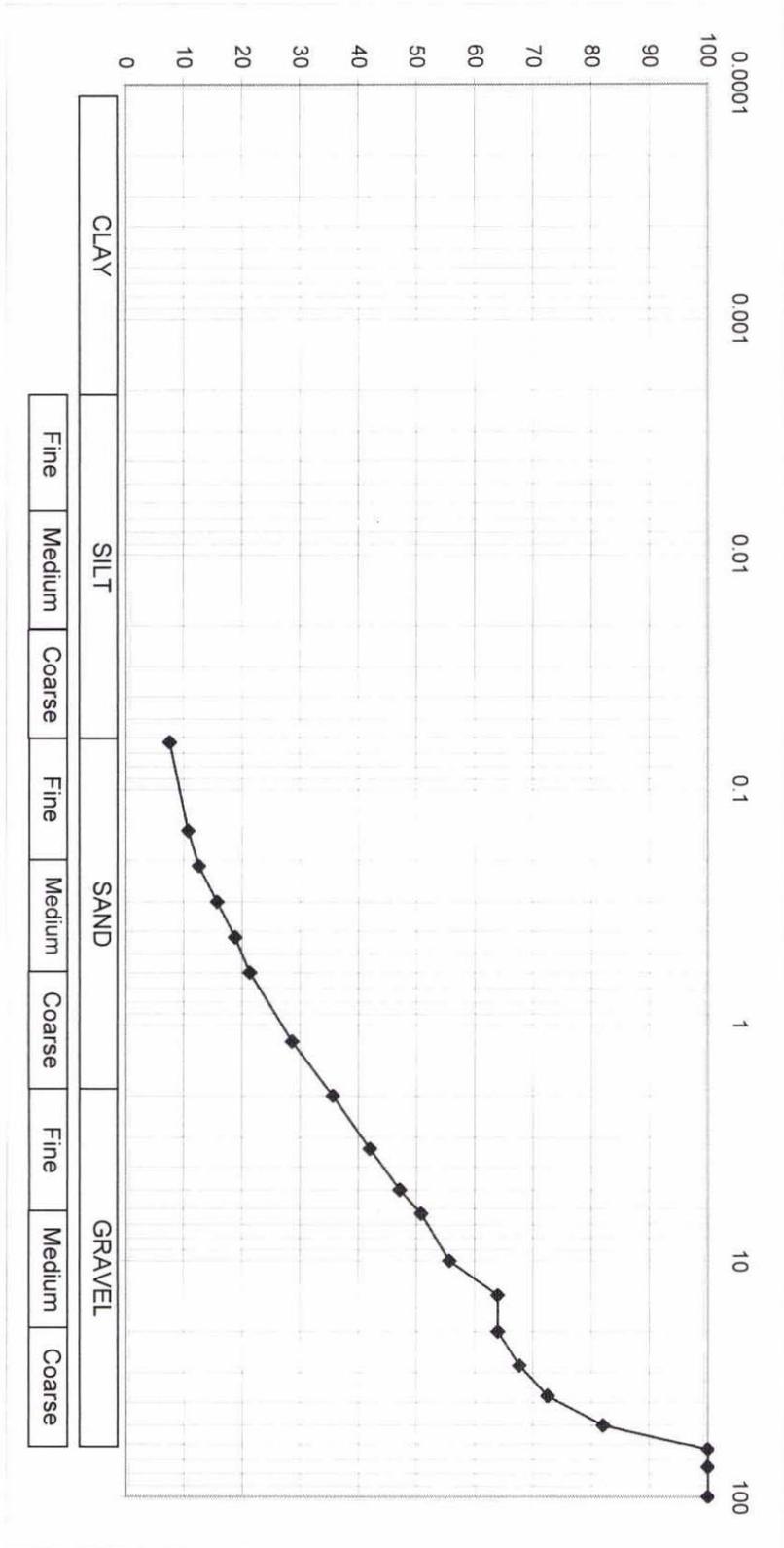
Summary of Von Post Classification

Borehole/ Trialpit	Type	Depth m	Moisture Content %	Plant Type Term	Humification Term	Water Content Classification	Fibre Content F/R/W/N	Organic Content LOI	Tensile Strength	Smell	Plasticity	Acidity
BH 0864		0.0-0.5			H3	B0	F3 R2 W0 N1		TV0 TH1	A0	P1	
BH 0888		1.5-2.0	Peat mixed with pieces of damp firm brown-grey SILT / CLAY.									
BH 0888		1.5-2.0			H4	B1	F3 R2 W0 N1		TV1 TH0	A1	P1	
BH 0911 A		0.5-1.0			H3	B1	F3 R2 W0 N1		TV1 TH1	A0	P0	
BH 0911 B		0.5-1.0			H3	B1	F3 R2 W0 N1		TV1 TH0	A0	P0	
BH 0915		0.5-1.0			H3	B2	F3R2W0N0		TV0 TH1	A0	P0	
BH 0934		0.5-1.0			H3	B2	F3R2W0N2		TV1TH1	A0	P0	
BH 0939		1.5-1.95			H9	B2	F3 R0 W0 N0		TV1 TH0	A0	P1	
BH 1182		0.0-1.0			H3	B0	F2 R2 W0 N0		TV0 TH1	A0	P0	
BH 1189		0.0-1.0	Topsoil : soft damp dark brown slightly gravelly sandy SILT / CLAY with some roots.									
BH0 896		0.0-1.0			H2	B1	F3 R3 W0 N0		TV3 TH3	A0	P0	
TP 0693		0.4			H2	B0	F3 R2 W0 N0		TV2 TH3	A0	P0	
TP 0716		0.7	Soft damp brown slightly gravelly sandy SILT / CLAY.									
TP 0718		1.5			H6	B1	F2 R1 W0 N1		TV0 TH0	A0	P1	
TP 0721		0.5			H4	B1	F3 R2 W0 N1		TV0 TH1	A0	P1	
TP 0721		0.5			H4	B1	F3 R2 W0 N1		TV0 TH1	A0	P1	
TP 0732 B		0.2			H4	B0	F3 R2 W0 N0		TV0 TH0	A0	P1	
TP 0733 B		0.5			H3	B1	F3 R2 W0 N0		TV0 TH2	A0	P0	
TP 0754 A		0.5			H4	B0	F3 R1 W0 N1		TV1 TH1	A0	P1	
TP 0754 C		0.5			H8	B0	F0 R0 W0 N0		TV0 TH0	A0	P1	
TP 0754 C		0.5	Soft damp dark brown slightly sandy SILT / CLAY topsoil, rich with organic matter.									
TP 0795		1.1			H9	B4	F3 R1 W0 N0		TV0 TH0	A0	P1	
TP 0796		0.5		S,C	H2	B2	F2 R3 W1 N1		TV1 TH1	A0	P1	
TP 0833		1.3	Damp dense light brown gravelly silty SAND.									
TP 0840		1.7	Damp firm light brown mottled orange slightly gravelly sandy SILT / CLAY. Contains a few white shells									
TP 0857		1.2	Damp soft light brown mottled white SILT / CLAY with abundant white shells.									
TP 0870		0.5			H2	B1	F3 R1 W0 N1		TV1 TH1	A0	P0	
TP 0870		2.9	Damp soft grey SILT / CLAY with abundant fibres and high organic content.									
TP 0876		1.4			H8	B0	F3 R1 W0 N1		TV0 TH0	A0	P1	
TP 0876		1.9	Damp soft light brown mottled white SILT / CLAY with a few white shells.									
TP 0894		3.1	Soft damp grey-brown mottled white SILT / CLAY. Contains abundant white shells and fibres.									
TP 0895		2.0-2.5			H3	B3	F3 R1 W0 N0		TV2 TH1	A1	P1	
TP 0897		1.5-2.0			H3	B3	F3 R1 W0 N0		TV2 TH1	A0	P1	
TP 0906		1.0-1.2			H4	B1	F3 R1 W0 N1		TV1 TH0	A0	P1	
TP 0907		1.0-1.2			H2	B1	F2 R1 W2 N1		TV2 TH2	A0	P1	
TP 0907		1.8-2.0			H2	B1	F3 R1 W0 N1		TV2 TH2	A1	P0	
TP 0941 A		2.0			H7	B1	F3 R1 W1 N1		TV0 TH0	A1	P1	
TP 1023		1.0-1.5			H5	B4	F4 R0 W0 N0		TV0 TH1	A0	P1	
TP 1429		1.0-1.2			H6	B1	F3 R1 W0 N1		TV0 TH0	A0	P1	
TP 1435		1.0			H5	B3	F3 R1 W0 N0		TV0 TH0	A0	P1	

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	82
37.5	73
28	68
20	64
14	64
10	56
6.3	51
5	47
3.35	42
2	36
1.18	29
0.600	21
0.425	19
0.300	16
0.212	13
0.150	11
0.063	8
0.020	
0.006	
0.002	



Soil Description: Grey silty very sandy coarse GRAVEL.

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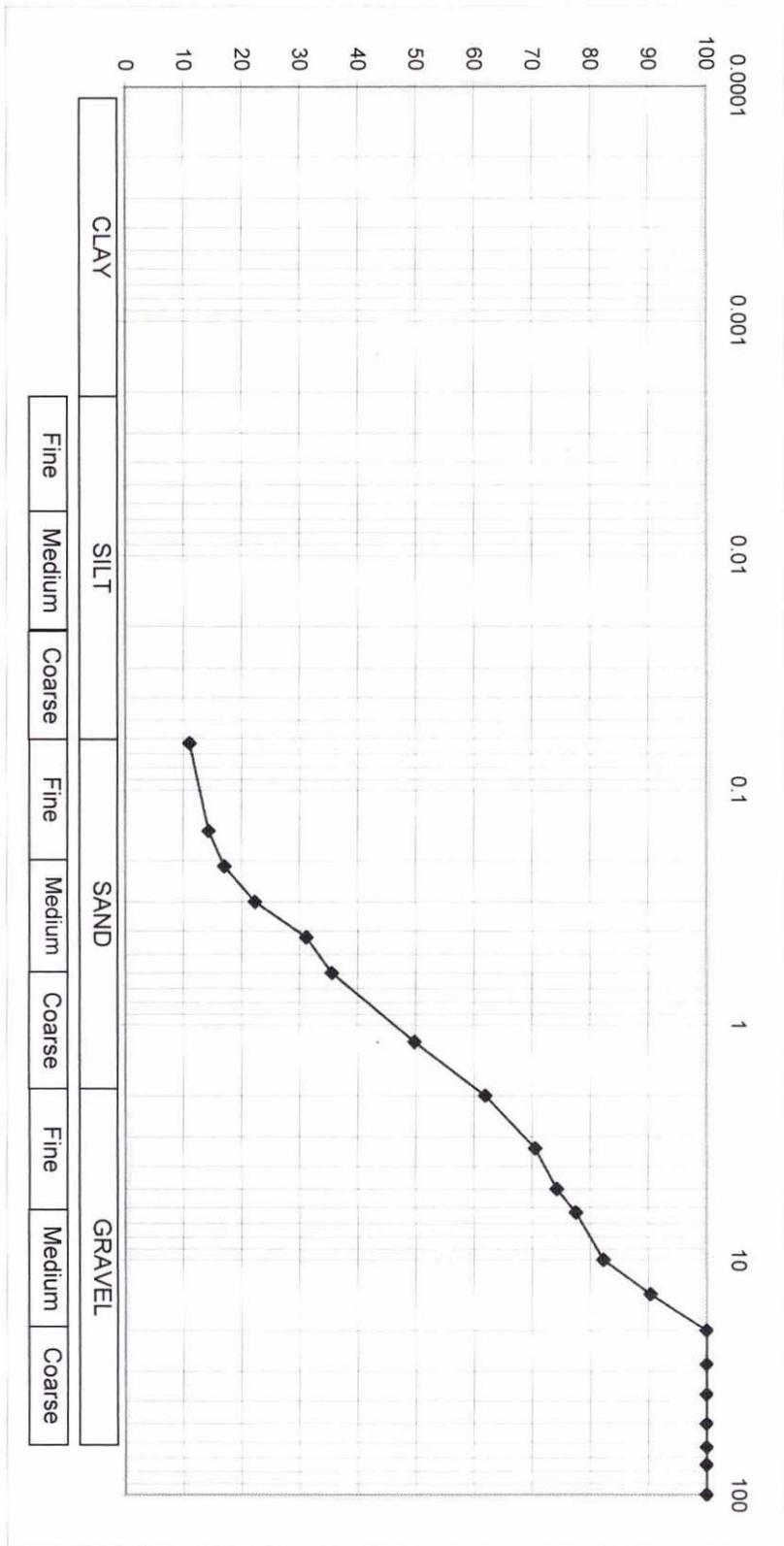
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD
Checked: DJ

Location
BH 911 A
Depth: 1.5-2.0 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	90
10	82
6.3	77
5	74
3.35	70
2	62
1.18	50
0.600	36
0.425	31
0.300	22
0.212	17
0.150	14
0.063	11
0.020	
0.006	
0.002	



Soil Description: Brown silty very gravelly medium and coarse SAND.

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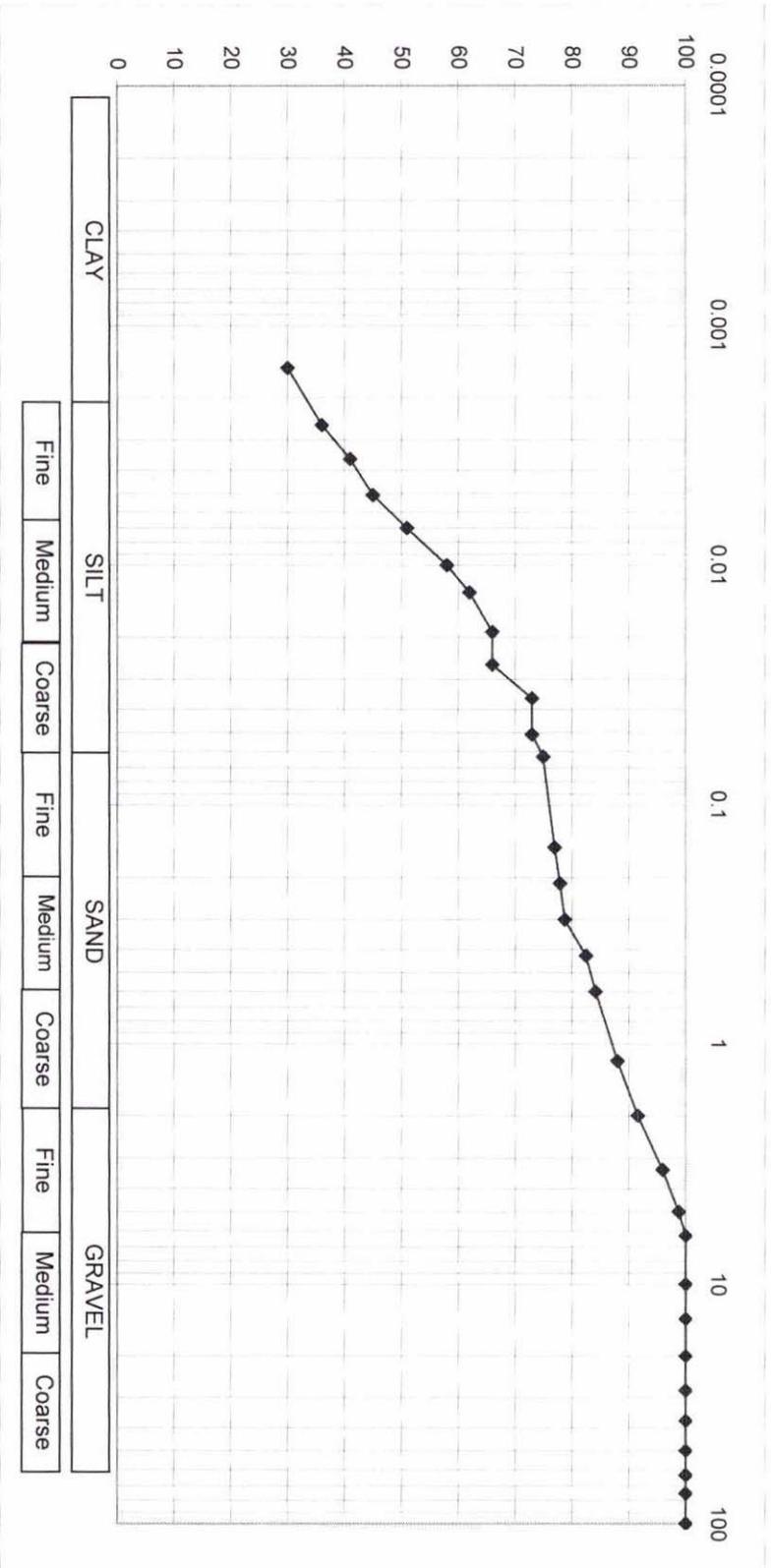
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD
Checked: DJ

Job Code:
Location: **BH 911 B**
Depth: **0.5-1.0 m**

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/01/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5	99
3.35	96
2	92
1.18	88
0.600	84
0.425	82
0.300	79
0.212	78
0.150	77
0.063	75
0.020	66
0.006	48
0.002	34



Soil Description: Black slightly gravelly slightly sandy organic SILT and PEAT.

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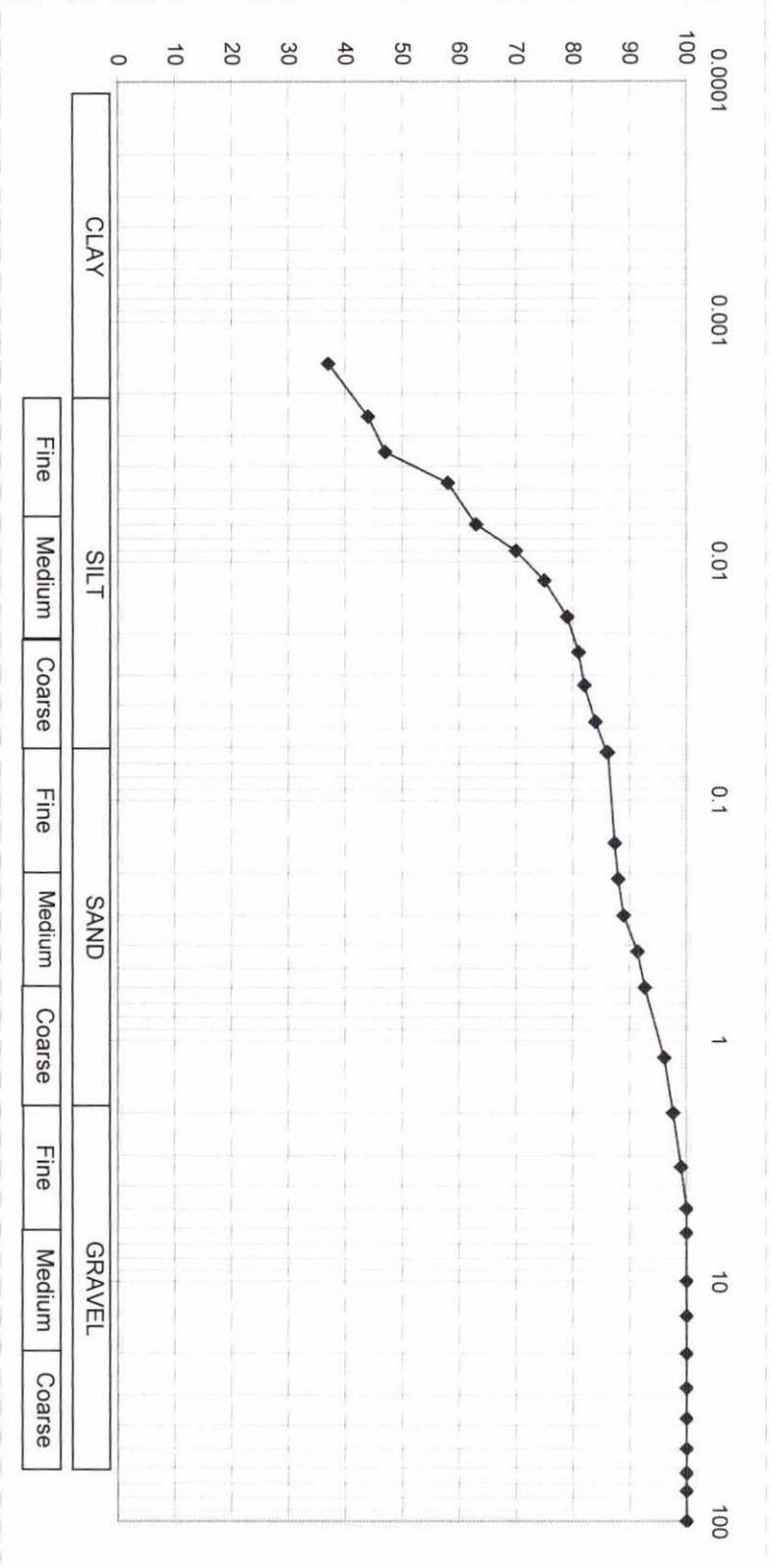
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 22/12/2006
Tested by: DD
Checked: DJ

Location: BH 934
Depth: 3.5-4.0 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/01/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5	100
3.35	99
2	98
1.18	96
0.600	93
0.425	91
0.300	89
0.212	88
0.150	87
0.063	86
0.020	80
0.006	61
0.002	41



Soil Description: Grey slightly gravelly slightly sandy organic SILT.

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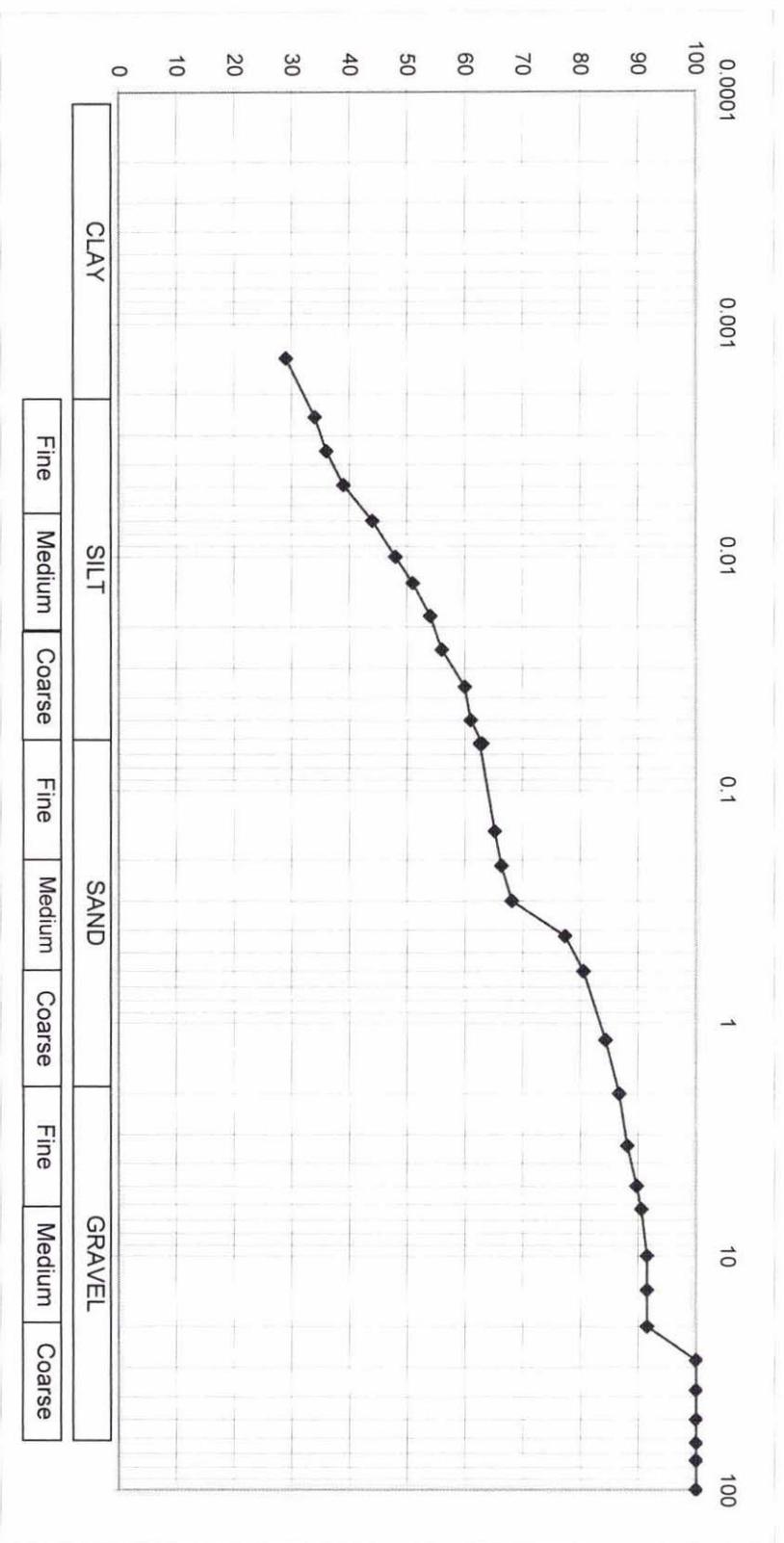
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: 22/12/2006
Date: DD
Tested by: Checked: DJ

Location BH 934 A
Depth: 3.5-4.0 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/01/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	92
14	92
10	92
6.3	91
5	90
3.35	88
2	87
1.18	84
0.600	81
0.425	77
0.300	68
0.212	66
0.150	65
0.063	63
0.020	55
0.006	42
0.002	32



Soil Description: Black slightly gravelly slightly sandy organic SILT and PEAT.

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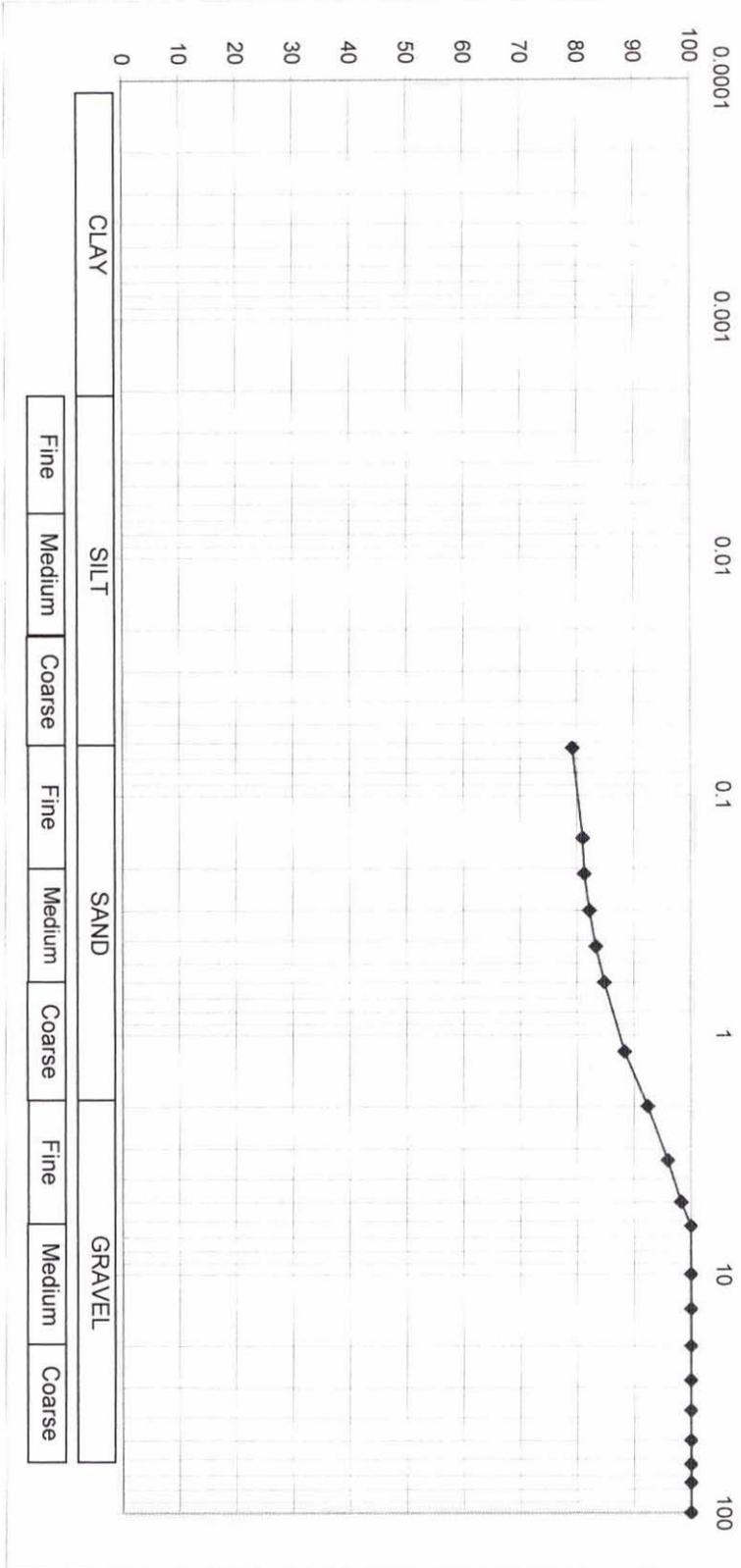
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 22/12/2006
Tested by: DD
Checked: DJ

Location BH 939
Depth: 2.5-3.0 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

2/2/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5	98
3.35	96
2	92
1.18	88
0.600	85
0.425	83
0.300	82
0.212	81
0.150	81
0.063	79
0.020	
0.006	
0.002	



Soil Description: Black slightly gravelly slightly sandy ORGANIC SILT / PEAT.

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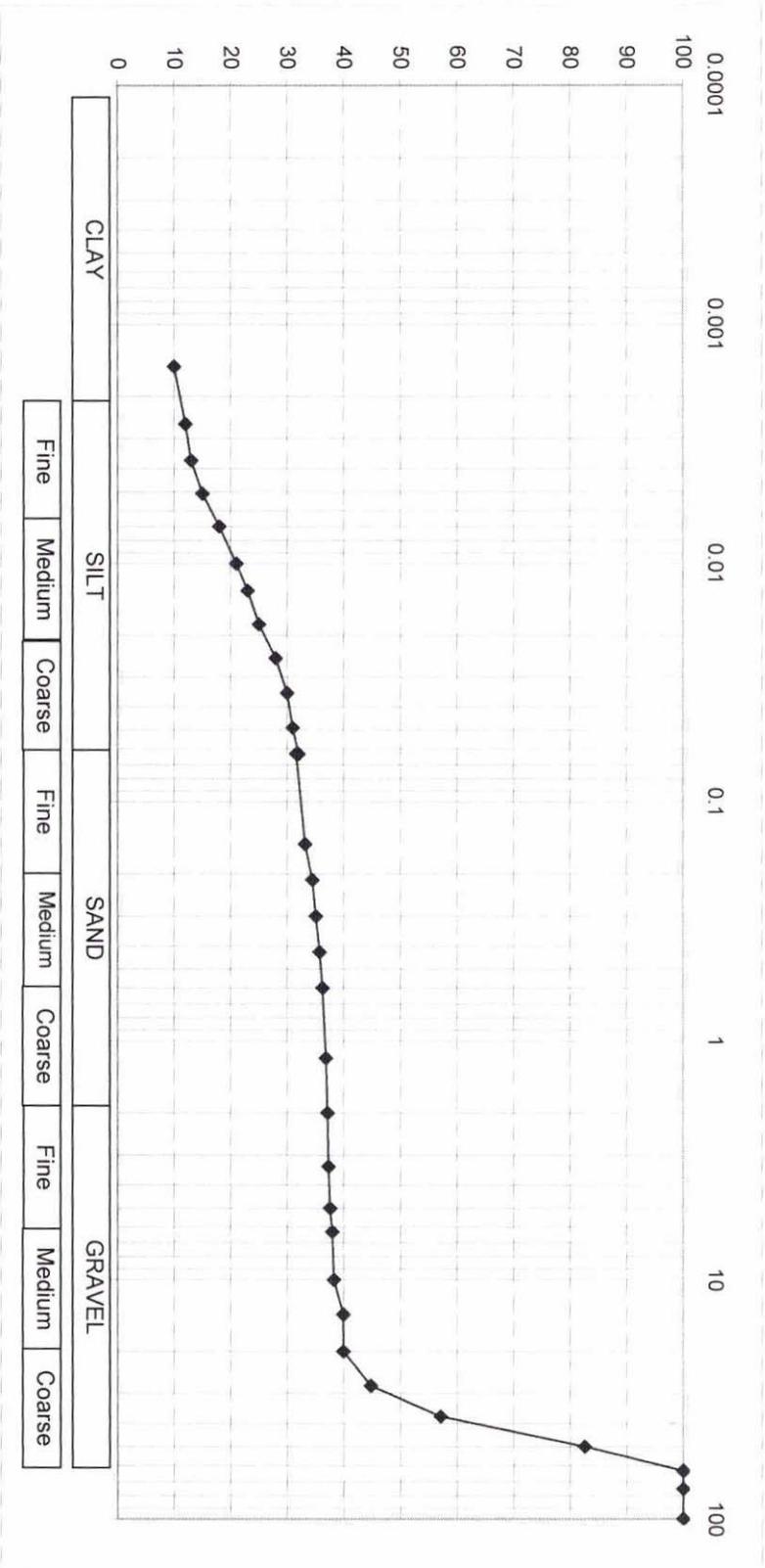
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 29.1.07
Tested by: DD
Checked: DJ

Location
BH 943 A
Depth: 6.5-7.5 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/01/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	83
37.5	57
28	45
20	40
14	40
10	38
6.3	38
5	38
3.35	37
2	37
1.18	37
0.600	36
0.425	36
0.300	35
0.212	34
0.150	33
0.063	32
0.020	26
0.006	18
0.002	11



Soil Description: Grey sandy very silty coarse GRAVEL.

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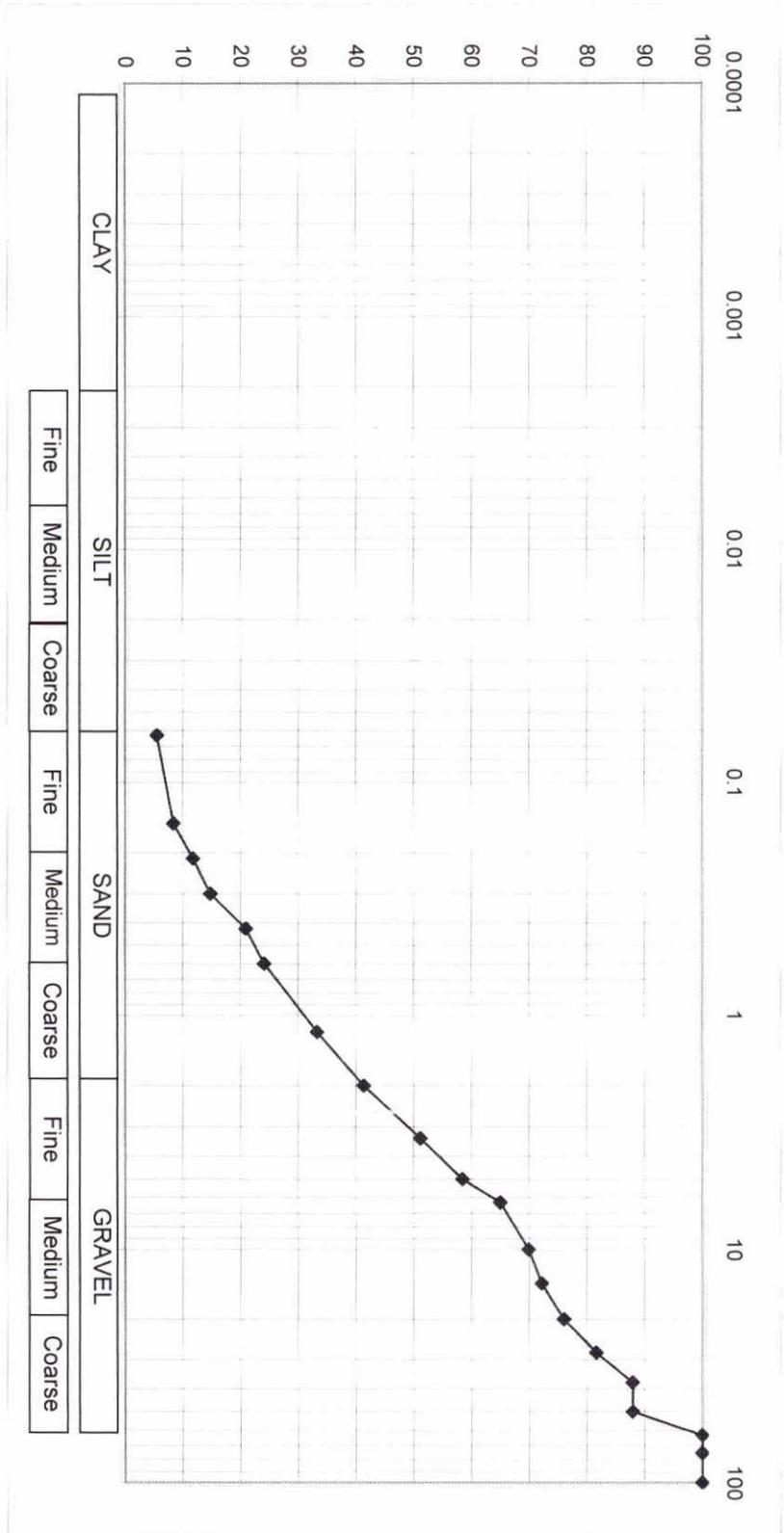
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: 22/12/2006
Date: DD
Tested by: Checked: DJ

Location: BH 943 A
Depth: 11.5 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	88
28	88
20	82
14	76
10	72
6.3	70
5	65
3.35	58
2	51
1.18	41
0.600	33
0.425	24
0.300	21
0.212	15
0.150	12
0.063	8
0.020	6
0.006	
0.002	



Soil Description: Brown silty very sandy coarse and fine GRAVEL.

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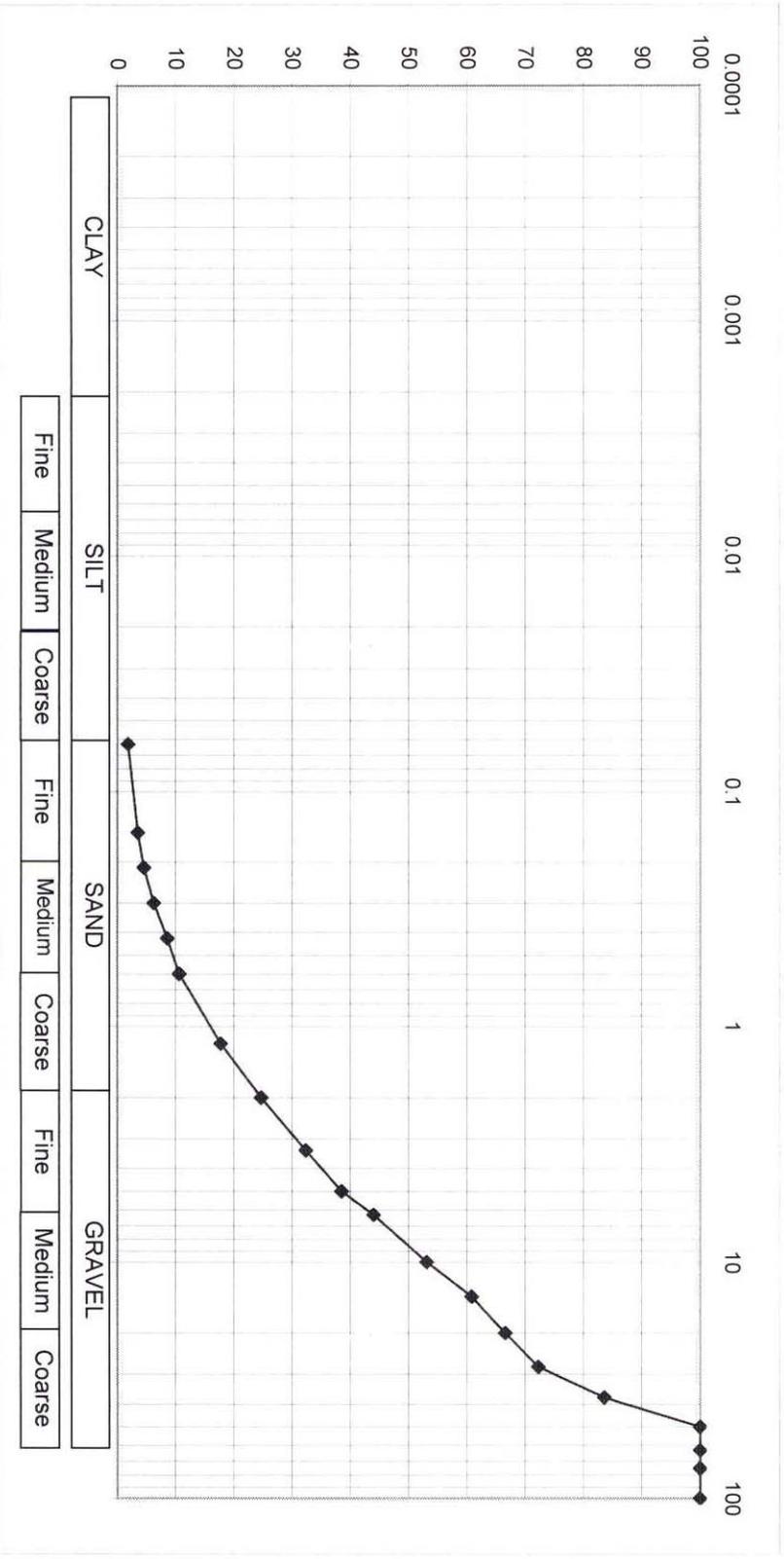
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 26/10/2006
Tested by: DD
Checked: DJ

Location TP 525
Depth: 1.5 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	84
28	72
20	67
14	61
10	53
6.3	44
5	38
3.35	32
2	25
1.18	18
0.600	11
0.425	9
0.300	6
0.212	5
0.150	4
0.063	4
0.020	2
0.006	
0.002	



Soil Description: Grey slightly silty very sandy coarse GRAVEL.

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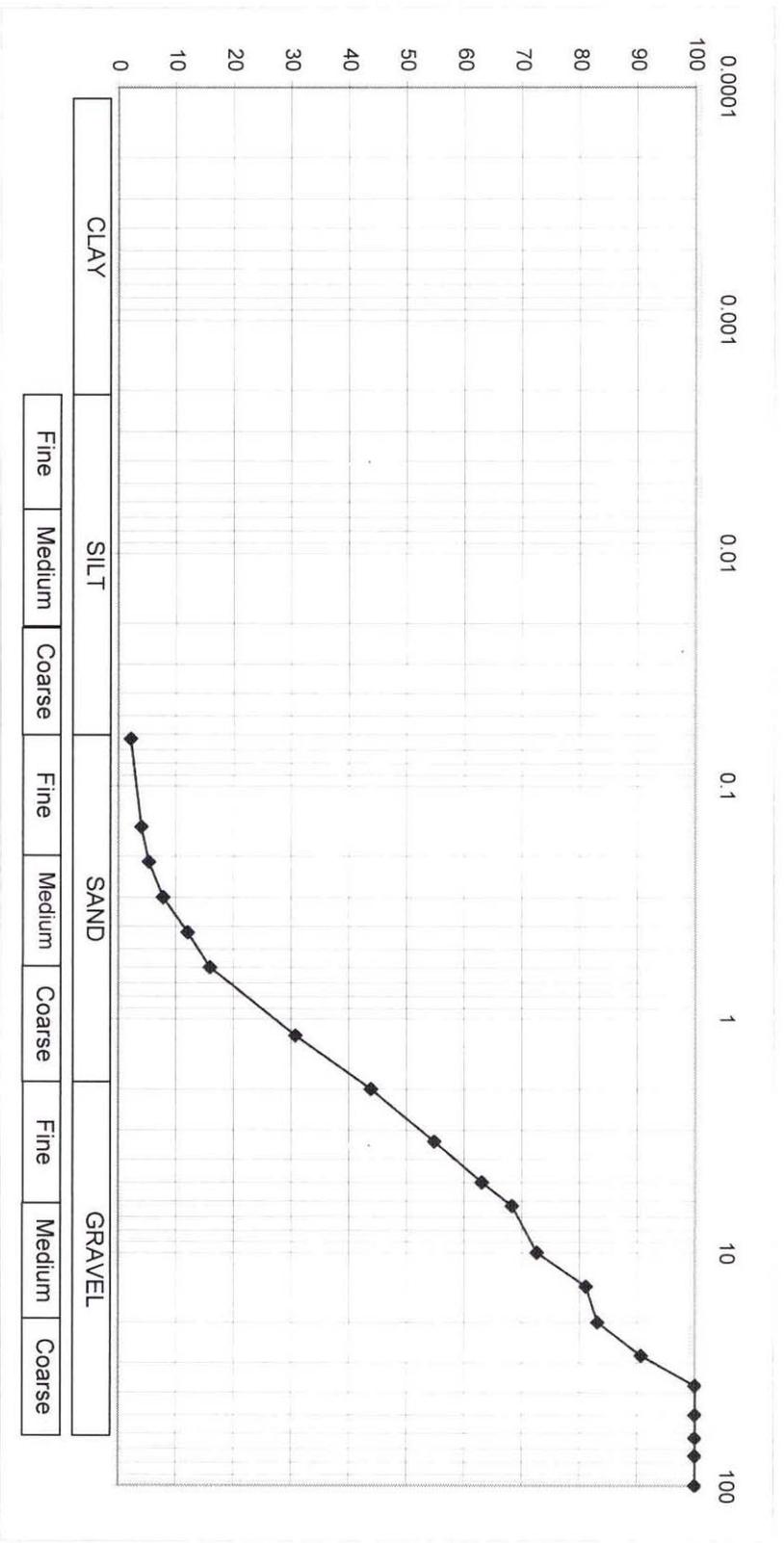
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD Checked: DJ

Location: **TP 716**
Depth: **1.6 m**

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	91
20	83
14	81
10	73
6.3	68
5	63
3.35	55
2	44
1.18	31
0.600	16
0.425	12
0.300	8
0.212	5
0.150	4
0.063	2
0.020	
0.006	
0.002	



Soil Description: Reddish-brown slightly silty very sandy fine GRAVEL.

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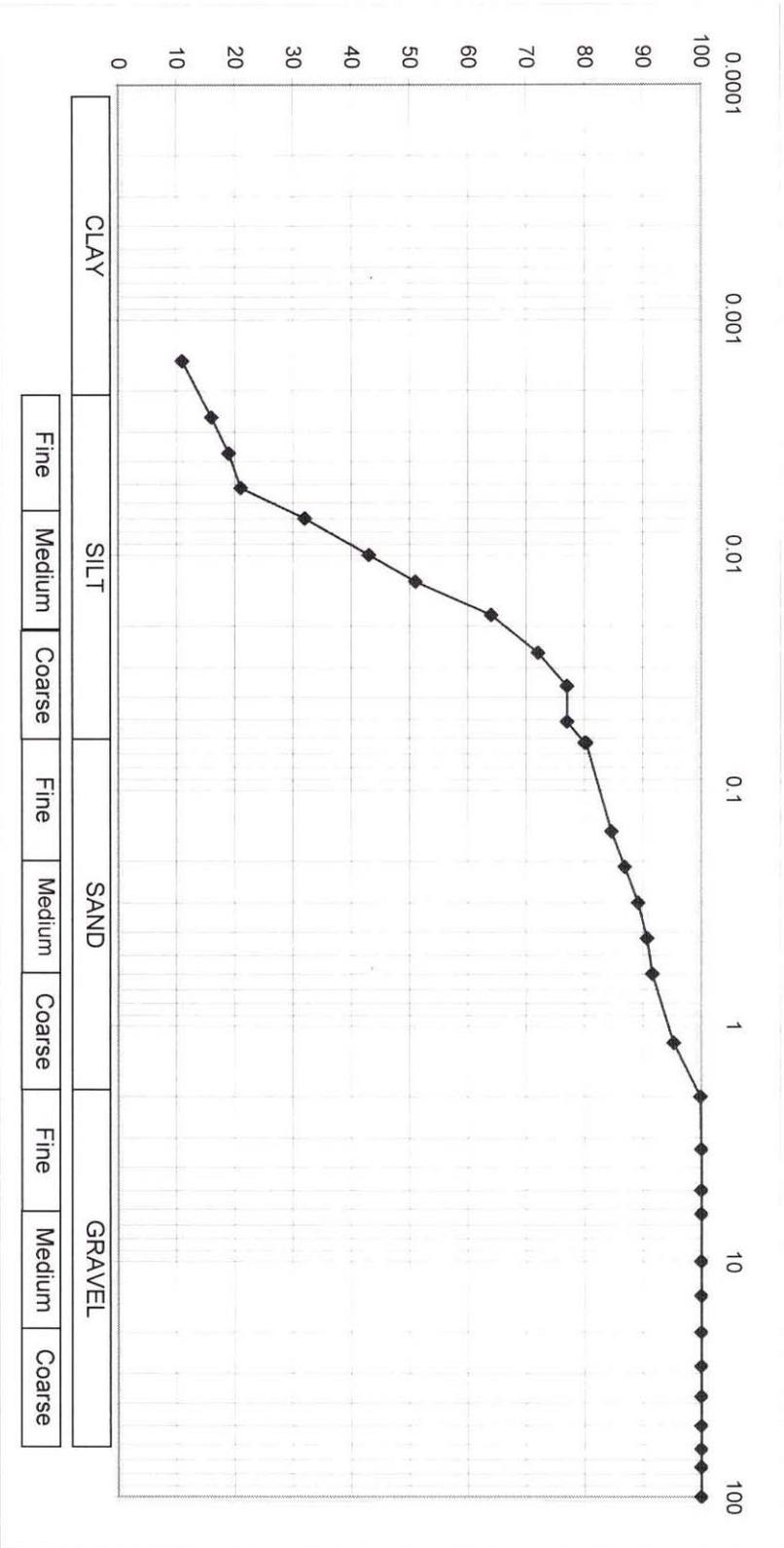
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer:
Date: 16/11/2006
Tested by: DD
Checked: DJ

Location TP 717
Depth: 0.7 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5	100
3.35	100
2	100
1.18	95
0.600	92
0.425	91
0.300	89
0.212	87
0.150	85
0.063	80
0.020	68
0.006	28
0.002	14



Soil Description: Grey slightly sandy SILT.

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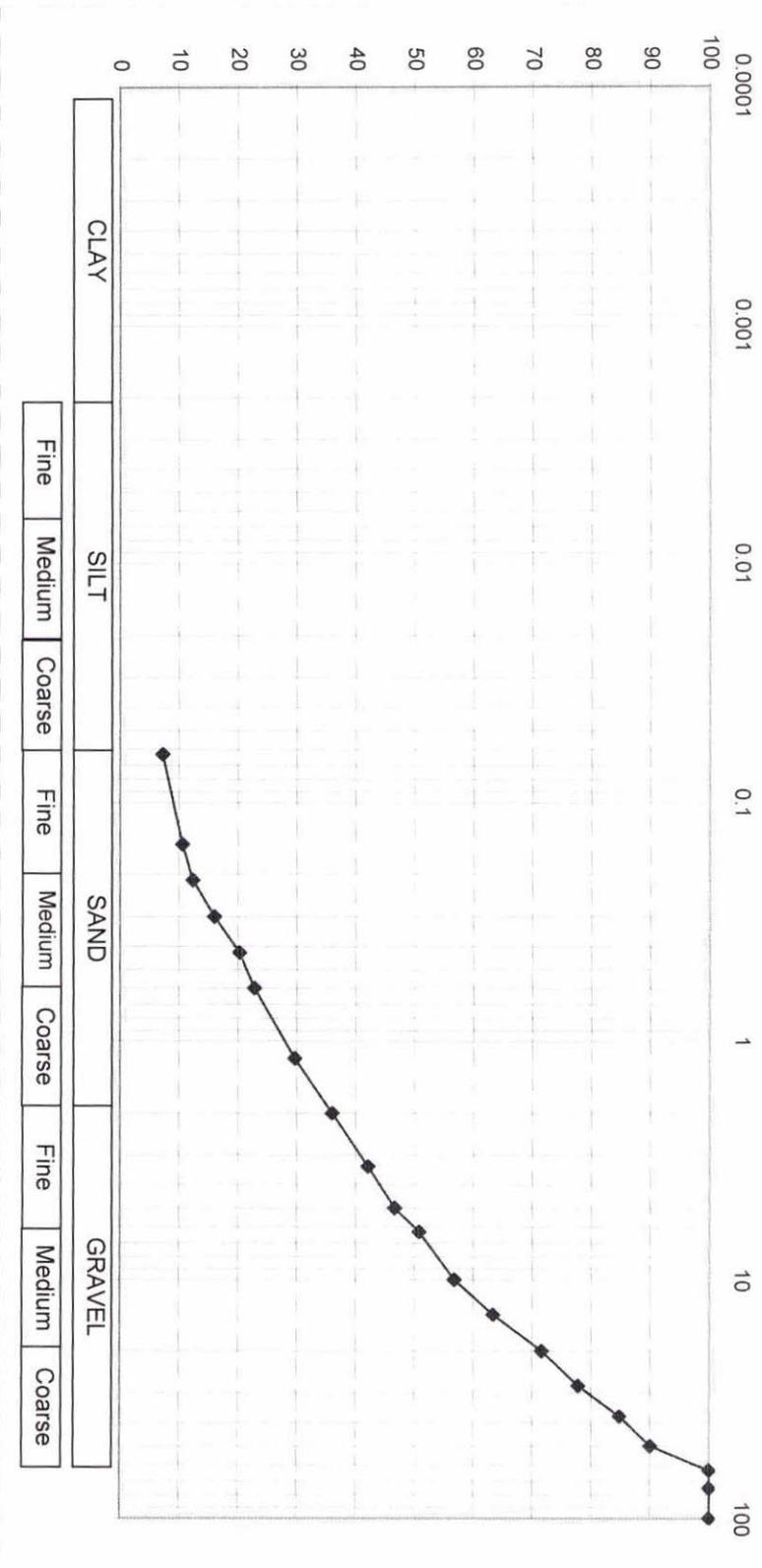
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD
Checked: DJ

Location: **TP 718**
Depth: **2.5 m**

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

1/31/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	90
37.5	85
28	78
20	72
14	63
10	57
6.3	51
5	47
3.35	42
2	36
1.18	30
0.600	23
0.425	20
0.300	16
0.212	12
0.150	11
0.063	7
0.020	
0.006	
0.002	



Soil Description: Grey silty very sandy medium and coarse GRAVEL.

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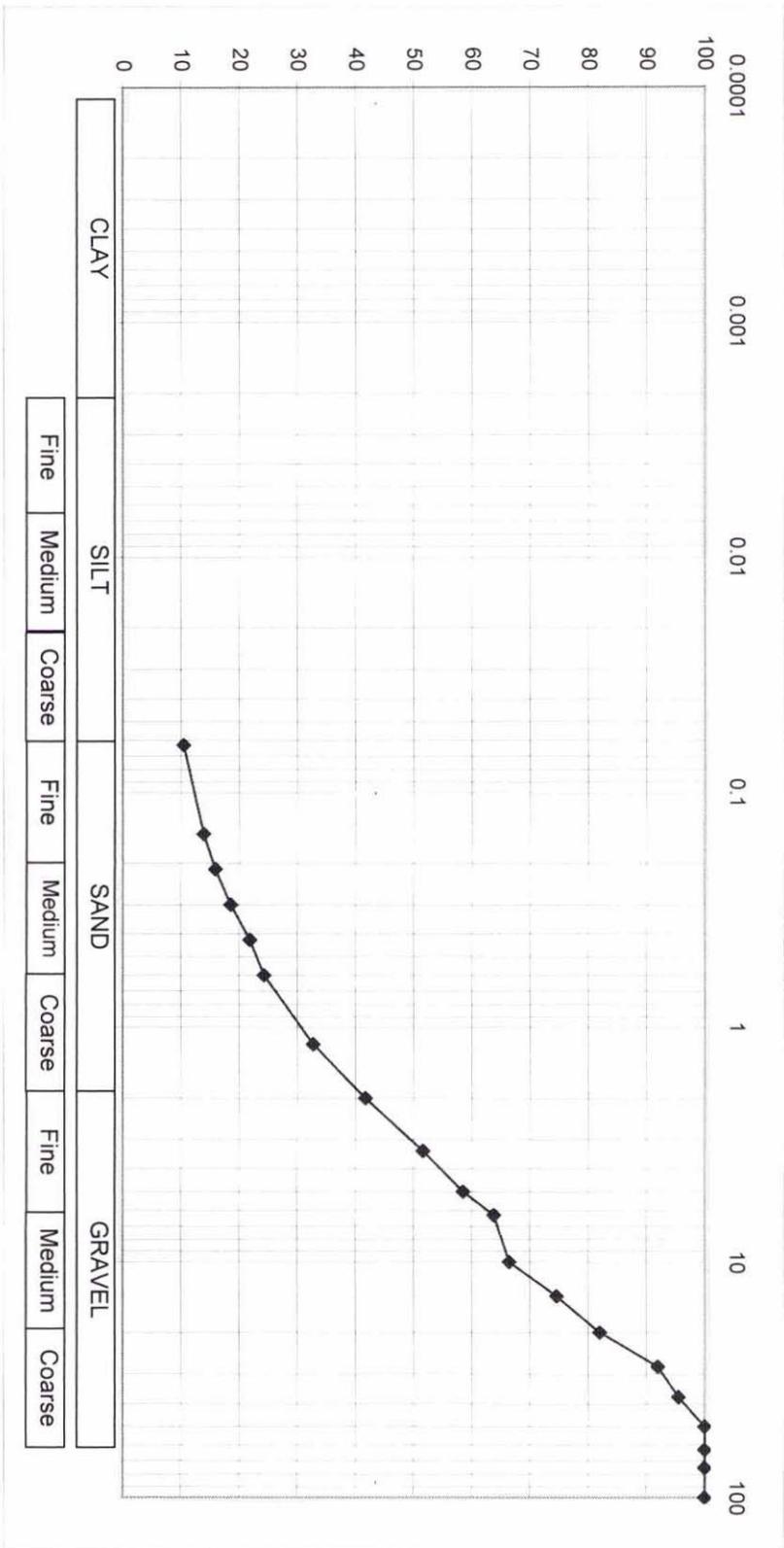
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 22.1.07
Tested by: DD
Checked: DJ

Location TP 719
Depth: 1.6 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	96
28	92
20	82
14	75
10	66
6.3	64
5	58
3.35	52
2	42
1.18	33
0.600	24
0.425	22
0.300	19
0.212	16
0.150	14
0.063	14
0.020	10
0.006	
0.002	



Soil Description: Blackish-grey silty very sandy GRAVEL.

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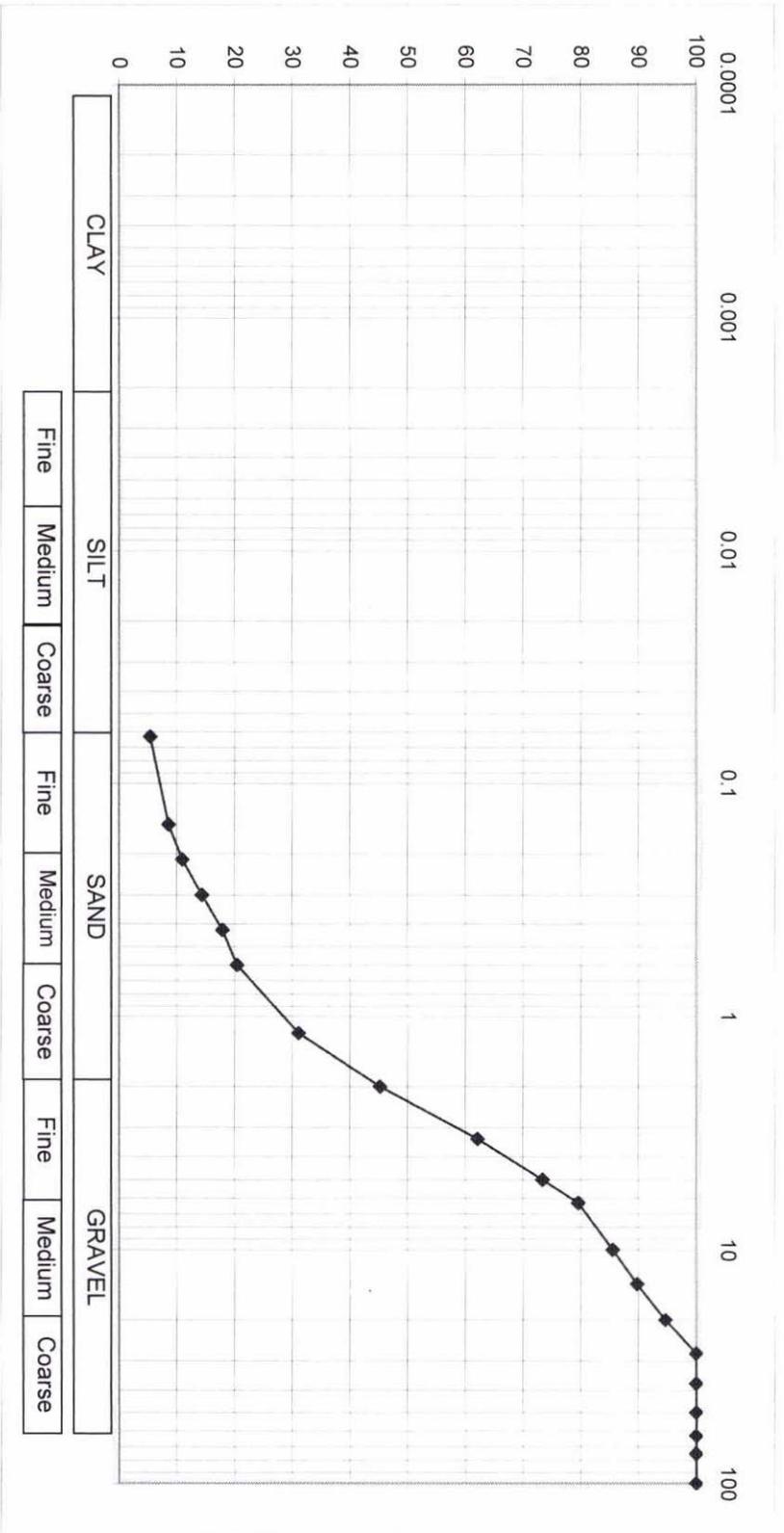
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer:
Date: 16/11/2006
Tested by: DD
Checked: DJ

Location TP 720
Depth: 1.2 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	95
14	90
10	86
6.3	80
5	73
3.35	62
2	45
1.18	31
0.600	20
0.425	18
0.300	14
0.212	11
0.150	9
0.063	5
0.020	
0.006	
0.002	



Soil Description: Dark grey slightly silty very sandy fine GRAVEL.

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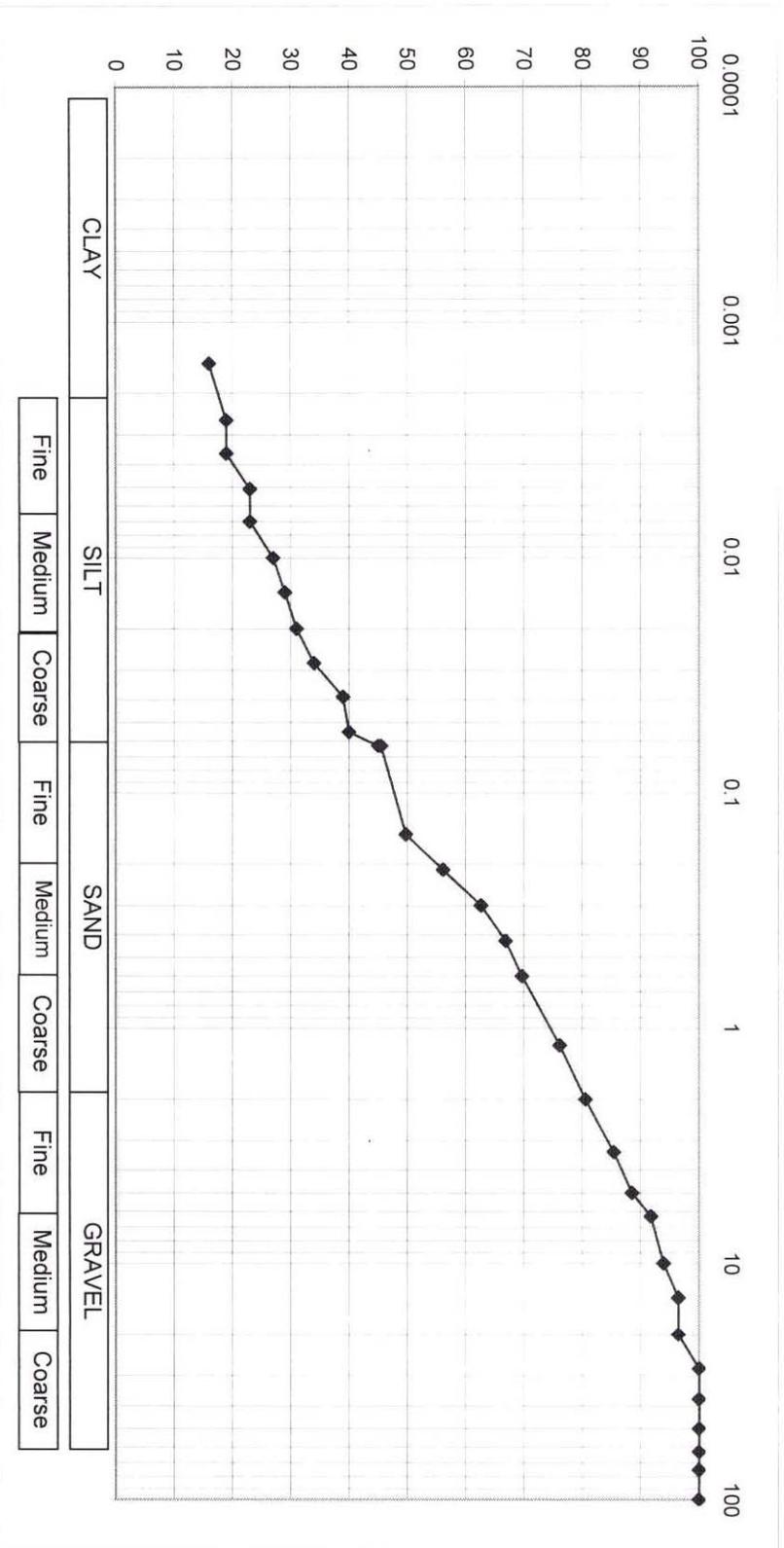
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 16/11/2006
Tested by: DD
Checked: DJ

Location: TP 721
Depth: 1.5 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	96
14	96
10	94
6.3	92
5	89
3.35	85
2	81
1.18	76
0.600	70
0.425	67
0.300	63
0.212	56
0.150	50
0.063	45
0.020	31
0.006	23
0.002	18



Soil Description: Grey slightly gravelly sandy SILT.

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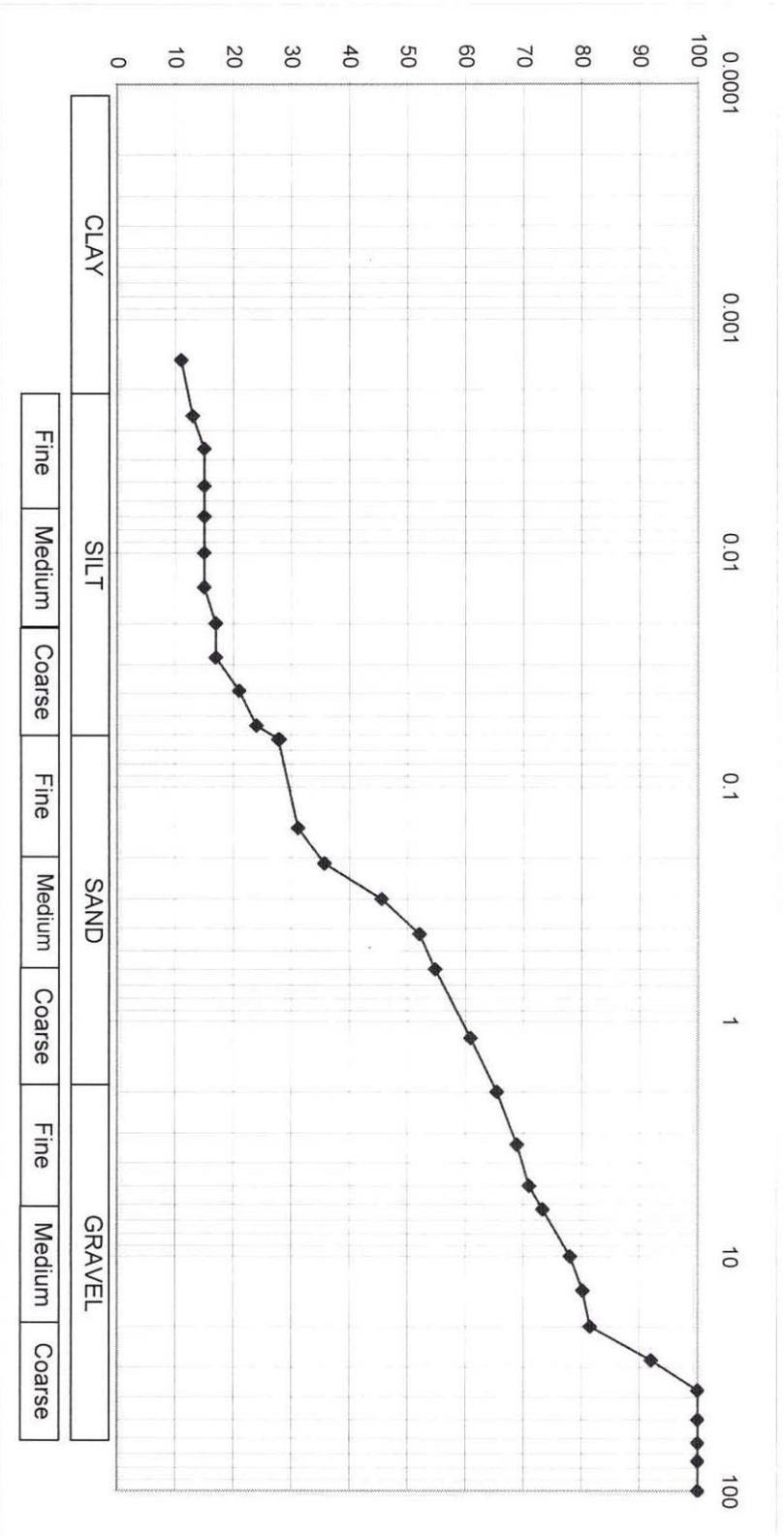
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 16/11/2006
Tested by: DD
Checked: DJ

Location TP 908
Depth: 0.5 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	92
20	81
14	80
10	78
6.3	73
5	71
3.35	69
2	65
1.18	61
0.600	55
0.425	52
0.300	46
0.212	36
0.150	31
0.063	28
0.020	17
0.006	17
0.002	12



Soil Description: Grey very silty very gravelly medium and coarse SAND.

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Fax: (091) 847687

Contact: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 16/11/2006
Tested by: DD
Checked: DJ

Job Code:

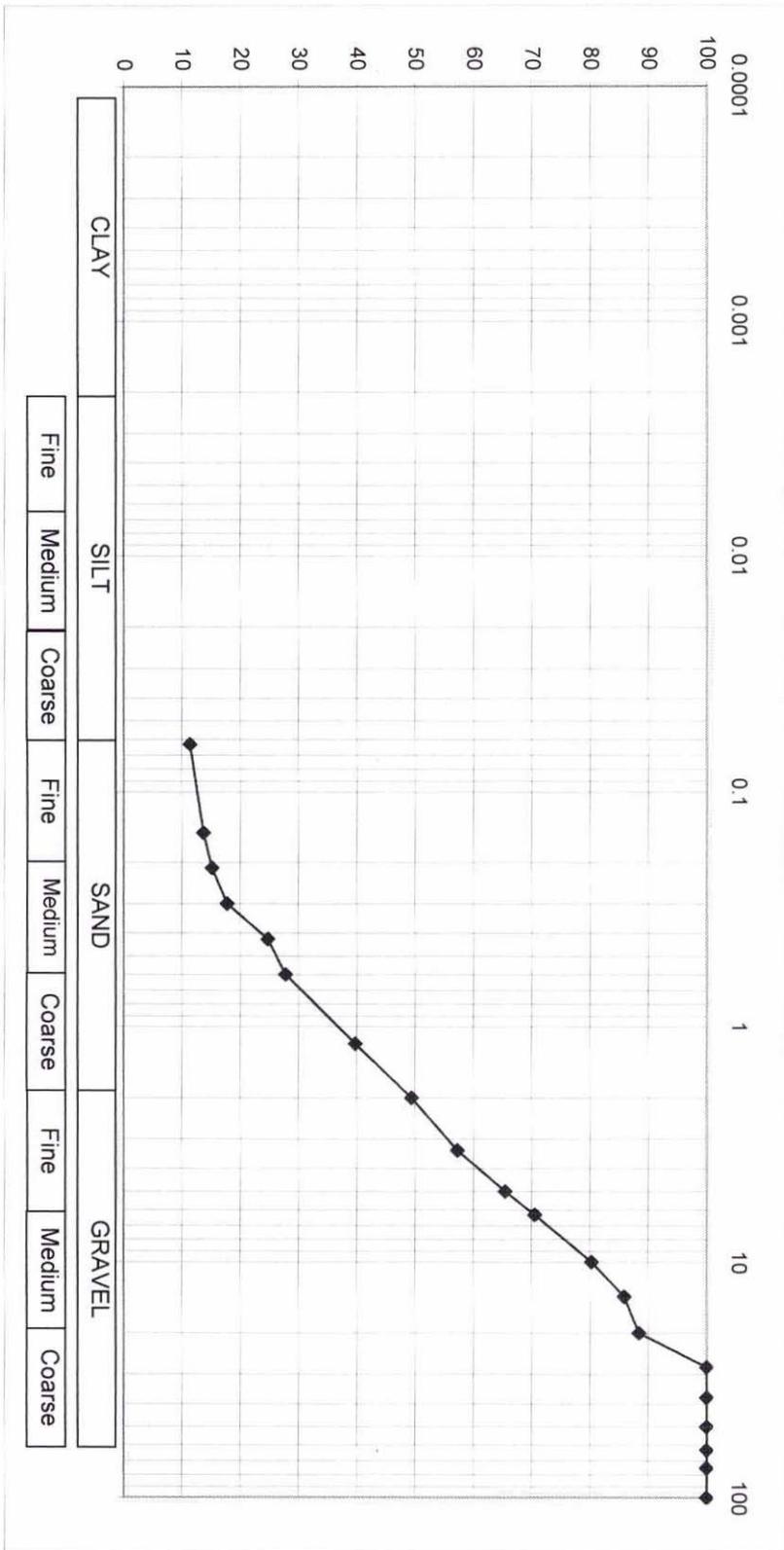
Location
TP 909
Depth: 2 m

PARTICLE SIZE DISTRIBUTION

BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	88
14	86
10	80
6.3	71
5	65
3.35	57
2	49
1.18	40
0.600	28
0.425	25
0.300	18
0.212	15
0.150	14
0.063	11
0.020	
0.006	
0.002	



Soil Description: Dark grey silty very sandy medium and fine GRAVEL.

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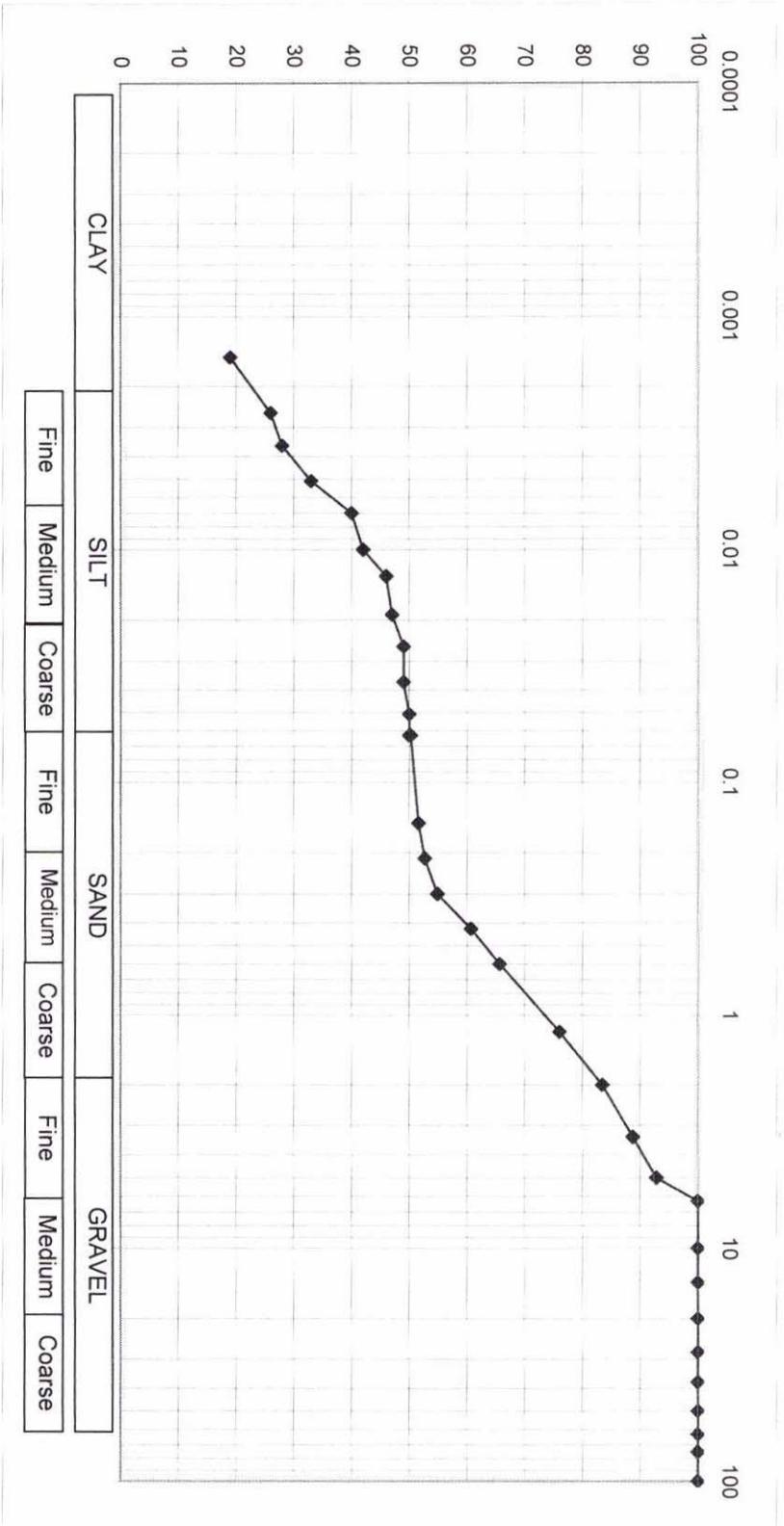
Contract: N6 Galway City Outer Bypass
Client:
Engineer: John Barnett & Associates
Date: 16/11/2006
Tested by: DD
Checked: DJ

Job Code:
Location: TP 909 A
Depth: 1 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

18/01/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5	93
3.35	89
2	83
1.18	76
0.600	66
0.425	61
0.300	55
0.212	53
0.150	52
0.063	50
0.020	48
0.006	38
0.002	22



Soil Description: Grey slightly gravelly slightly sandy SILT.

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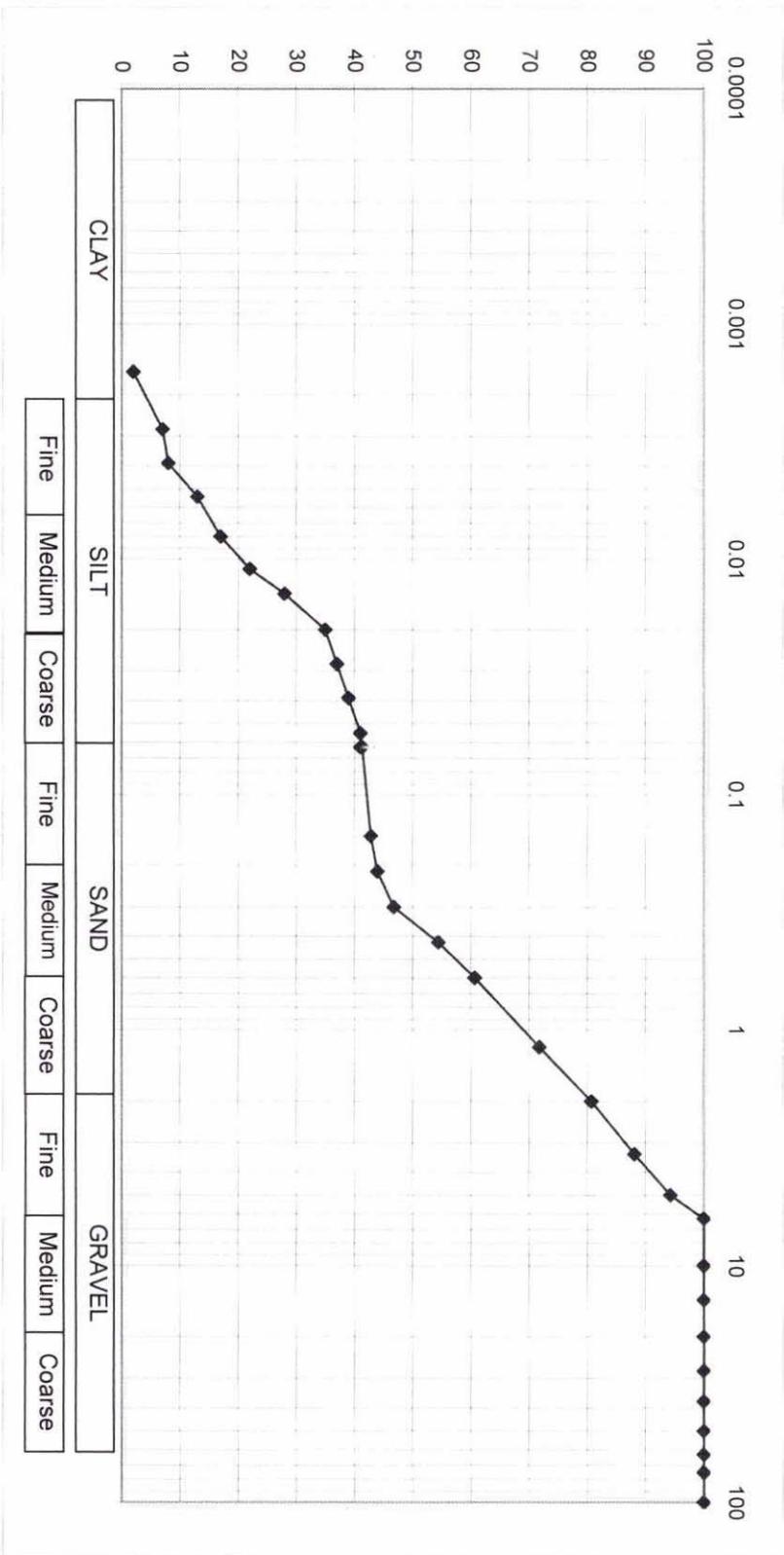
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: 23/11/2006
Date: DD
Tested by: DD
Checked: DJ

Location TP 932
Depth: 2.5 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

18/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5	94
3.35	88
2	81
1.18	72
0.600	61
0.425	54
0.300	47
0.212	44
0.150	43
0.063	41
0.020	35
0.006	14
0.002	4



Soil Description: White-grey slightly gravelly sandy SILT.

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Tel: (091) 841274
Fax: (091) 847687

Contract:
Client:
Engineer:
Date:
Tested by:

N6 Galway City Outer Bypass
John Barnett & Associates
23/11/2006
DD Checked: DJ

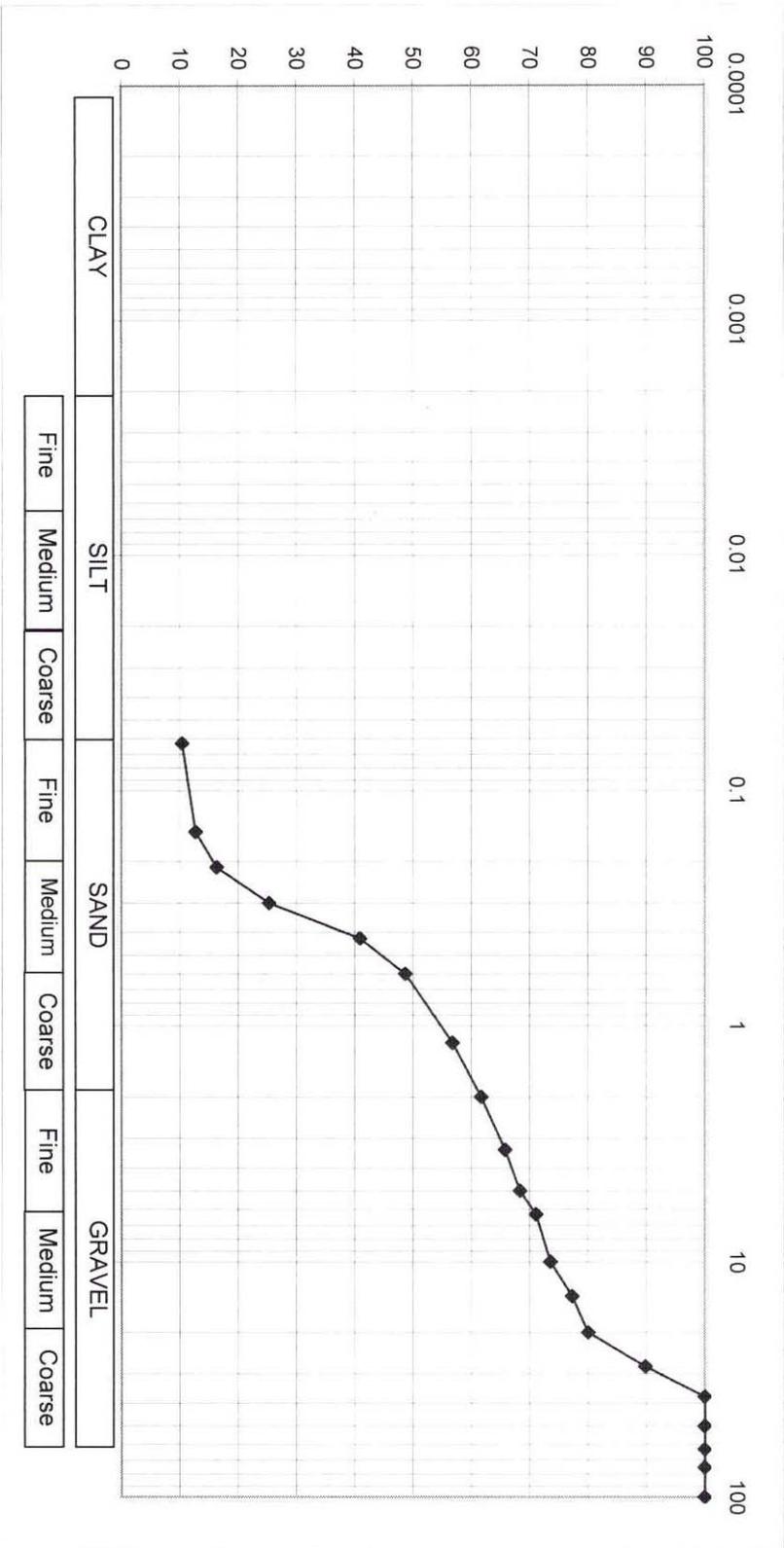
Job Code:

Location
TP 935
Depth: 1.5 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	90
20	80
14	77
10	74
6.3	71
5	68
3.35	66
2	62
1.18	57
0.600	49
0.425	41
0.300	25
0.212	16
0.150	13
0.063	10
0.020	
0.006	
0.002	



Soil Description: Grey silty very gravelly medium SAND.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

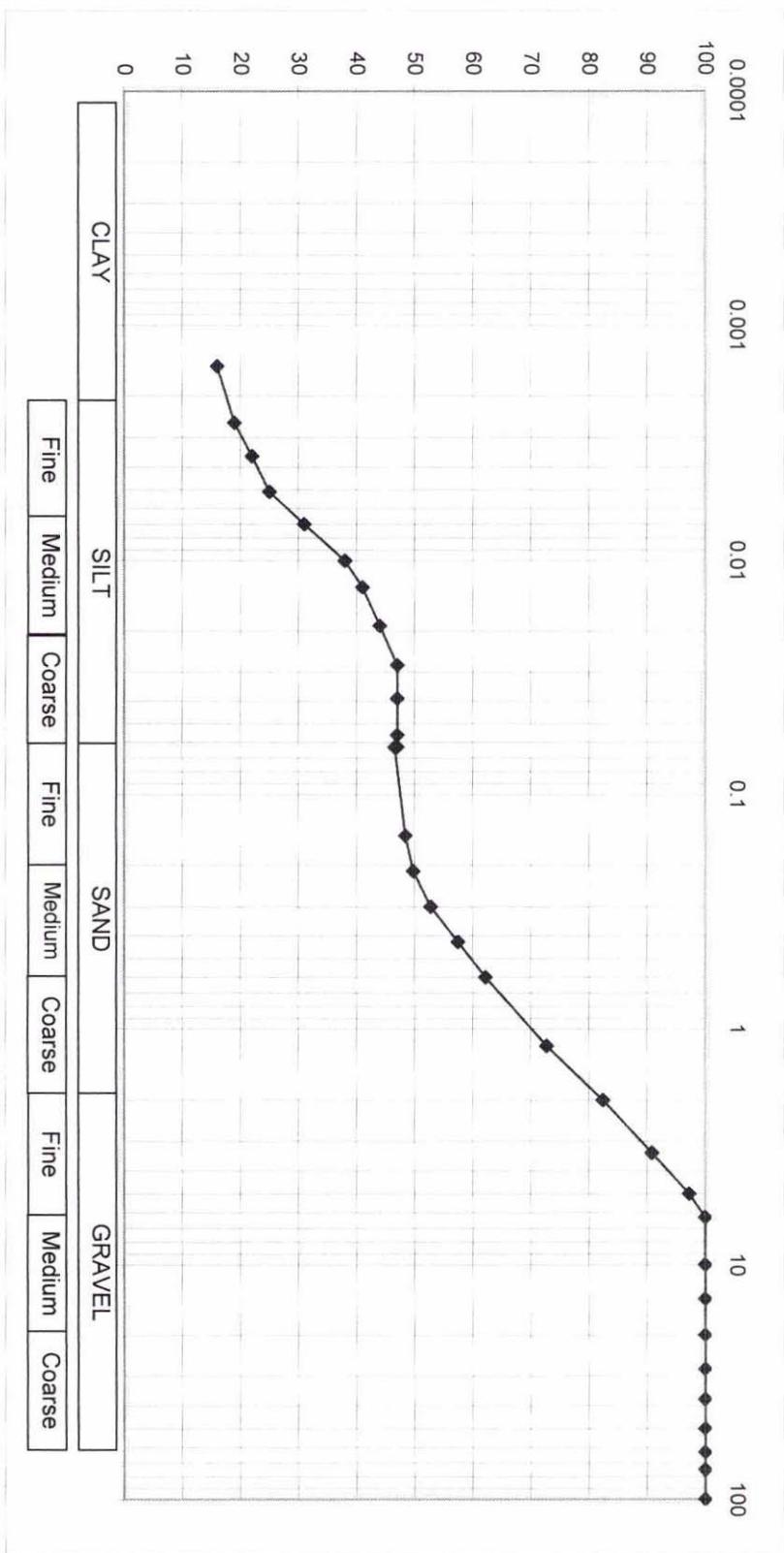
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD
Checked: DJ

Location TP 941
Depth: 0.5 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

18/01/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5	97
3.35	91
2	82
1.18	73
0.600	62
0.425	57
0.300	53
0.212	50
0.150	48
0.063	47
0.020	44
0.006	29
0.002	18



Soil Description: Dark grey slightly gravelly sandy SILT.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

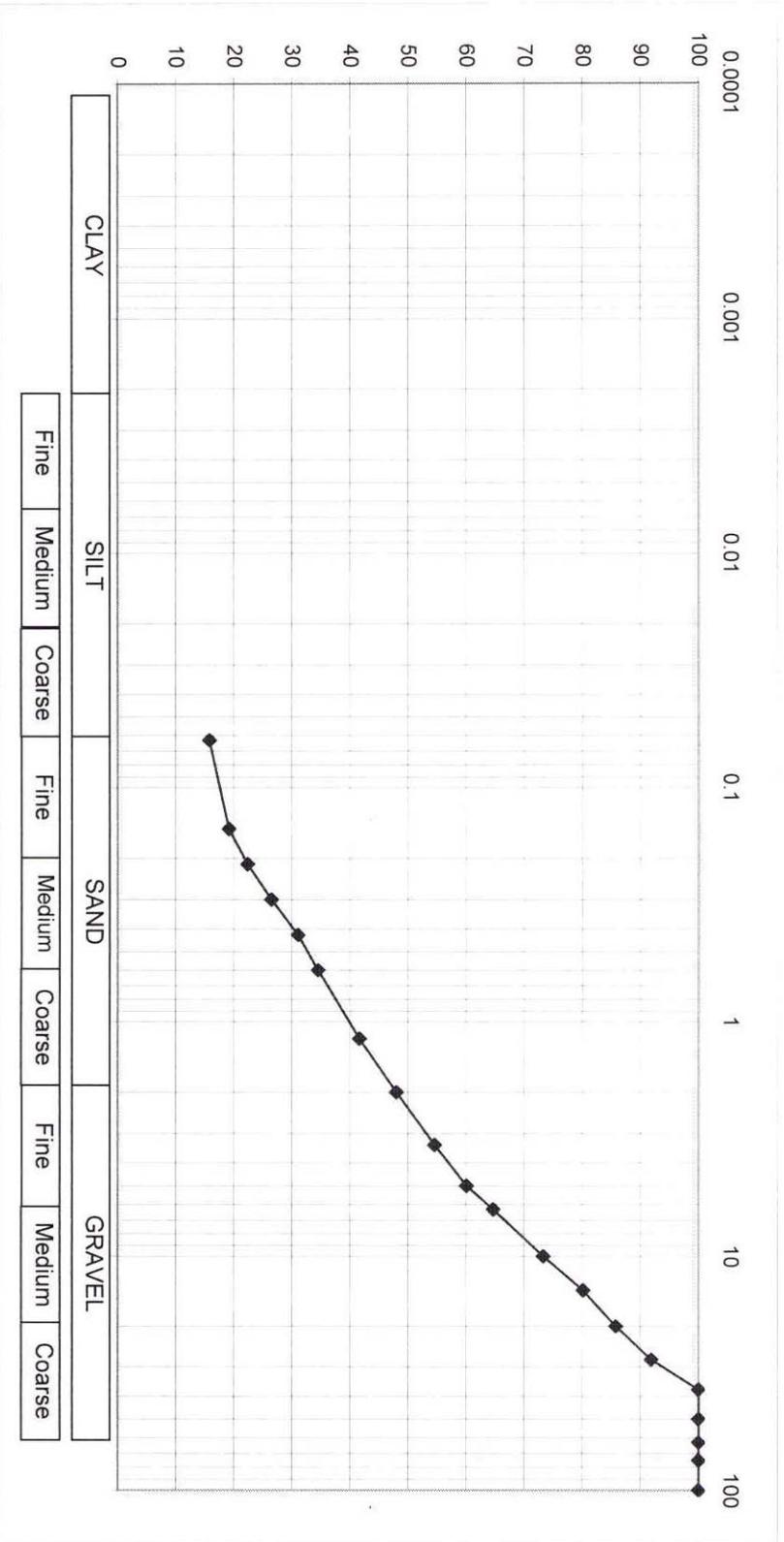
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD
Checked: DJ

Location
TP 941 A
Depth: 3.0-3.5 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	92
20	86
14	80
10	73
6.3	65
5	60
3.35	55
2	48
1.18	42
0.600	35
0.425	31
0.300	26
0.212	22
0.150	19
0.063	16
0.020	
0.006	
0.002	



Soil Description: Brown silty very sandy medium GRAVEL.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

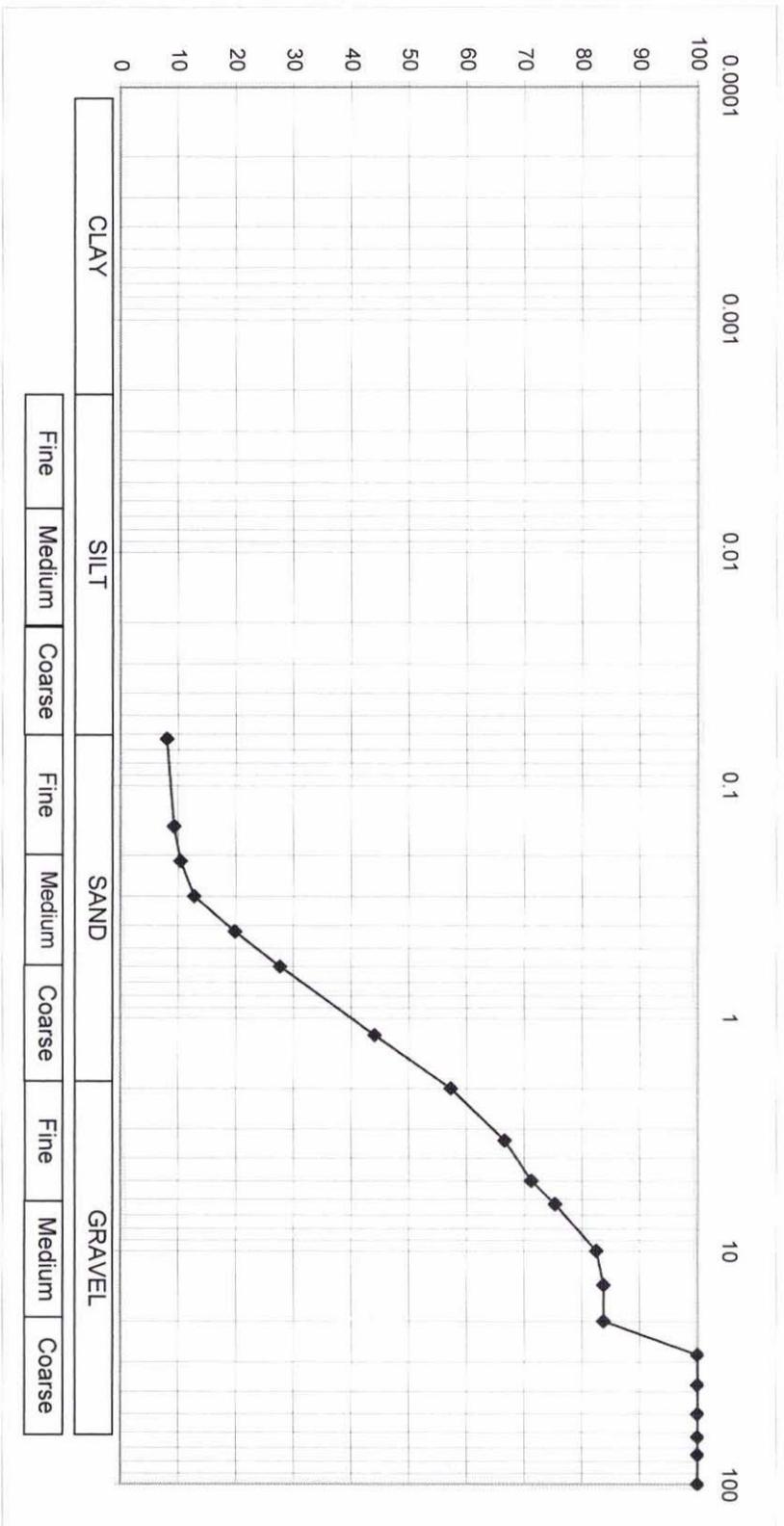
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD
Checked: DJ

Location
TP 944
Depth: 0.5 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	84
14	84
10	82
6.3	75
5	71
3.35	67
2	57
1.18	44
0.600	28
0.425	20
0.300	13
0.212	10
0.150	9
0.063	8
0.020	
0.006	
0.002	



Soil Description: Brown silty GRAVEL and SAND.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

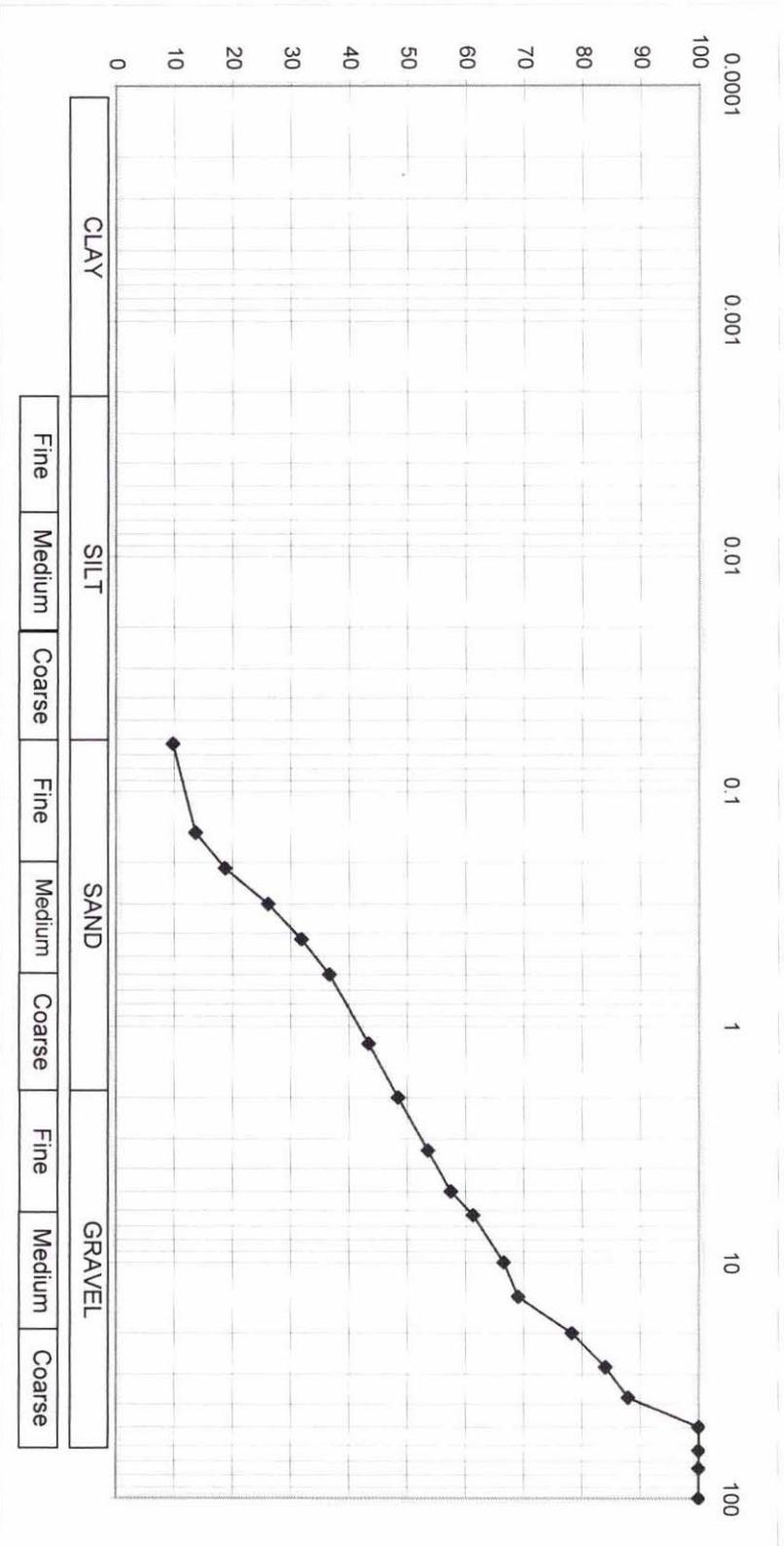
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD Checked: DJ

Location: **TP 945**
Depth: **1.4 m**

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	88
28	84
20	78
14	69
10	67
6.3	61
5	57
3.35	54
2	48
1.18	43
0.600	37
0.425	32
0.300	26
0.212	19
0.150	14
0.063	10
0.020	
0.006	
0.002	



Soil Description: Grey silty very sandy GRAVEL.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

Contract:
Client:
Engineer:
Date:
Tested by:

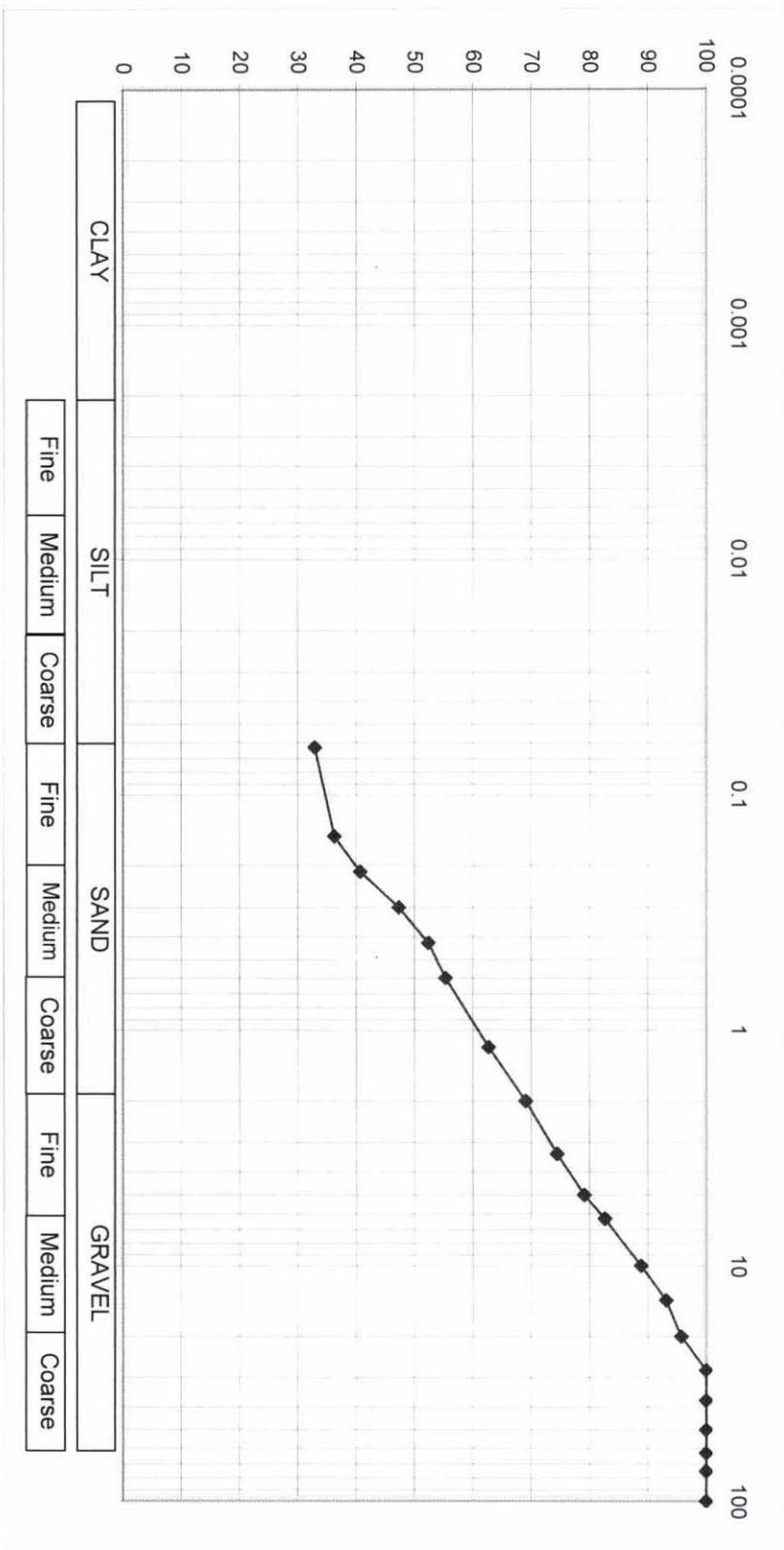
N6 Galway City Outer Bypass
John Barnett & Associates
23/11/2006
DD **Checked: DJ**
Job Code:

Location
TP 951
Depth: 1 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	96
14	93
10	89
6.3	83
5	79
3.35	74
2	69
1.18	63
0.600	55
0.425	52
0.300	47
0.212	41
0.150	36
0.063	33
0.020	
0.006	
0.002	



Soil Description: Light brown very gravelly very silty medium and coarse SAND.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

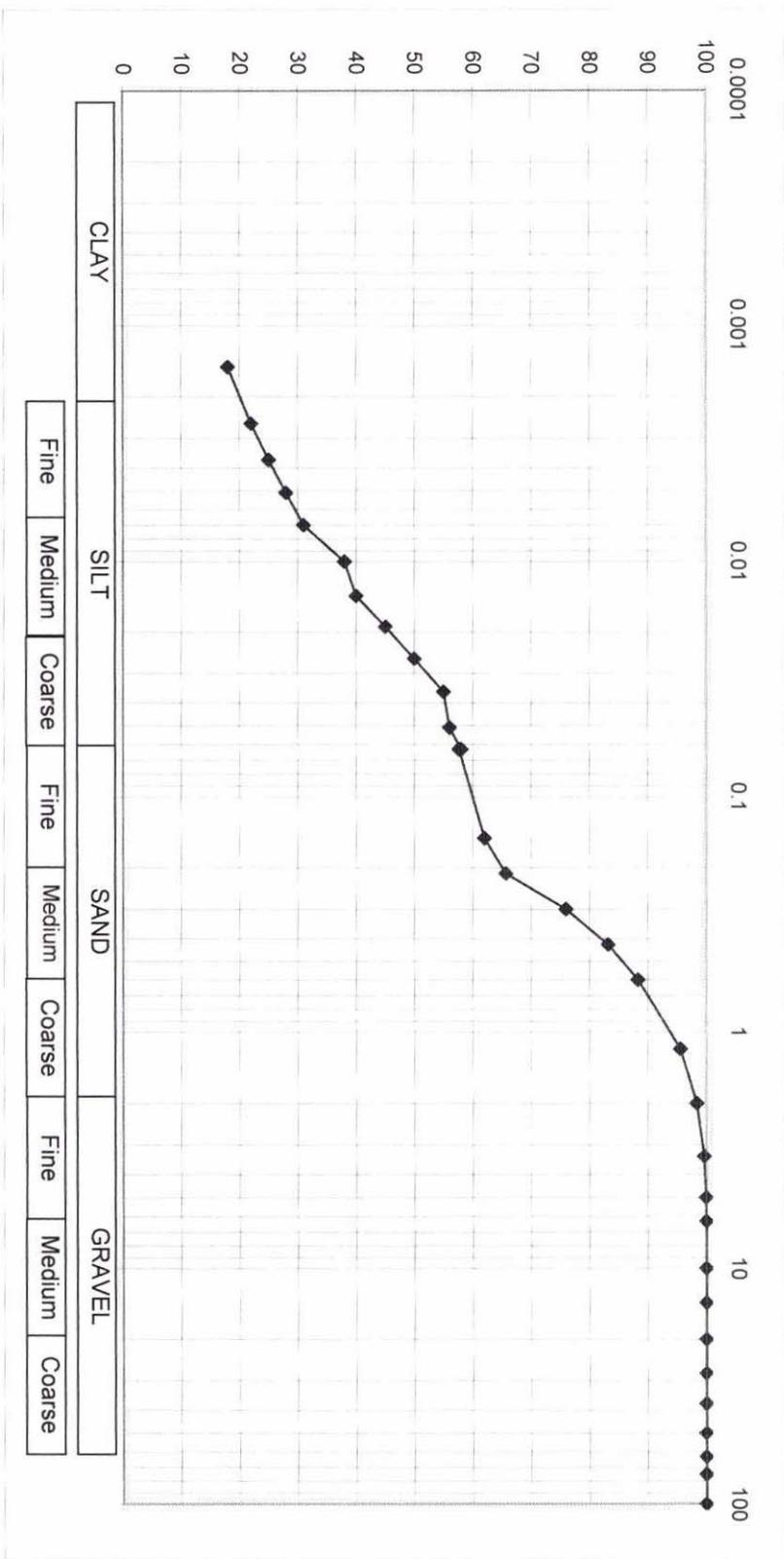
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD
Checked: DJ

Location TP 962
Depth: 0.6 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

18/01/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5	100
3.35	100
2	98
1.18	96
0.600	88
0.425	83
0.300	76
0.212	66
0.150	62
0.063	58
0.020	45
0.006	30
0.002	20



Soil Description: Light brown slightly gravelly sandy SILT.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD
Checked: DJ

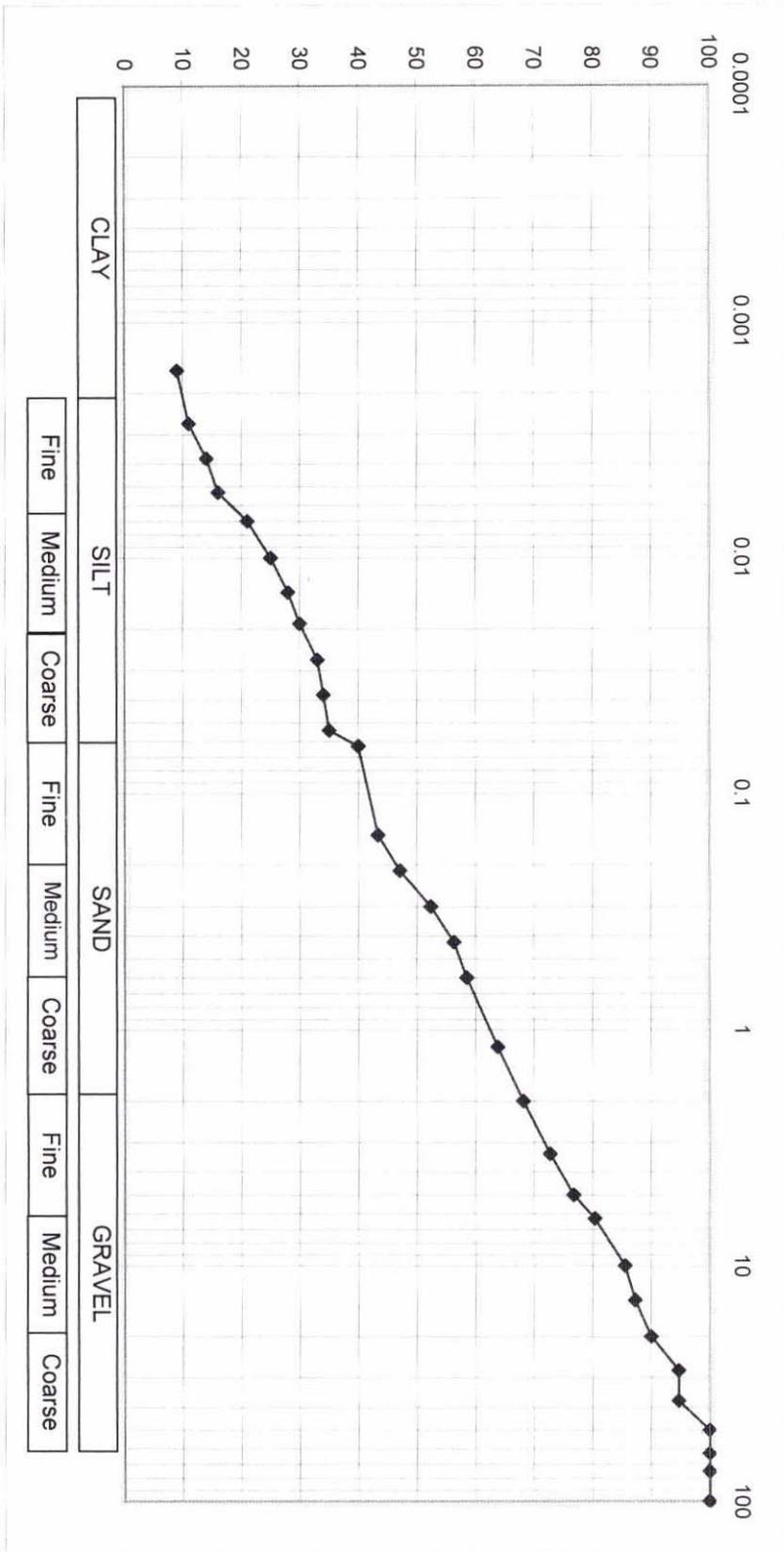
Location: TP 969
Depth: 0.7 m

PARTICLE SIZE DISTRIBUTION

BS 1377: 1990: PART 2 (9.2, 9.5)

18/01/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	95
28	95
20	90
14	87
10	86
6.3	80
5	77
3.35	73
2	68
1.18	64
0.600	58
0.425	56
0.300	52
0.212	47
0.150	43
0.063	40
0.020	30
0.006	19
0.002	10



Soil Description: Brown slightly gravelly slightly sandy SILT.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 23/11/2006
Tested by: DD
Checked: DJ

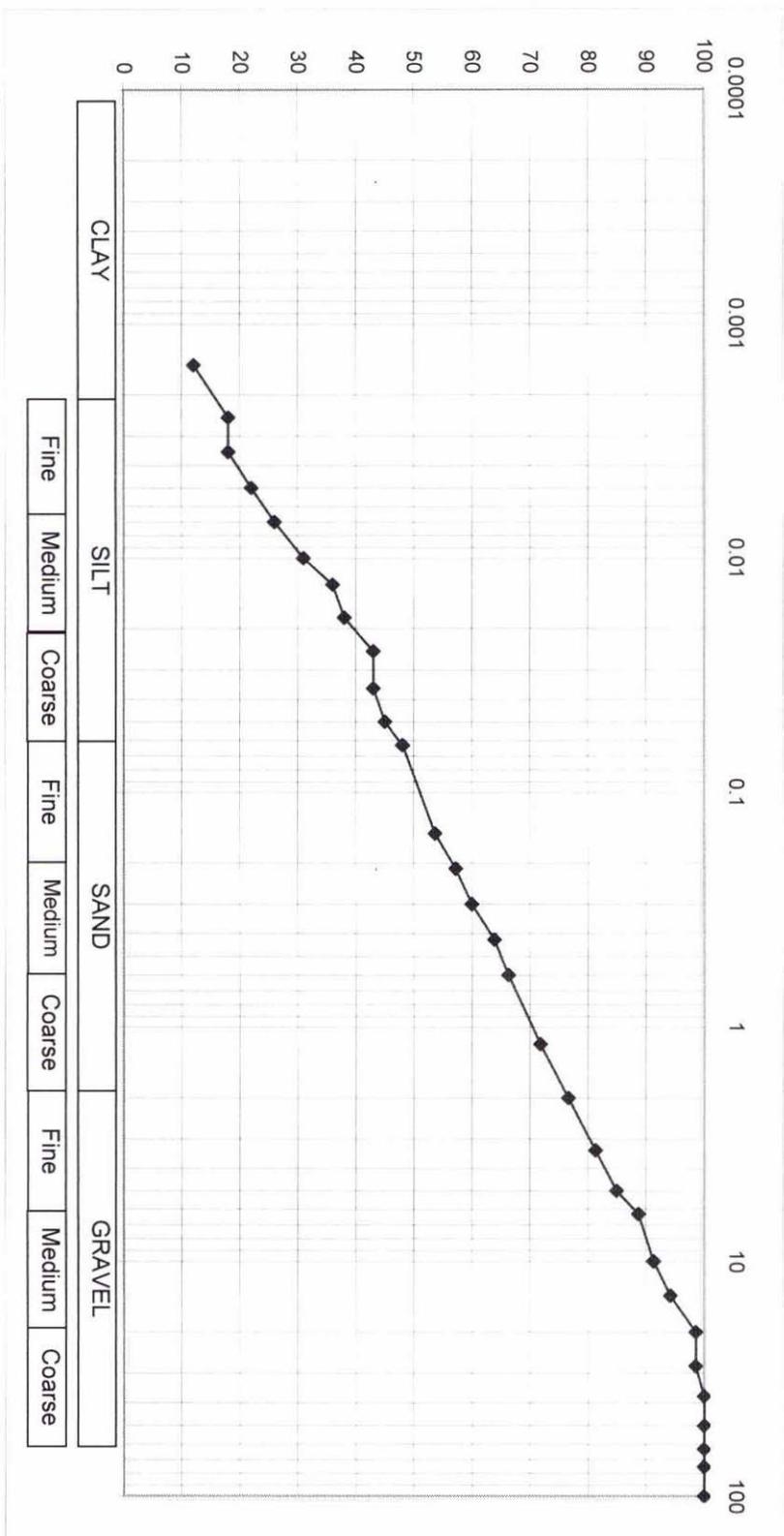
Location: TP 971
Depth: 1 m

PARTICLE SIZE DISTRIBUTION

BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	99
20	99
14	94
10	91
6.3	89
5	85
3.35	81
2	77
1.18	72
0.600	66
0.425	64
0.300	60
0.212	57
0.150	54
0.063	48
0.020	40
0.006	24
0.002	15



Soil Description: Grey slightly gravelly slightly sandy SILT.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: 26/10/2006
Date: DD
Tested by: DD
Checked: DJ

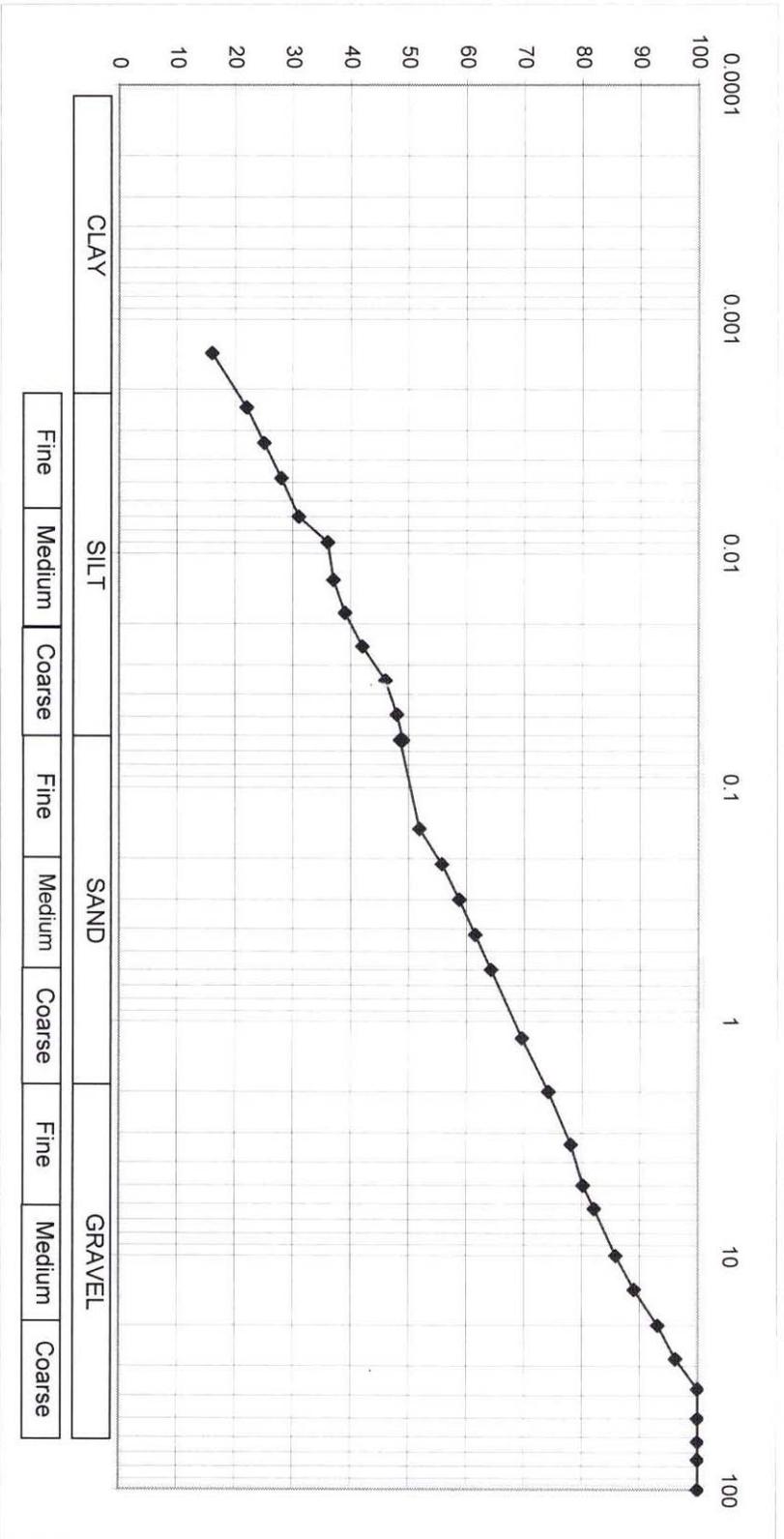
Location: **TP 1111**
Depth: **2 m**

PARTICLE SIZE DISTRIBUTION

BS 1377: 1990: PART 2 (9.2, 9.5)

12/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	96
20	93
14	89
10	86
6.3	82
5	80
3.35	78
2	74
1.18	70
0.600	64
0.425	62
0.300	59
0.212	56
0.150	52
0.063	49
0.020	40
0.006	30
0.002	20



Soil Description: Grey slightly gravelly slightly sandy SILT.

IRISH DRILLING LTD.
 Loughrea Co. Galway
 Tel: (091) 841274
 Fax: (091) 847687

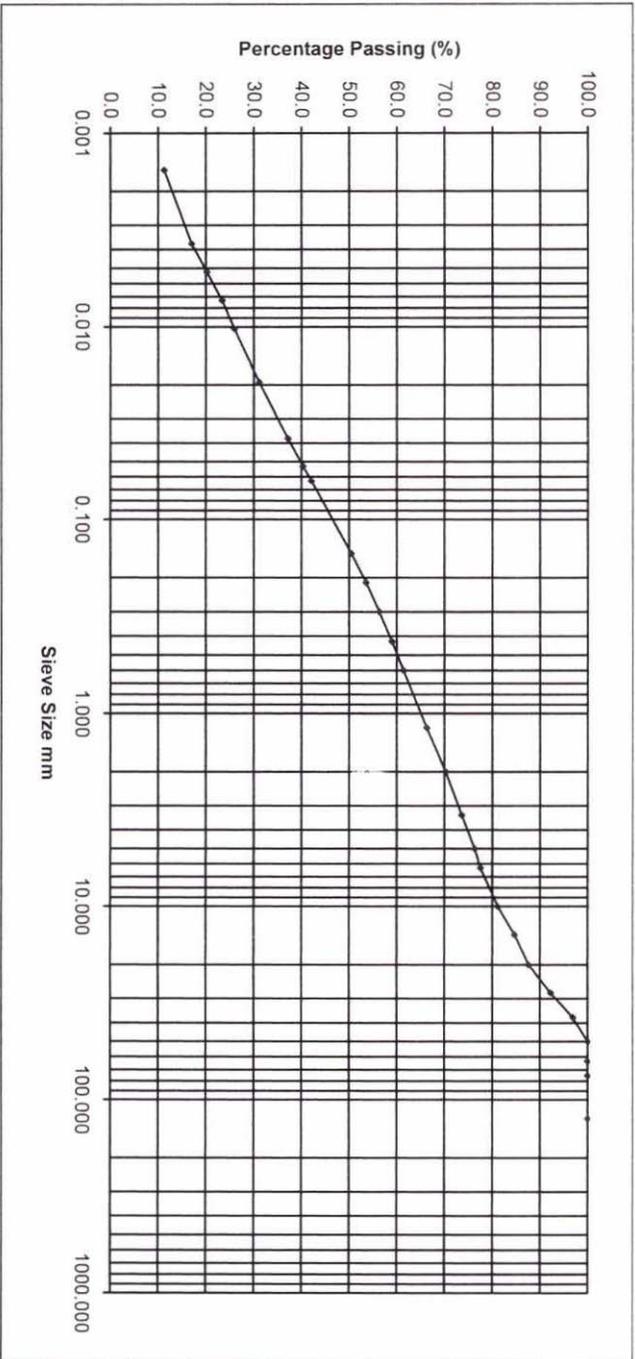
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: 26/10/2006
Date: DD
Tested by: Checked: DJ

Location TP 1111
Depth: 4 m

NMTL Ltd

Determination of Particle Size Distribution BS 1377 : 1990 : Part 2 : Clauses 9.2 & 9.5

Sieve	Size mm	Passing %
	125.000	100.0
	75.000	100.0
	63.000	100.0
	50.000	100.0
	37.500	96.9
	28.000	92.2
	20.000	87.7
	14.000	84.7
	10.000	81.2
	6.300	77.5
	5.000	76.3
	3.350	73.6
	2.000	70.3
	1.180	66.3
	0.600	61.4
	0.425	58.9
	0.300	56.4
	0.212	53.6
	0.150	50.5
	0.063	42.1
	0.053	40.4
	0.038	37.2
	0.019	31.1
	0.010	26.0
	0.007	23.4
	0.005	20.2
	0.004	17.0
	0.002	11.2



Clay	Percentage Particle Size				Cobbles	Boulder
	Fine	Medium	Coarse	Silt		
	11.2	30.9	28.1	29.7	0.0	0.0

Sample Description Grey sandy gravelly SILT/CLAY..

Project GCOB Galway County Council

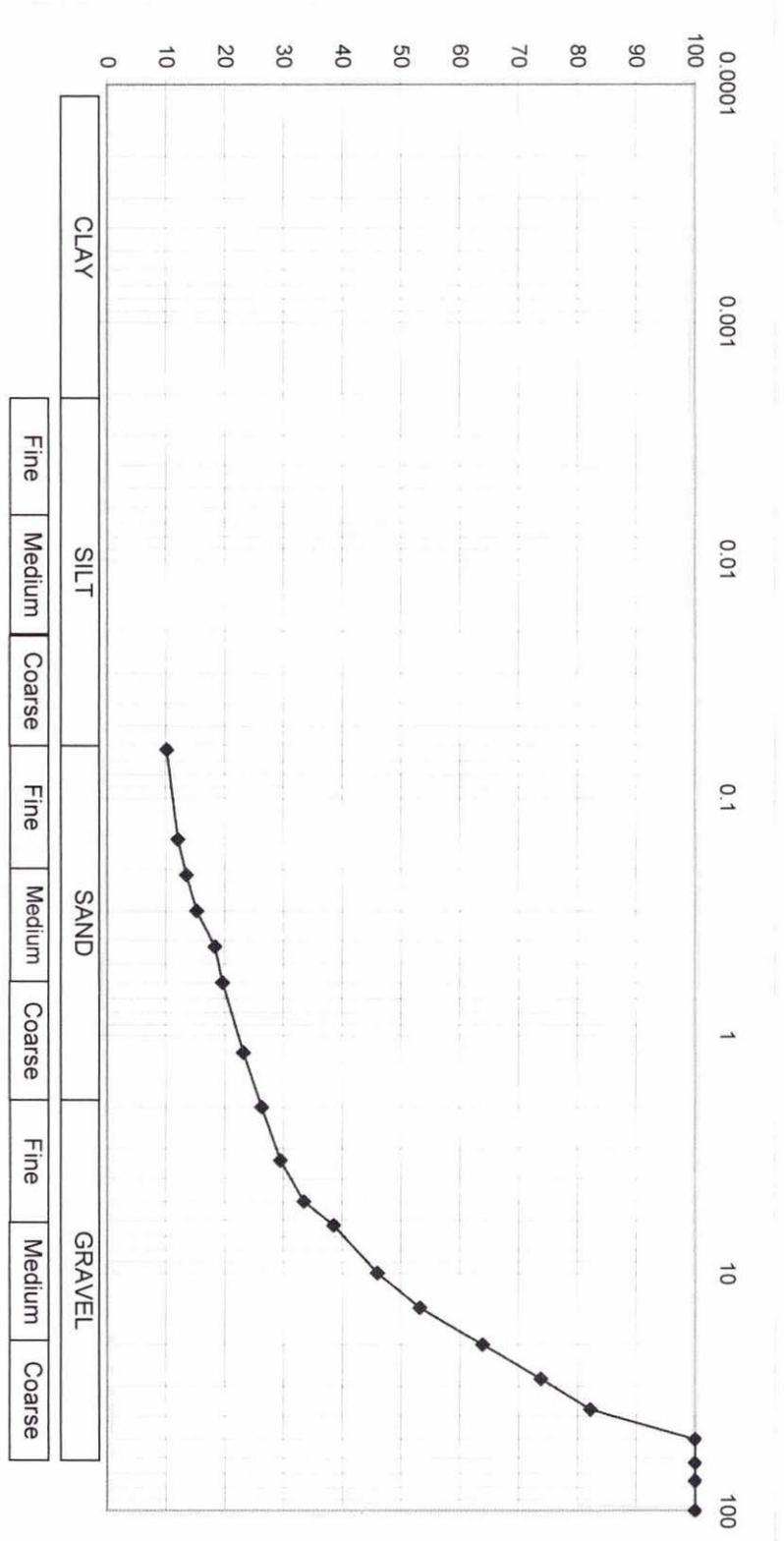
NMTL Ltd

Project No. NMTL249
 Trial Pit No. TP1132
 Sample No. B
 Depth 1.00m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

18/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	82
28	74
20	64
14	53
10	46
6.3	39
5	33
3.35	29
2	26
1.18	23
0.600	20
0.425	18
0.300	15
0.212	13
0.150	12
0.063	10
0.020	
0.006	
0.002	



Soil Description: Grey silty sandy medium and coarse GRAVEL, with much PEAT.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

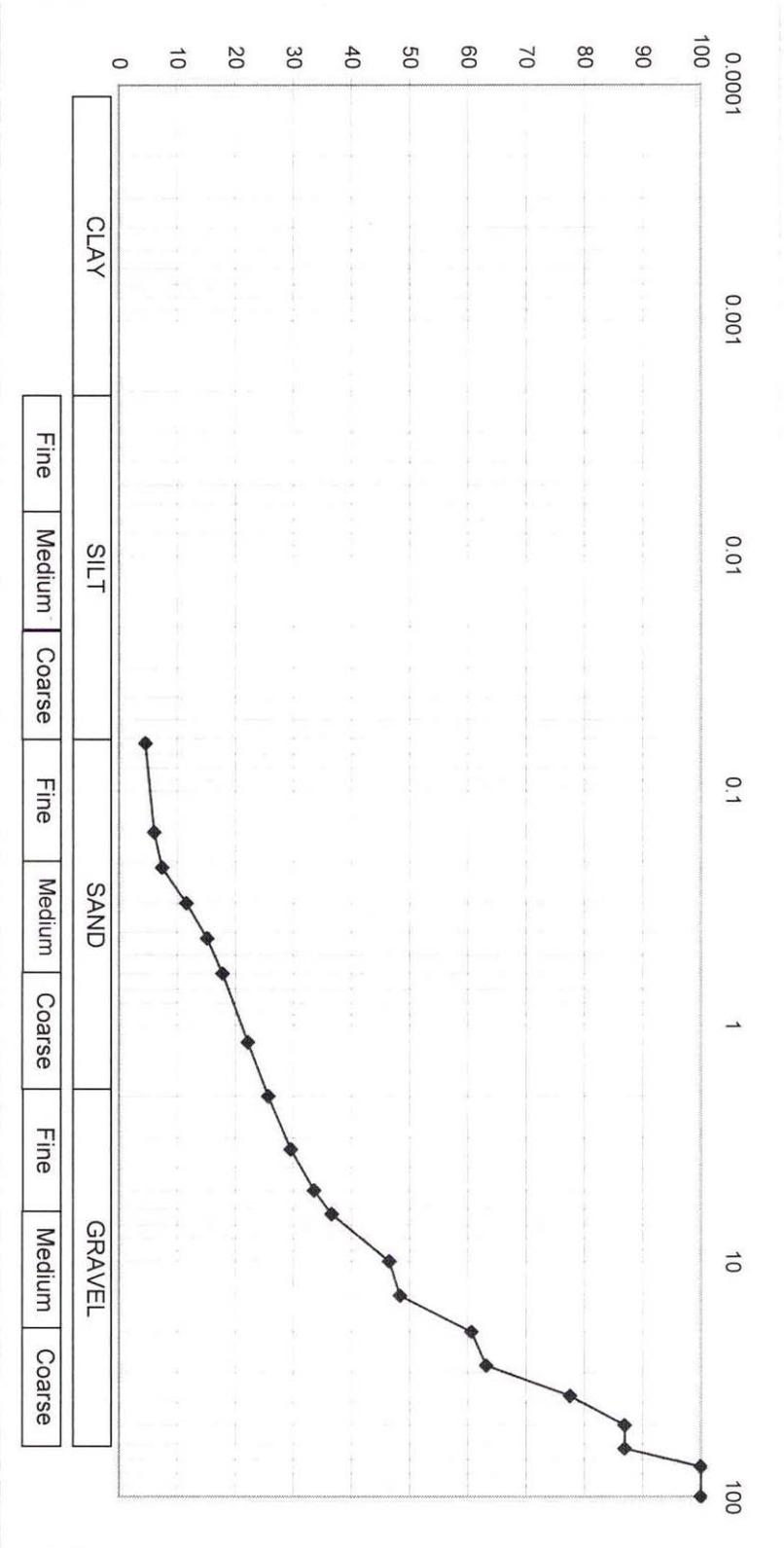
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: 13/12/2006
Date: DD
Tested by: Checked: DJ

Location TP 1430
Depth: 1.3 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

18/12/2006

Sieve size mm	Percentage passing, %
100	100
75	100
63	87
50	87
37.5	78
28	63
20	61
14	48
10	46
6.3	37
5	34
3.35	30
2	26
1.18	22
0.600	18
0.425	15
0.300	12
0.212	7
0.150	6
0.063	5
0.020	
0.006	
0.002	



Soil Description: Grey silty very sandy medium and coarse GRAVEL with some cobbles.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

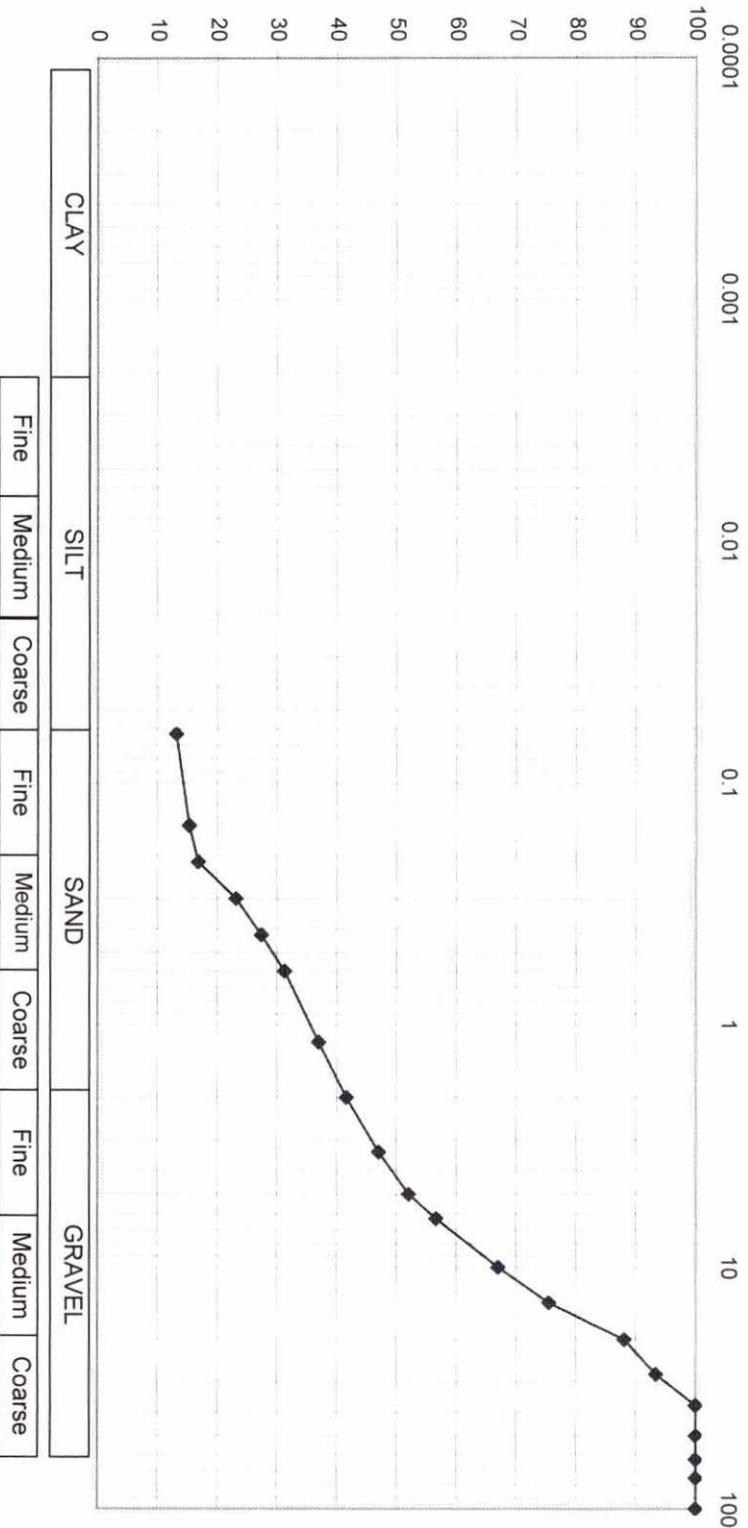
Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 13/12/2006
Tested by: DD
Checked: DJ

Location: TP 1431
Depth: 1 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

05/01/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	93
20	88
14	75
10	67
6.3	57
5	52
3.35	47
2	42
1.18	37
0.600	31
0.425	27
0.300	23
0.212	17
0.150	15
0.063	13
0.020	
0.006	
0.002	



CLAY	SILT			SAND			GRAVEL		
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse

Soil Description: Grey-brown silty very sandy medium GRAVEL.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

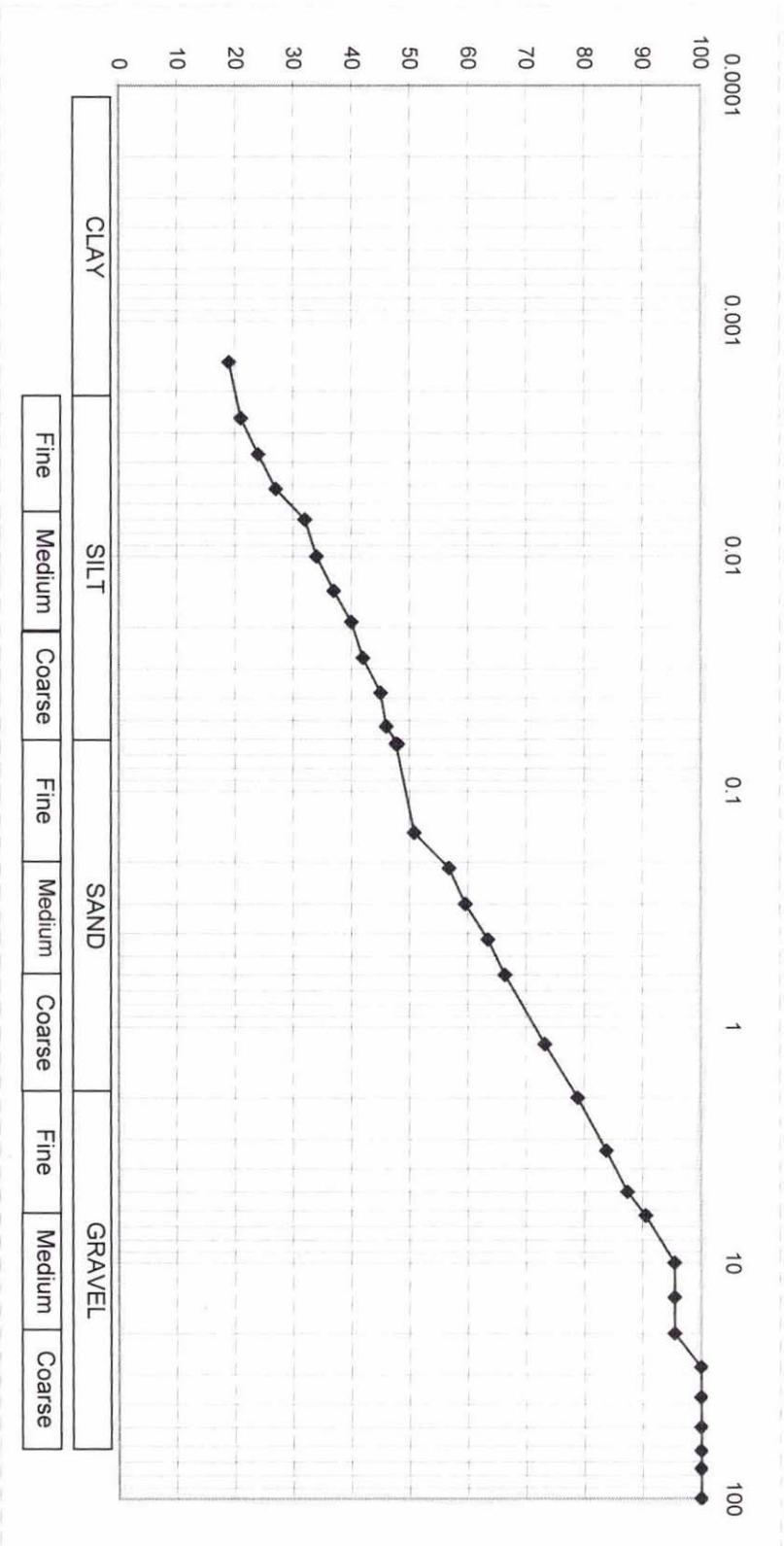
Contract: N6 Galway City Outer Bypass
Client:
Engineer: John Barnett & Associates
Date: 02/01/2007
Tested by: DD
Checked: DJ

Location TP 1432
Depth: 1 m

PARTICLE SIZE DISTRIBUTION BS 1377: 1990: PART 2 (9.2, 9.5)

12/01/2007

Sieve size mm	Percentage passing, %
100	100
75	100
63	100
50	100
37.5	100
28	100
20	95
14	95
10	95
6.3	90
5	87
3.35	84
2	79
1.18	73
0.600	66
0.425	63
0.300	60
0.212	57
0.150	51
0.063	48
0.020	40
0.006	30
0.002	20



Soil Description: Grey-brown slightly gravelly slightly sandy SILT.

IRISH DRILLING LTD.
Loughrea Co. Galway
Tel: (091) 841274
Fax: (091) 847687

Contract: N6 Galway City Outer Bypass
Client: John Barnett & Associates
Engineer: John Barnett & Associates
Date: 15/12/2006
Tested by: DD
Checked: DJ

Location: TP 1436
Depth: 0.95 m



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC936

Location

GCOB

Sample No

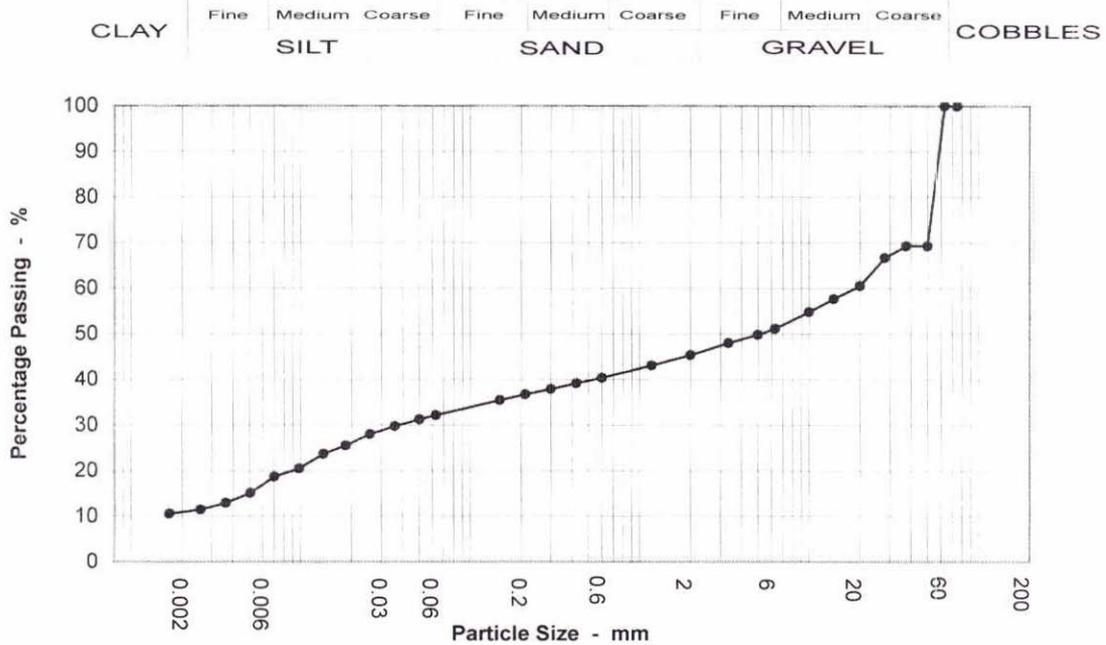
Depth

6.00 m

Visual Soil Description

Grey clayey sandy very silty GRAVEL

Sample type



Seiving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.050	31
63	100	0.036	30
50	69	0.026	28
37.5	69	0.018	25
28	67	0.014	24
20	61	0.010	20
14	58	0.007	19
10	55	0.005	15
6.3	51	0.004	13
5	50	0.003	11
3.35	48	0.002	11
2	45		
1.18	43		
0.6	40		
0.425	39		
0.3	38		
0.212	37		
0.15	35		
0.063	32		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	54.6
Sand	13.5
Silt	21.0
Clay	10.9

Grading Analysis	
D100	63.0
D60	18.8
D10	
Uniformity Coefficient	N/A

K4 SOILS LABORATORY

Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU.
E-mail: k4soils@aol.com

Approved Signatories: **K.Phaure(Tech.Mgr)**

J.Phaure(Lab.Mgr) Bhavika.R.(Qual.Mgr)

Test results relate only to the sample numbers shown above

Checked and Approved

Initials: kp

Date: 2/5/2007

Sheet3/3

MSF-11 / R9

All samples connected with this report, incl any on 'hold' will be disposed off according to Company Policy. Acopy of this policy is available on request



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC936

Location

GCOB

Sample No

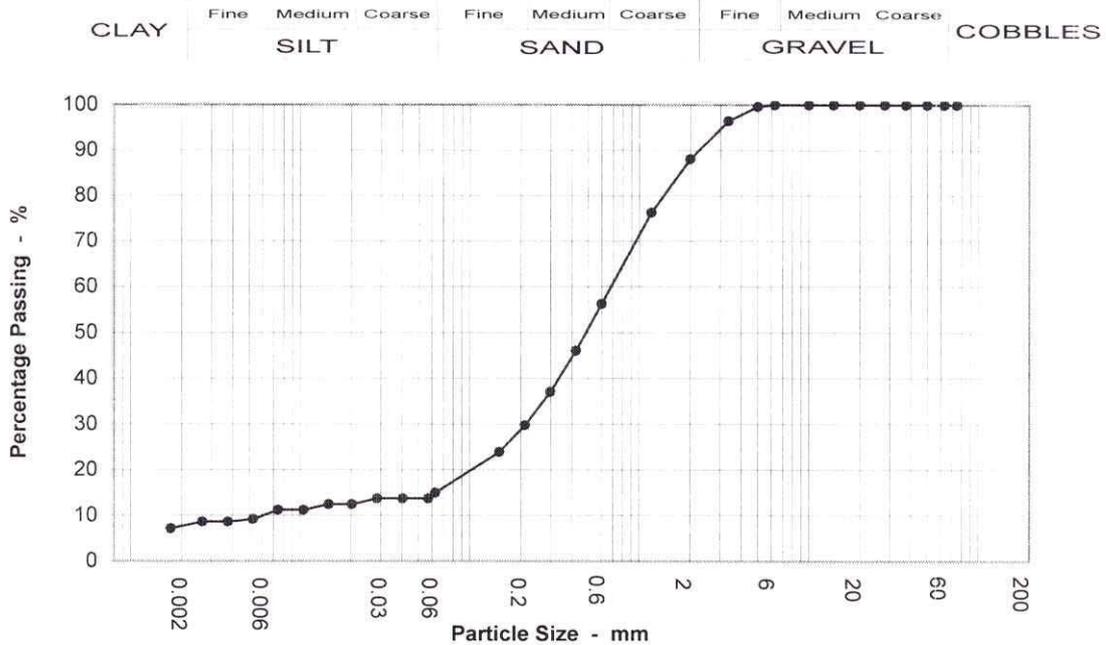
Depth

17.00 m

Visual Soil Description

Grey silty clayey gravelly SAND

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.057	14
63	100	0.040	14
50	100	0.029	14
37.5	100	0.020	12
28	100	0.015	12
20	100	0.011	11
14	100	0.007	11
10	100	0.005	9
6.3	100	0.004	9
5	100	0.003	9
3.35	96	0.002	7
2	88		
1.18	76		
0.6	56		
0.425	46		
0.3	37		
0.212	30		
0.15	24		
0.063	15		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	11.9
Sand	73.8
Silt	6.8
Clay	7.5

Grading Analysis	
D100	6.3
D60	0.7
D10	
Uniformity Coefficient	N/A

K4 SOILS LABORATORY

Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU.
E-mail: k4soils@aol.com

Approved Signatories: K.Phaure(Tech.Mgr)

J.Phaure(Lab.Mgr) Bhavika.R.(Qual.Mgr)

Test results relate only to the sample numbers shown above

Checked and Approved

Initials: kp

Date: 2/5/2007

Sheet:3/3

MSF-11 / R9



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC936

Location

GCOB

Sample No

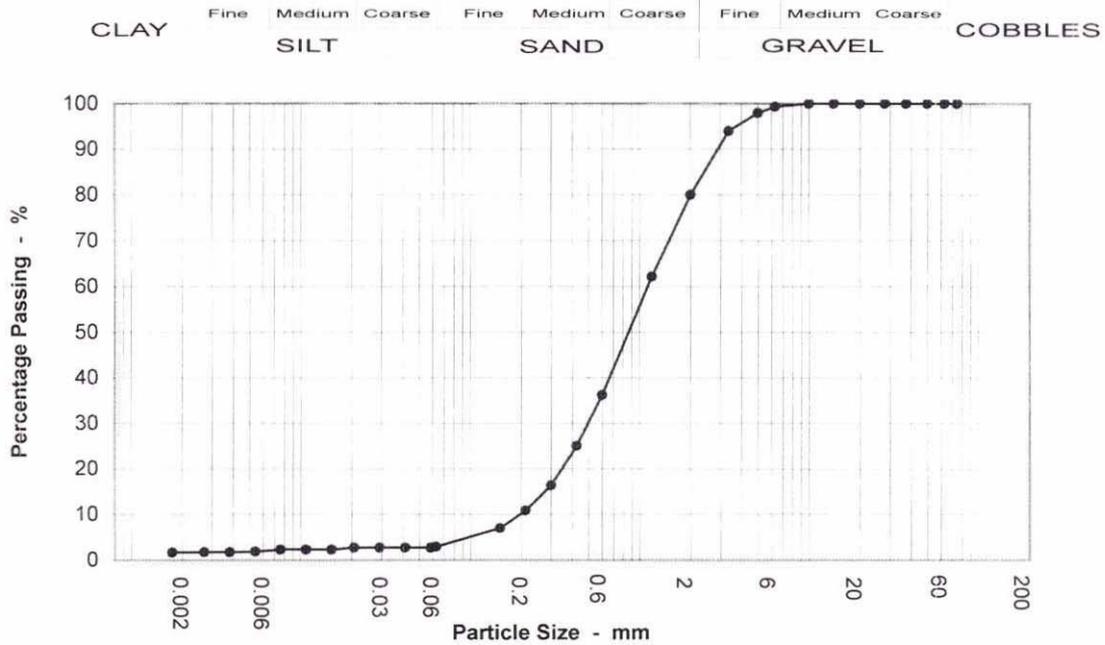
Depth

24.00 m

Visual Soil Description

Grey slightly silty slightly clayey gravelly SAND

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.059	3
63	100	0.041	3
50	100	0.029	3
37.5	100	0.021	3
28	100	0.015	2
20	100	0.011	2
14	100	0.008	2
10	100	0.005	2
6.3	99	0.004	2
5	98	0.003	2
3.35	94	0.002	2
2	80		
1.18	62		
0.6	36		
0.425	25		
0.3	16		
0.212	11		
0.15	7		
0.063	3		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	20.0
Sand	77.2
Silt	1.1
Clay	1.7

Grading Analysis	
D100	10.0
D60	1.1
D10	0.2
Uniformity Coefficient	6

K4 SOILS LABORATORY

Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU.
E-mail: k4soils@aol.com

Approved Signatories: K.Phaure(Tech.Mgr)

J.Phaure(Lab.Mgr) Bhavika.R.(Qual.Mgr)

Test results relate only to the sample numbers shown above

Checked and Approved

Initials: kp

Date: 2/5/2007

Sheet3/3

MSF-11 / R9



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC936

Location

GCOB

Sample No

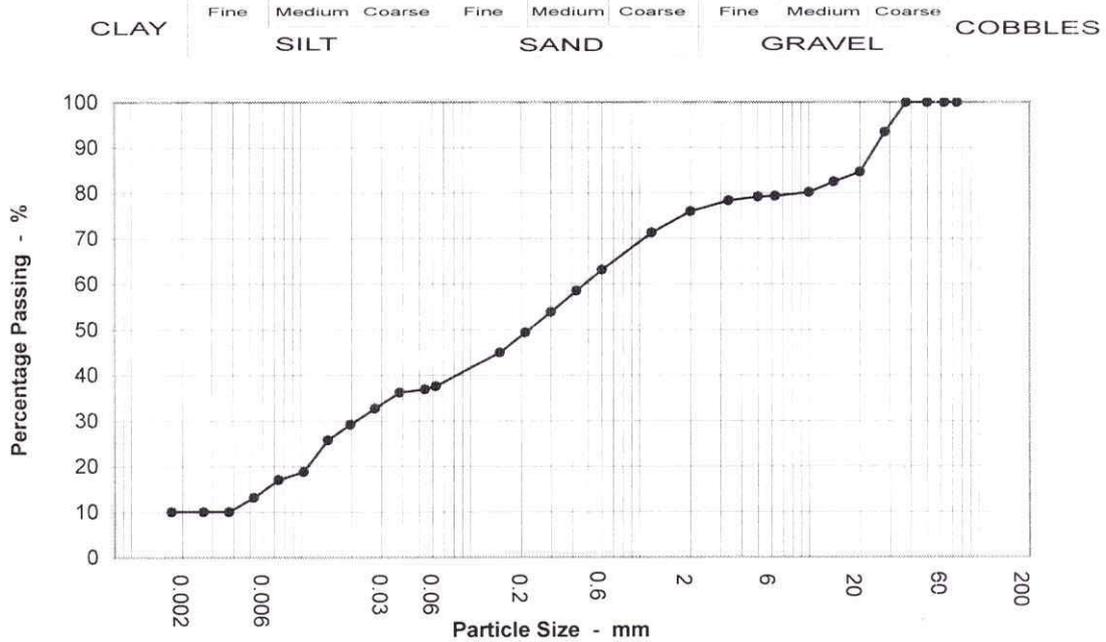
Depth

34.00 m

Visual Soil Description

Grey clayey very gravelly very silty SAND

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.054	37
63	100	0.038	36
50	100	0.027	33
37.5	100	0.020	29
28	93	0.014	26
20	85	0.010	19
14	83	0.007	17
10	80	0.005	13
6.3	79	0.004	10
5	79	0.003	10
3.35	78	0.002	10
2	76		
1.18	71		
0.6	63		
0.425	59		
0.3	54		
0.212	49		
0.15	45		
0.063	38		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	23.9
Sand	38.7
Silt	27.3
Clay	10.1

Grading Analysis	
D100	37.5
D60	0.5
D10	
Uniformity Coefficient	N/A

K4 SOILS LABORATORY

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Initials: kp

Date: 2/5/2007

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MSF-11 / R9



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC936

Location

GCOB

Sample No

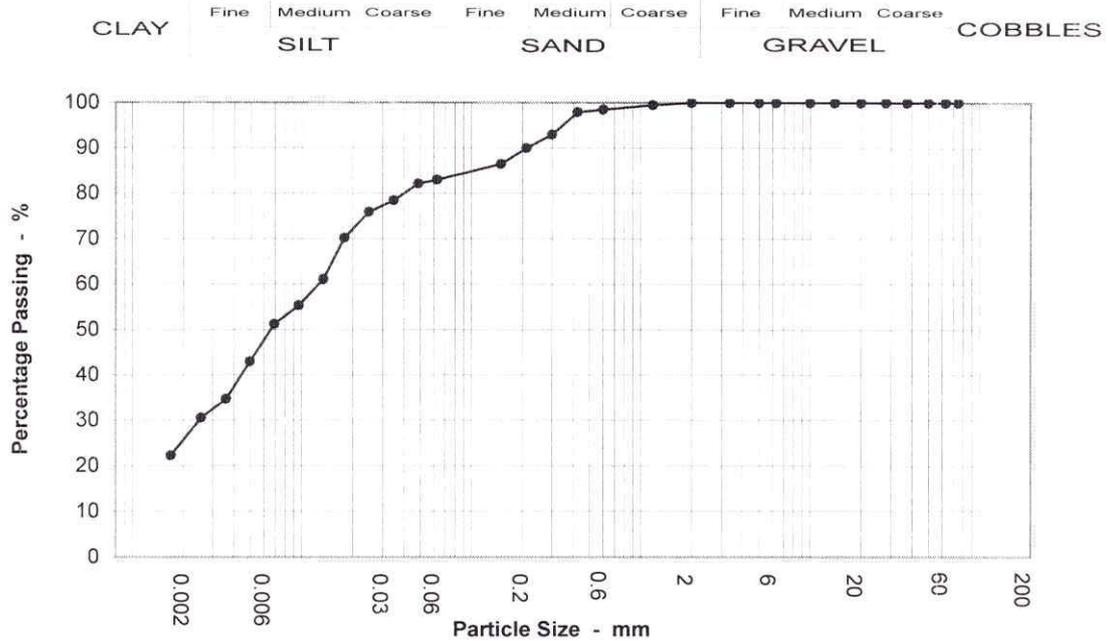
Depth

40.00 m

Visual Soil Description

Grey slightly sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.049	82
63	100	0.035	78
50	100	0.025	76
37.5	100	0.018	70
28	100	0.013	61
20	100	0.010	55
14	100	0.007	51
10	100	0.005	43
6.3	100	0.004	35
5	100	0.003	31
3.35	100	0.002	22
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	93		
0.212	90		
0.15	87		
0.063	83		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	0.0
Sand	17.2
Silt	57.6
Clay	25.2

Grading Analysis	
D100	2.0
D60	
D10	
Uniformity Coefficient	N/A

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MSF-11 / R9



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC936

Location

GCOB

Sample No

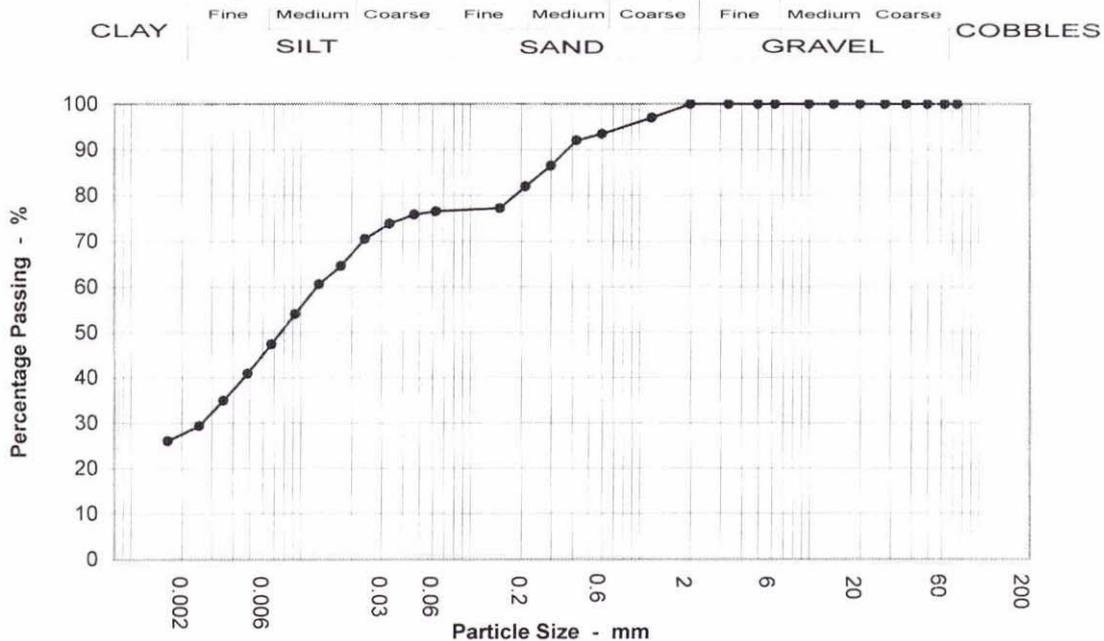
Depth

46.00 m

Visual Soil Description

Dark grey slightly sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.047	76
63	100	0.033	74
50	100	0.024	71
37.5	100	0.017	65
28	100	0.013	61
20	100	0.009	54
14	100	0.007	47
10	100	0.005	41
6.3	100	0.004	35
5	100	0.003	29
3.35	100	0.002	26
2	100		
1.18	97		
0.6	94		
0.425	92		
0.3	87		
0.212	82		
0.15	77		
0.063	77		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	0.0
Sand	23.6
Silt	49.0
Clay	27.4

Grading Analysis	
D100	2.0
D60	
D10	
Uniformity Coefficient	N/A

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PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC936

Location

GCOB

Sample No

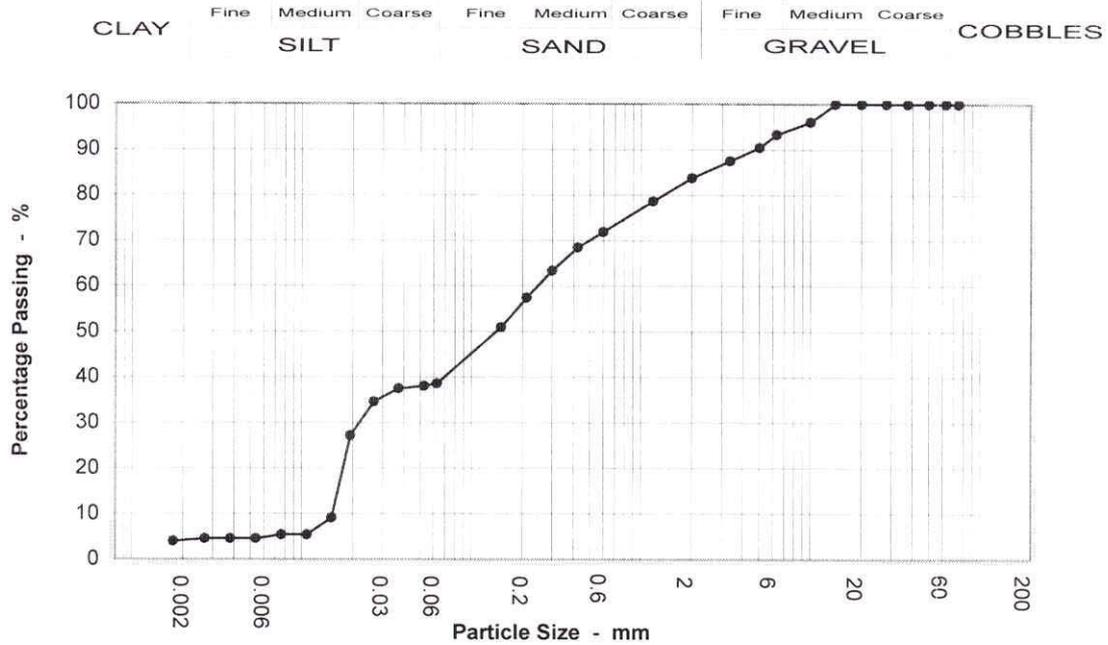
Depth

51.00 m

Visual Soil Description

Dark grey slightly gravelly very sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.053	38
63	100	0.037	37
50	100	0.027	35
37.5	100	0.019	27
28	100	0.015	9
20	100	0.011	5
14	100	0.008	5
10	96	0.005	5
6.3	93	0.004	5
5	90	0.003	5
3.35	88	0.002	4
2	84		
1.18	79		
0.6	72		
0.425	68		
0.3	63		
0.212	57		
0.15	51		
0.063	39		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	16.2
Sand	45.4
Silt	34.3
Clay	4.1

Grading Analysis	
D100	14.0
D60	0.3
D10	
Uniformity Coefficient	N/A

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PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC936

Location

GCOB

Sample No

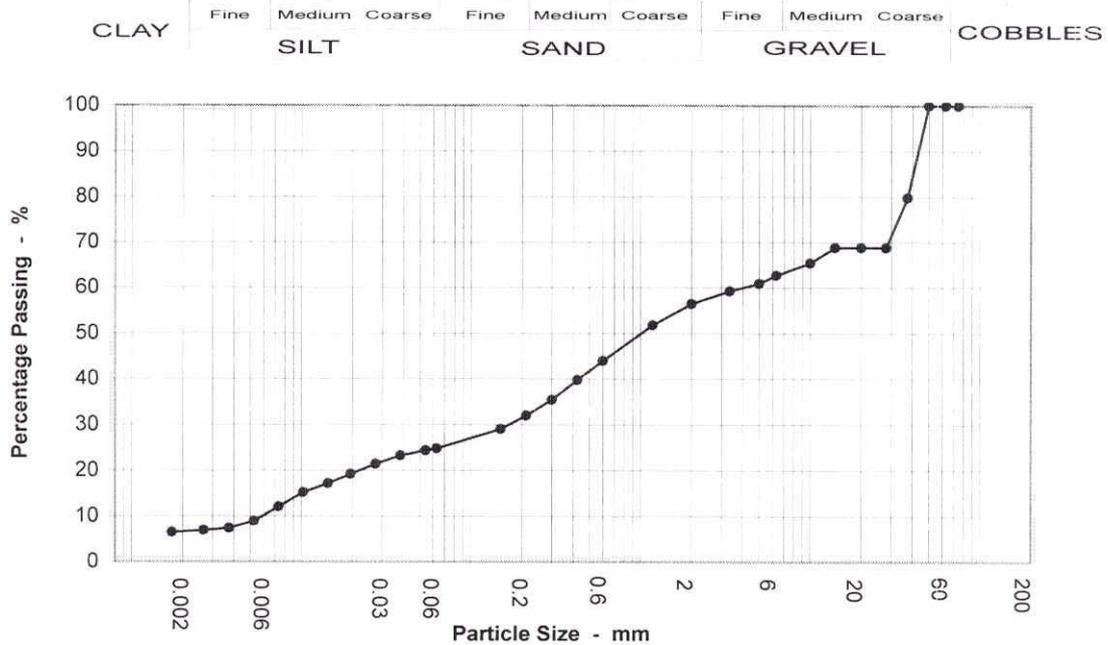
Depth

55.50 m

Visual Soil Description

Grey clayey silty very sandy GRAVEL

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.054	24
63	100	0.038	23
50	100	0.027	21
37.5	80	0.020	19
28	69	0.014	17
20	69	0.010	15
14	69	0.007	12
10	66	0.005	9
6.3	63	0.004	7
5	61	0.003	7
3.35	59	0.002	6
2	56		
1.18	52		
0.6	44		
0.425	40		
0.3	35		
0.212	32		
0.15	29		
0.063	25		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	43.5
Sand	31.8
Silt	18.1
Clay	6.6

Grading Analysis	
D100	50.0
D60	4.1
D10	
Uniformity Coefficient	N/A

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PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC937

Location

GCOB

Sample No

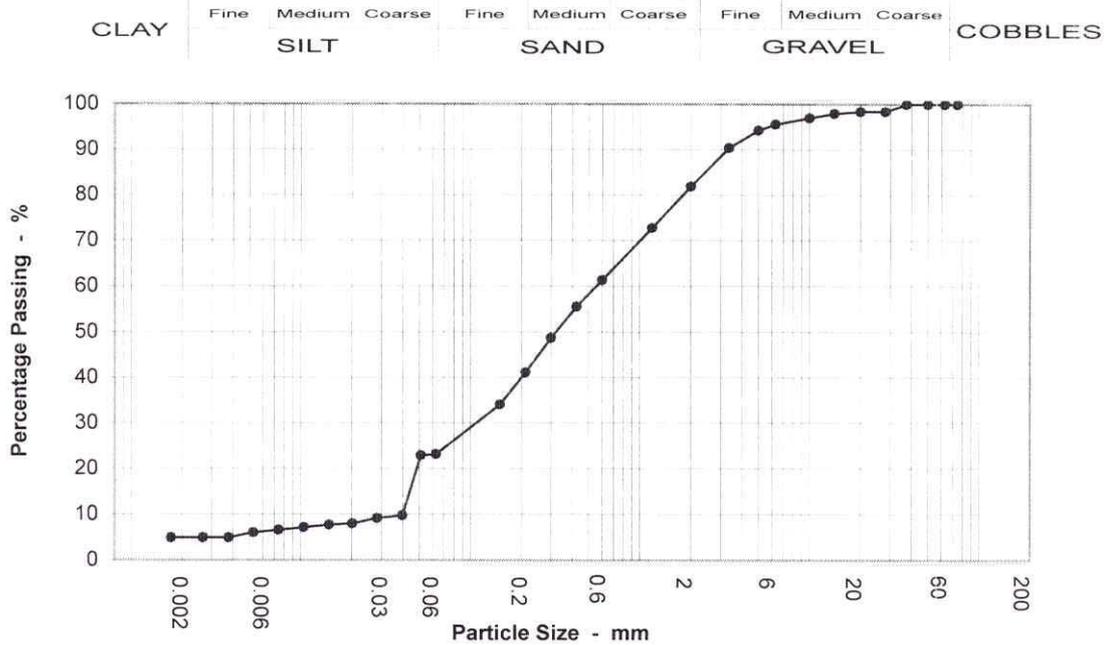
Depth

9.00 m

Visual Soil Description

Grey slightly clayey silty gravelly SAND

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.051	23
63	100	0.040	10
50	100	0.028	9
37.5	100	0.020	8
28	98	0.015	8
20	98	0.010	7
14	98	0.007	7
10	97	0.005	6
6.3	96	0.004	5
5	94	0.003	5
3.35	90	0.002	5
2	82		
1.18	73		
0.6	61		
0.425	56		
0.3	49		
0.212	41		
0.15	34		
0.063	23		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	18.1
Sand	58.8
Silt	18.2
Clay	4.9

Grading Analysis	
D100	37.5
D60	0.6
D10	
Uniformity Coefficient	N/A

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PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC937

Location

GCOB

Sample No

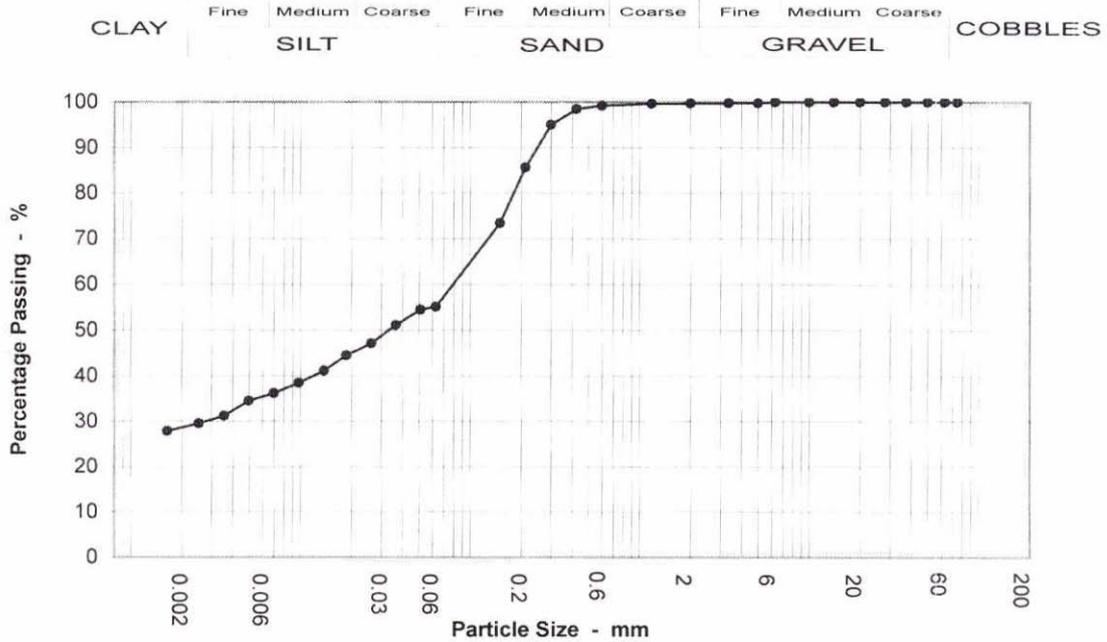
Depth

11.00 m

Visual Soil Description

Dark grey very sandy silty CLAY

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.051	54
63	100	0.036	51
50	100	0.026	47
37.5	100	0.019	45
28	100	0.014	41
20	100	0.010	39
14	100	0.007	36
10	100	0.005	35
6.3	100	0.004	31
5	100	0.003	30
3.35	100	0.002	28
2	100		
1.18	100		
0.6	99		
0.425	98		
0.3	95		
0.212	86		
0.15	73		
0.063	55		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	0.3
Sand	44.8
Silt	26.4
Clay	28.6

Grading Analysis	
D100	6.3
D60	0.1
D10	
Uniformity Coefficient	N/A

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PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC937

Location

GCOB

Sample No

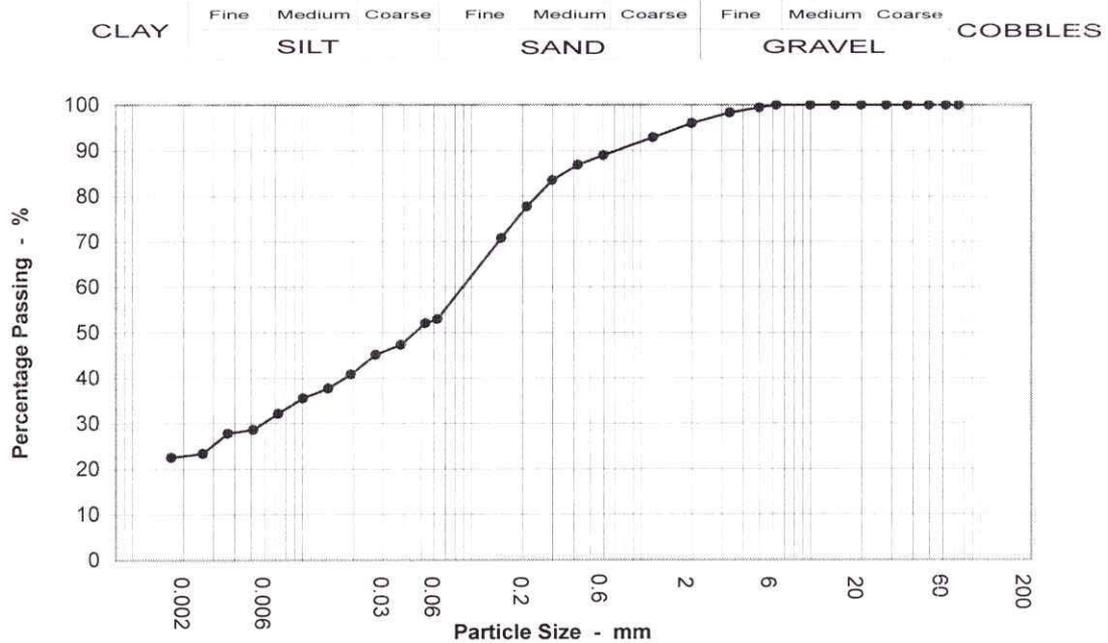
Depth

16.00 m

Visual Soil Description

Dark grey slightly gravelly very sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.054	52
63	100	0.038	47
50	100	0.027	45
37.5	100	0.019	41
28	100	0.014	38
20	100	0.010	36
14	100	0.007	32
10	100	0.005	29
6.3	100	0.004	28
5	99	0.003	23
3.35	98	0.002	23
2	96		
1.18	93		
0.6	89		
0.425	87		
0.3	84		
0.212	78		
0.15	71		
0.063	53		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	4.0
Sand	43.3
Silt	29.8
Clay	22.9

Grading Analysis	
D100	6.3
D60	0.1
D10	
Uniformity Coefficient	N/A

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PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC937

Location

GCOB

Sample No

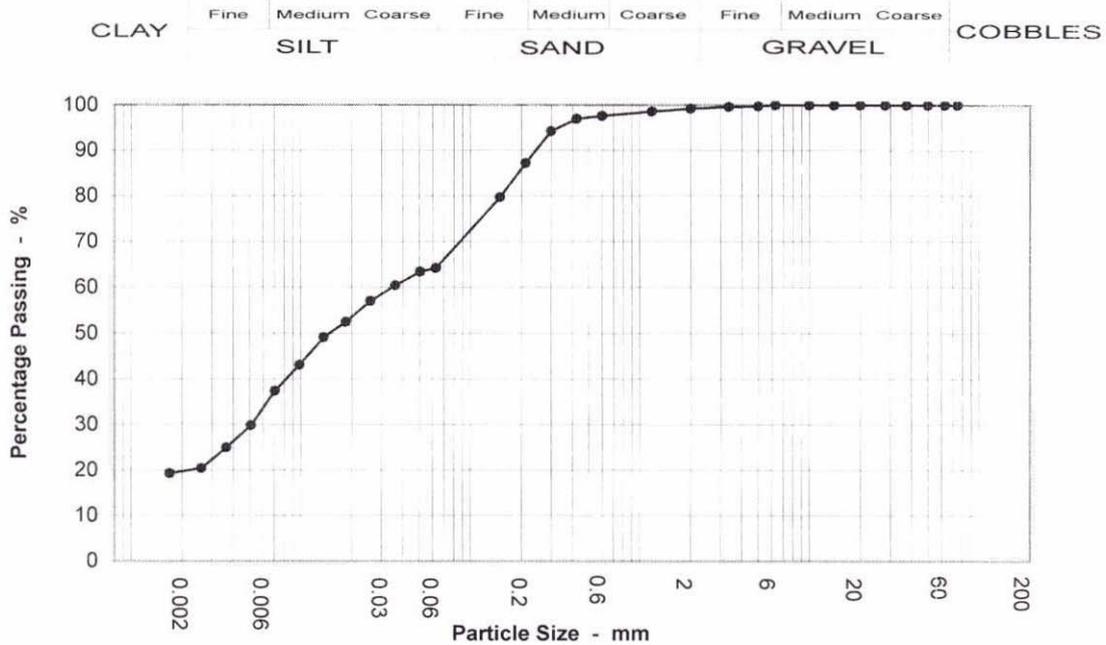
Depth

19.00 m

Visual Soil Description

Dark grey slightly gravelly very sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.051	63
63	100	0.036	60
50	100	0.026	57
37.5	100	0.019	53
28	100	0.014	49
20	100	0.010	43
14	100	0.007	37
10	100	0.005	30
6.3	100	0.004	25
5	100	0.003	20
3.35	100	0.002	19
2	99		
1.18	99		
0.6	98		
0.425	97		
0.3	94		
0.212	87		
0.15	80		
0.063	64		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	0.8
Sand	35.2
Silt	44.4
Clay	19.6

Grading Analysis	
D100	6.3
D60	
D10	
Uniformity Coefficient	N/A

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PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC937

Location

GCOB

Sample No

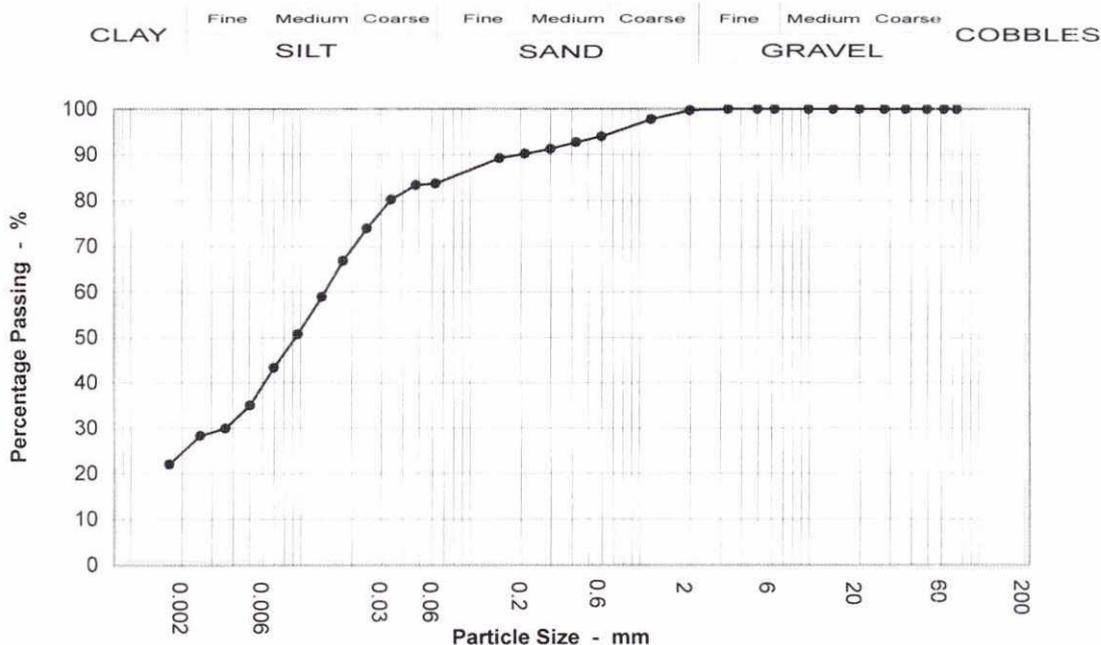
Depth

26.00 m

Visual Soil Description

Dark grey slightly sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.048	83
63	100	0.034	80
50	100	0.025	74
37.5	100	0.018	67
28	100	0.013	59
20	100	0.010	51
14	100	0.007	43
10	100	0.005	35
6.3	100	0.004	30
5	100	0.003	28
3.35	100	0.002	22
2	100		
1.18	98		
0.6	94		
0.425	93		
0.3	91		
0.212	90		
0.15	89		
0.063	84		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	0.3
Sand	16.1
Silt	59.4
Clay	24.2

Grading Analysis	
D100	3.4
D60	
D10	
Uniformity Coefficient	N/A

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PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC937

Location

GCOB

Sample No

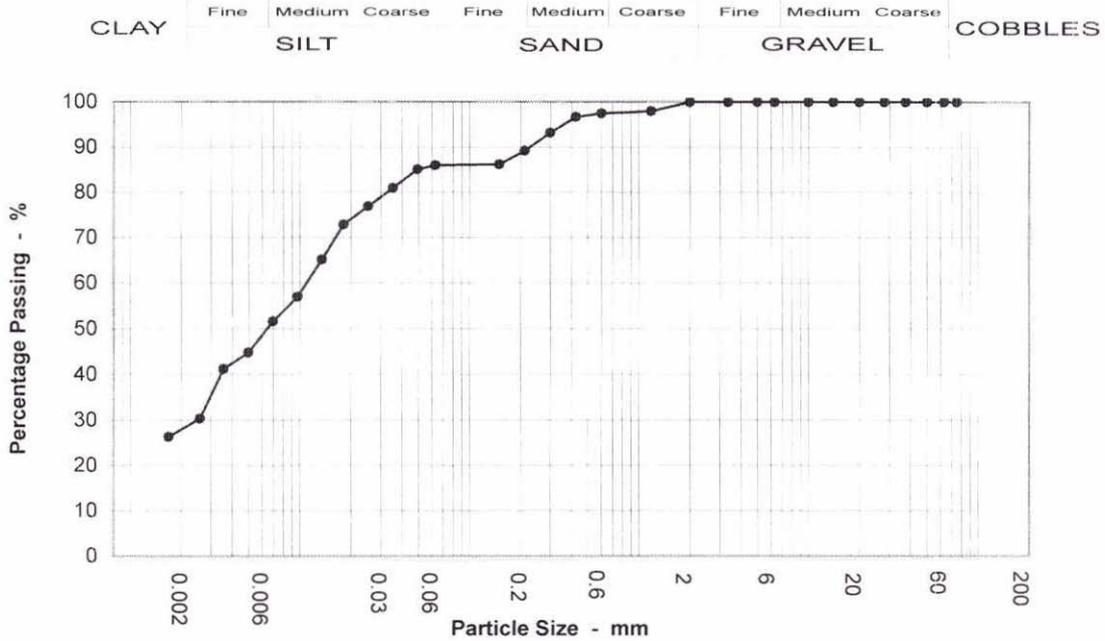
Depth

32.00 m

Visual Soil Description

Dark grey slightly sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.050	85
63	100	0.035	81
50	100	0.025	77
37.5	100	0.018	73
28	100	0.013	65
20	100	0.010	57
14	100	0.007	52
10	100	0.005	45
6.3	100	0.004	41
5	100	0.003	30
3.35	100	0.002	26
2	100		
1.18	98		
0.6	98		
0.425	97		
0.3	93		
0.212	89		
0.15	86		
0.063	86		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	0.0
Sand	14.2
Silt	58.1
Clay	27.7

Grading Analysis	
D100	2.0
D60	
D10	
Uniformity Coefficient	N/A

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MSF-11 / R9



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC937

Location

GCOB

Sample No

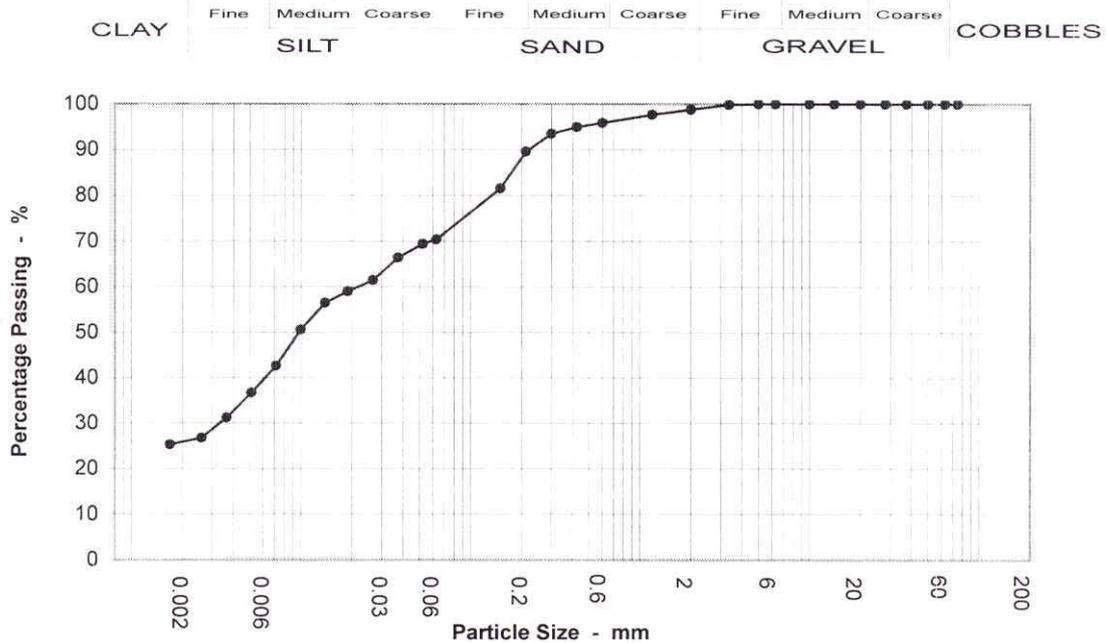
Depth

36.00 m

Visual Soil Description

Dark grey slightly gravelly slightly sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.052	69
63	100	0.037	66
50	100	0.027	61
37.5	100	0.019	59
28	100	0.014	57
20	100	0.010	51
14	100	0.007	43
10	100	0.005	37
6.3	100	0.004	31
5	100	0.003	27
3.35	100	0.002	25
2	99		
1.18	98		
0.6	96		
0.425	95		
0.3	93		
0.212	90		
0.15	82		
0.063	70		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	1.2
Sand	28.7
Silt	44.4
Clay	25.8

Grading Analysis	
D100	5.0
D60	
D10	
Uniformity Coefficient	N/A

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MSF-11 / R9



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC937

Location

GCOB

Sample No

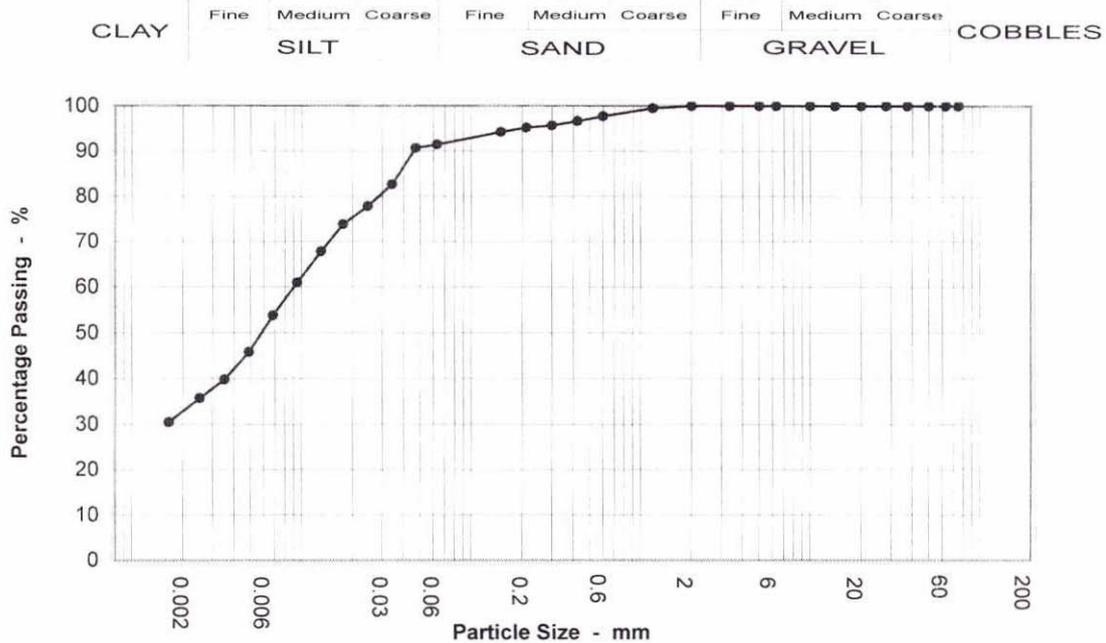
Depth

49.00 m

Visual Soil Description

Dark grey slightly sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.047	91
63	100	0.034	83
50	100	0.025	78
37.5	100	0.018	74
28	100	0.013	68
20	100	0.009	61
14	100	0.007	54
10	100	0.005	46
6.3	100	0.004	40
5	100	0.003	36
3.35	100	0.002	31
2	100		
1.18	100		
0.6	98		
0.425	97		
0.3	96		
0.212	95		
0.15	94		
0.063	92		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	0.0
Sand	8.7
Silt	58.8
Clay	32.6

Grading Analysis	
D100	2.0
D60	
D10	
Uniformity Coefficient	N/A

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MSF-11 / R9



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC940

Location

GCOB

Sample No

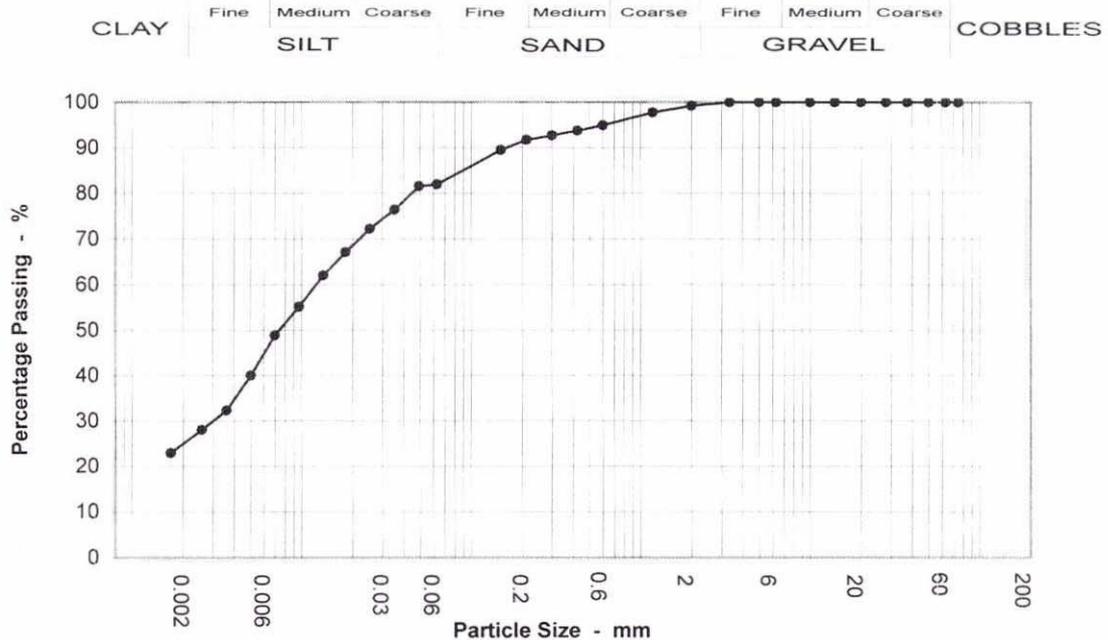
Depth

10.00 m

Visual Soil Description

Dark grey brown slightly sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.049	82
63	100	0.035	76
50	100	0.025	72
37.5	100	0.018	67
28	100	0.013	62
20	100	0.010	55
14	100	0.007	49
10	100	0.005	40
6.3	100	0.004	32
5	100	0.003	28
3.35	100	0.002	23
2	99		
1.18	98		
0.6	95		
0.425	94		
0.3	93		
0.212	92		
0.15	90		
0.063	82		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	0.8
Sand	17.3
Silt	57.2
Clay	24.7

Grading Analysis	
D100	3.4
D60	
D10	
Uniformity Coefficient	N/A

K4 SOILS LABORATORY

Unit 8 Olds Close Olds Approach
Watford Herts WD18 9RU.
E-mail: k4soils@aol.com

Approved Signatories: **K.Phaure(Tech.Mgr)**

J.Phaure(Lab.Mgr) Bhavika.R.(Qual.Mgr)

Test results relate only to the sample numbers shown above

Checked and Approved

Initials: kp

Date: 2/5/2007

Sheet3/3

MSF-11 / R9



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC940

Location

GCOB

Sample No

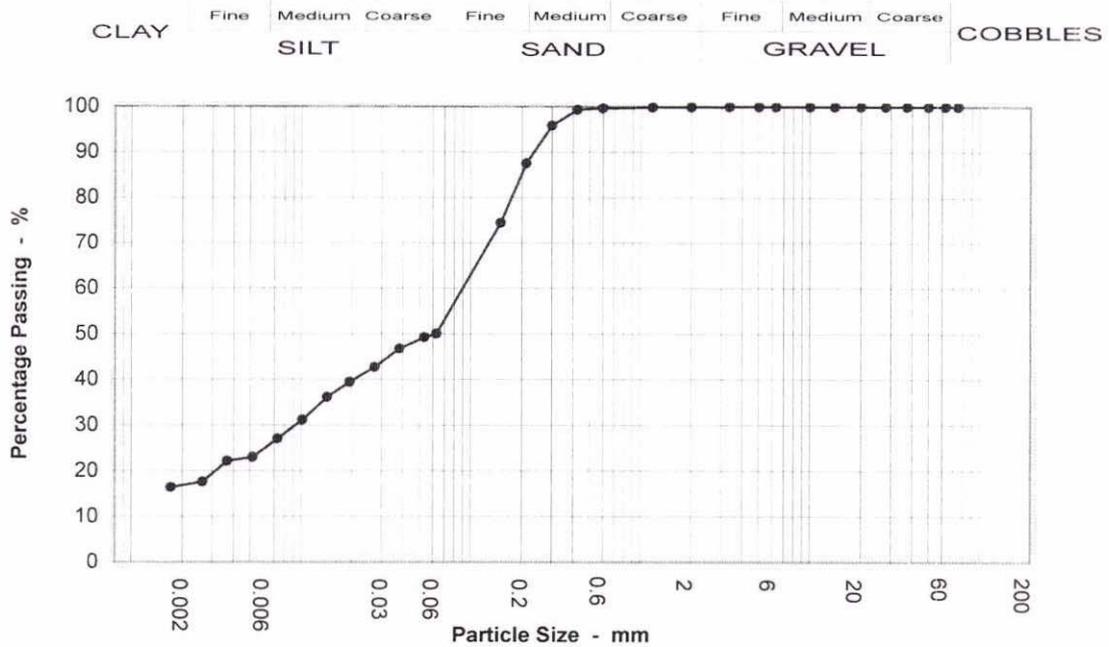
Depth

19.00 m

Visual Soil Description

Dark grey clayey very silty SAND

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.054	49
63	100	0.038	47
50	100	0.027	43
37.5	100	0.019	39
28	100	0.014	36
20	100	0.010	31
14	100	0.007	27
10	100	0.005	23
6.3	100	0.004	22
5	100	0.003	18
3.35	100	0.002	16
2	100		
1.18	100		
0.6	100		
0.425	99		
0.3	96		
0.212	88		
0.15	74		
0.063	50		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	0.1
Sand	50.2
Silt	33.0
Clay	16.8

Grading Analysis	
D100	3.4
D60	0.1
D10	
Uniformity Coefficient	N/A

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Date: 2/5/2007

Sheet 3/3

MSF-11 / R9



PARTICLE SIZE DISTRIBUTION

BS 1377 : Part 2 : 1990 : Clause 9

Job Ref

4949

Borehole / Pit No

RC940

Location

GCOB

Sample No

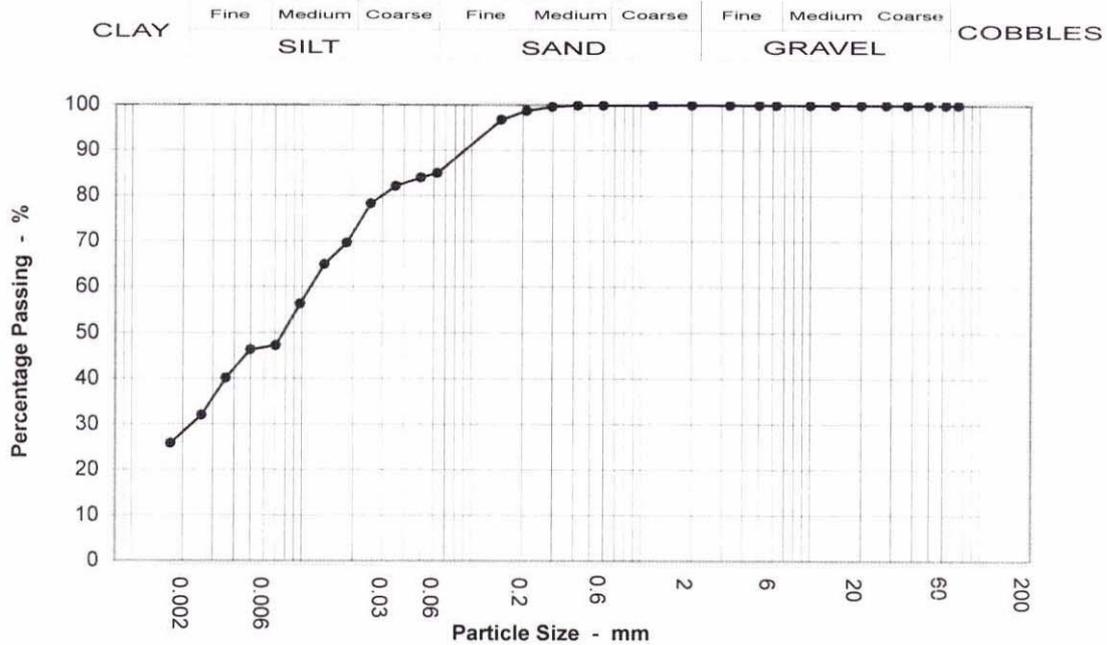
Depth

14.00 m

Visual Soil Description

Dark grey slightly sandy clayey SILT

Sample type



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
75	100	0.050	84
63	100	0.036	82
50	100	0.025	78
37.5	100	0.018	70
28	100	0.014	65
20	100	0.010	56
14	100	0.007	47
10	100	0.005	46
6.3	100	0.004	40
5	100	0.003	32
3.35	100	0.002	26
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	100		
0.212	99		
0.15	97		
0.063	85		

Test Method	
BS 1377 : Part 2 : 1990	
Sieving	Clause
Sedimentation	Clause 9.5

Sample Proportions	
Cobbles	0.0
Gravel	0.0
Sand	15.3
Silt	56.8
Clay	27.9

Grading Analysis	
D100	1.2
D60	
D10	
Uniformity Coefficient	N/A

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Test results relate only to the sample numbers shown above

Checked and Approved

Initials: kp

Date: 05/02/2007

Sheet:3/3

MSF-11 / R9

IRISH DRILLING LTD. Loughrea Co. Galway Tel: (091) 841274 Fax: (091) 847687	Contract: N6 Galway City Outer Bypass Client: Engineer: Date: Tested by: DD Checked: DJ
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BS 1377 : Part 5 : 1990 Clause 3.4, 7.4
CBR Test Results

Location	Depth	moisture content	Bulk D Mg/m ³	Dry D Mg/m ³	CBR %	Comments
BH 1223 N	3	8.9	2.148	1.971	6.1	
TP 0730	1	24.5	1.950	1.570	0.3	
TP 0760	0.4	32.8	1.586	1.194	0.2	
TP 0760	1.6	15.7	2.186	1.889	2.3	
TP 0779	0.5	35.6	1.800	1.330	0.34	
TP 0810	0.5	16.1	1.916	1.650	1.4	
TP 1079	0.3	19.9	2.043	1.705	0.4	
TP 1086	0.6	12.3	2.182	1.942	8.3	
TP 1088	0.5	10.6	2.166	1.958	5.4	
TP 1132	1	11.0	2.270	2.040	0.21	
TP 1233	1.0-1.5	11.2	2.310	2.078	0.4	
TP 1236	0.5-0.8	10.8	2.241	2.023	0.8	
TP 1263	0.5	13.2	2.267	2.003	0.3	

IRISH DRILLING LTD. Loughrea Co. Galway Tel: (091) 841274 Fax: (091) 847687	Contract: N6 Galway City Outer Bypass Client: Engineer: Date: Tested by: DD Checked: DJ
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BS 1377 : Part 5 : 1990 Clause 5.4
MCV Test Results.

Location	Depth	moisture content	MCV
TP 0693	0.35	68.1	3.7
TP 0695	0.3	43.4	<1
TP 0733	1.6	98.6	<1
TP 0733 C	0.4	62.7	<1
TP 0737	0.7	13.6	4.8
TP 0810	0.5	15.5	7.8
TP 1079	0.3	29.6	6.3
TP 1086	0.6	11.3	7.8
TP 1088	0.5	8.5	9.5
TP 1132	1.0	11.5	<1
TP 1233	1.0-1.5	11.0	3.6
TP 1236	0.5-0.8	10.6	7
TP 1263	0.5	11.6	<1

Compaction/CBR/Moisture content test
Moisture Condition Value / Moisture Content

BS1377:1990; Part 4, Clause 3.4, 7.4
 BS1377:1990; Part 4, Clause 5.5

IRISH DRILLING LTD. Loughrea, Co. Galway	Contract: N6 GCOB	Location: TP 951
	Client: Engineer: Date: 11/12/2006 Tested: MPD	Chckd: DCD

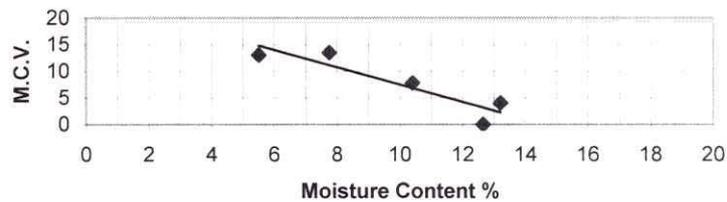
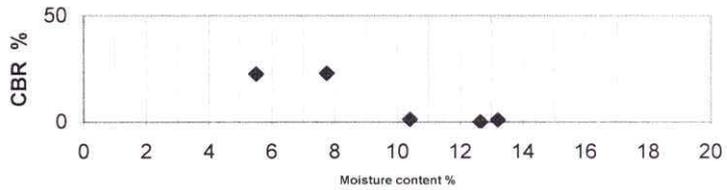
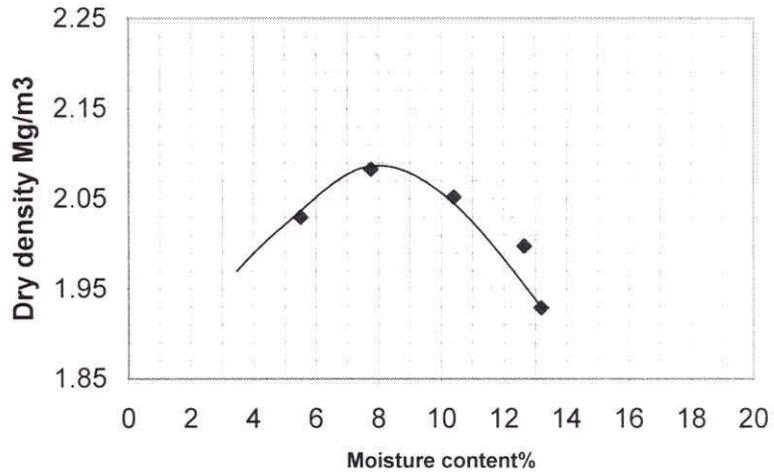
Description: Grey silty very sandy GRAVEL.

moisture content %	dry density Mg/m ³
5.5	2.03
7.75	2.083
10.4	2.052
12.65	1.998
13.2	1.929

moisture content %	CBR %
5.5	22.7
7.75	23
10.4	1.3
12.65	0.1
13.2	1

Gs assumed: 2.70

Moisture content %	MCV %
5.5	13.1
7.75	13.5
10.4	7.8
12.65	<1
13.2	4



RESULTS:

Maximum dry density: 2.09 Mg/m³
Optimum moisture content: 8.0 %
Natural moisture content*: 9.9 %
Passing 20mm sieve: 78 %
Natural moisture content:** 13.2 %

* refers to bulk sample before removal of coarse particles

** refers to test sample after removal of coarse particles

Compaction/CBR/Moisture content test
Moisture Condition Value / Moisture Content

BS1377:1990; Part 4, Clause 3.4, 7.4
 BS1377:1990; Part 4, Clause 5.5

IRISH DRILLING LTD. Loughrea, Co. Galway	Contract: N6 GCOB	Location: TP 971
	Client:	
	Engineer:	
	Date: 02/01/2007	Depth: 1.0 m
	Tested: TS Chckd: DCD	

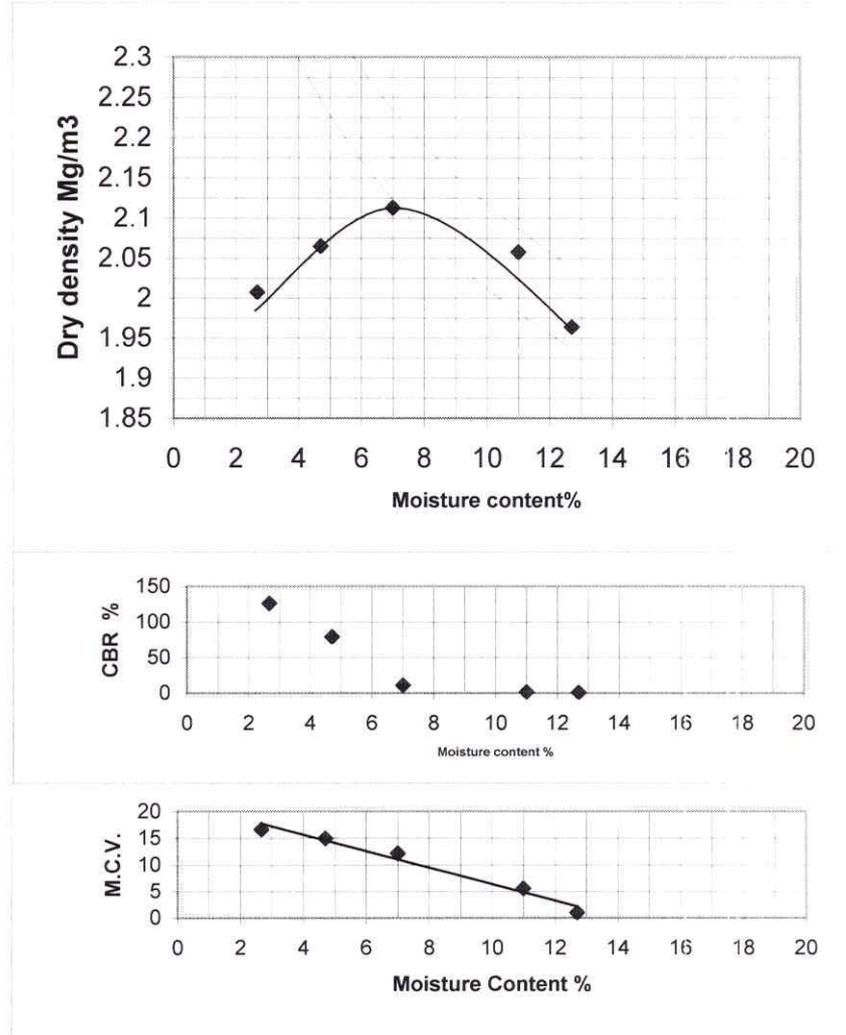
Description: Brown slightly sandy slightly gravelly SILT / CLAY with occasional cobbles.

moisture content %	dry density Mg/m ³
2.67	2.008
4.7	2.065
7	2.113
11	2.058
12.7	1.964

moisture content %	CBR %
2.67	126.3
4.7	79.5
7	11.2
11	2
12.7	0.7

Gs assumed: 2.70

Moisture content %	MCV %
2.67	16.7
4.7	15
7	12.2
11	5.6
12.7	1



RESULTS:

Maximum dry density: 2.11 Mg/m³
Optimum moisture content: 7.0 %
Natural moisture content*: 10.3 %
Passing 20mm sieve: 90 %
Natural moisture content:** 13.6 %

* refers to bulk sample before removal of coarse particles

** refers to test sample after removal of coarse particles

N6 Galway City Outer Bypass Chemical Test Results

Alcontrol Reference	Sample Identity	Other ID	Natural Moisture Content		pH Units	Acid Soluble Sulphide mg/kg	Soluble Sulphate 2:1 g/l	Chloride mg/kg	Total Organic Carbon** %	Loss on Ignition** %
			%							
06-B07348-S0022	BH 0826	1.5-2.0M	6.1	8.48	0.004	15	-			
06-B07348-S0023	BH 0831	0.5-1.0M	7.5	8.51	<0.003	16	0.3			
06-B07348-S0024	BH 0832	1.50-2.00	7.0	8.46	0.003	-	-			
	idl	1.0-1.5		7.6	0.03				2.8	
	IDL	0.0-0.5							51.54	
06-B07348-S0025	BH 0864A	2.5-3.5M	44.7	8.09	0.104	-	31.0			
	IDL	1.5-2.0							26.7	
06-B07348-S0026	BH 0888	3.5-4.5M	22.2	7.99	0.244	-	-			
		5.3 W		8.34	0.01					
	IDL	0.0-1.0							81.6	
	IDL	0.5-1.0							68.4	
	IDL	0.5-1.0							62.82	
	BH 0911 B	1.5 W		8.11	0.02					
	IDL	1.5-2.0			0.12					
06-B07348-S0027	BH 0915	0.5-1.0M	102.0	6.98	NDDP	-	2.2			
	IDL	0.5-1.0							55.7	
	IDL	3.5-4.0		7.52	0.59				3.69	
	idl	3.5-4.0							6.8	
	IDL	6.5-7.0							22.6	

N6 Galway City Outer Bypass Chemical Test Results

Al Control Reference	Sample Identity	Other ID	Natural Moisture Content		pH Units	Acid Soluble Sulphide	Soluble Sulphate 2:1 Extract	Chloride	Total Organic Carbon**	Loss on Ignition**
			%	%						
IDL	BH 0939	1.5-1.95								36.9
IDL	BH 0939	2.5-3.0			7.56		0.16			
IDL	BH 0943 A	4.0-5.0					0.72			37.4
IDL	BH 0943 A	6.5-7.0					0.08			
06-B07084-S0011	BH 1003	0.8M	17.8	8.48	<5			-	1.45	-
06-B06861-S0006	BH 1149	1.00-1.50	44.9	7.33	<5					
06-B06861-S0007	BH 1174	1.00-1.50	49.6	7.98	11					
06-B06861-S0005	BH 1175a	1.00-1.50	24.4	8.15	12					76.5
	BH 1182	0.0-1.0								
06-B06861-S0008	BH 1182	1.00-1.50	463.6	8.35	<5					
	BH 1189	0.0-1.0								15.72
06-B06861-S0009	BH 1189	1.00-1.50	26.3	7.56	<5					
06-B06861-S0004	BH 1235	1.00-1.50	10.2	8.47	10					
06-B07084-S0019	BH 1237	0.5-0.8M	5.0	8.61	<5					
06-B07084-S0007	BH 1278	1M	31.6	8.53	<5			33		
	TP 0502	0.10								16.13
	TP 0503	0.15								25.6
06-B07348-S0010	TP 0509	2.0M	1.9	6.83			0.069			
06-B07084-S0015	TP 0512	1M	21.7	7.51	<5			33	0.78	
06-B07348-S0011	TP 0516	0-0.5M	55.6	4.55			0.022			

N6 Galway City Outer Bypass Chemical Test Results

Alcontrol Reference	Sample Identity	Other ID	Natural Moisture	pH	Acid Soluble Sulphide	Soluble Sulphate 2:1 Extract	Chloride	Total Organic Carbon**	Loss on Ignition**
			%	pH Units	mg/kg	g/l	mg/kg	%	%
	TP 0525	1.50							10.2
06-B07084-S0018:	TP 0559	0.7M	121.5	8.69	<5		-	45.97	-
	TP 0560	2.30							37.6
06-B07084-S0017:	TP 0560	1M	82.1	8.63	<5		84	39.00	-
	TP 0577	0.80							73
	TP 0588	1.50							93.6
	TP 0600	1.00							81.2
	TP 0611	0.80							84.66
	TP 0629	1.00							78.6
06-B07348-S0012:	TP 0639	1-2M	41.3	5.07		NDP	206	43.0	
06-B07348-S0013:	TP 0657	0.9M	42.8	4.91		0.463	207	39.0	
	TP 0658	0.60							29.8
	TP 0669	2.20							18.2
06-B07084-S0002:	TP 0684	0.9M	70.9	8.23	<5		-	-	-
06-B07084-S0006:	TP 0686	0.9M	404.7	8.03	<5		-	-	-
IDL	TP 0693	0.35							44.4
06-B07348-S0014:	TP 0698	1.6M	5.8	7.43		0.005	-	-	-
06-B07348-S0015:	TP 0699	0.7M	9.2	7.17		0.007	-	0.6	-
06-B07348-S0016:	TP 0701	1.4M	6.7	8.42		0.049	-	-	-
06-B07348-S0017:	TP 0709	0.5M	7.2	6.88		0.008	-	-	-

N6 Galway City Outer Bypass Chemical Test Results

Alcontrol Reference	Sample Identity	Other ID	Natural Moisture		pH Units	Acid Soluble Sulphide	Soluble Sulphate 2:1 Extract	Chloride	Total Organic Carbon**	Loss on Ignition**
			%	mg/kg						
06-B07348-S0018:	TP 0710	1.0M	12.0	6.73	0.004	-	0.4	9.64		
	idl TP 0716	0.70		6.23	0.12	0		7.77		
	TP 0716	1.6								
	idl TP 0718	1.50		5.22	0.56			21.9		
	idl TP 0718	2.50		7.3	0.06					
	TP 0719	1.6 W		7.45	0.07					
	IDL TP 0721	0.50						62.96		
	IDL TP 0732 B	0.20						17.45		
	TP 0732 C	1.25 W		7.65	0.03					
	IDL TP 0733 B	0.50						81.9		
	IDL TP 0733 C	0.40		6.34	<0.01	0				
	NMTL 249 TP 0754	0.50		6.3	<0.01					
	IDL TP 0754 A	0.50						73.7		
	NMTL 249 TP 0754 A	1.50					52.3			
	NMTL 249 TP 0754 C	0.50		4.9	0.02					
	TP 0754 D	2.0 W		8.09	0.03					
	NMTL 249 TP 0773	0.50		4.8	0.02					
	IDL TP 0789	0.60		6.44	0.01					
	IDL TP 0795	1.10		5.58				55.6		
	IDL TP 0796	0.50						76.5		

N6 Galway City Outer Bypass Chemical Test Results

Alcontrol Reference	Sample Identity	Other ID	Natural Moisture Content		pH	Acid Soluble Sulphide	Soluble Sulphate 2:1 Extract	Chloride	Total Organic Carbon**	Loss on Ignition**
			%	mg/kg						
06-B07084-S0016	TP 0902	0.8-1.0								82.2
	TP 0905	1-1.5M	8.5	8.35	<5				0.65	-
06-B06861-S0014	TP 0906	1.0-1.2								86.96
	TP 0906	2.10-2.30	119.8	8.13	<5					67.6
IDL	TP 0907	1.8-2.0								0.736
	TP 0908	0.5								36.11
IDL	TP 0909	0.5								75.6
	TP 0909	1		7.85		0.14				14.9
IDL	TP 0913	0.5								9.8
	TP 0922	2.7								42.14
IDL	TP 0932	2.50		7.71		0.33				64.4
	TP 0935	1.50		6.44		0.52				
IDL	TP 0941	W 1.5		7.45		0.01				
	TP 0941 A	2.00								
IDL	TP 0969	0.70		8.04		0.41				
	TP 0996	1.50		8.2		<0.01				
NMTL 249	TP 1023	1-1.5M	143.9	8.47	<5					73.2
	TP 1052	0.60-1.00	22.0	8.29	11					
IDL	TP 1055	0.60		8.3		0.048				
	TP 1079	3M	25.0	7.70	<5					

N6 Galway City Outer Bypass Chemical Test Results

Alcontrol Reference	Sample Identity	Other ID	Natural Moisture		pH Units	Acid Soluble Sulphide	Soluble Sulphate 2:1 Extract	Chloride	Total Organic Carbon**	Loss on Ignition**
			%	mg/kg						
06-B07084-S00101	TP 1085	0.5M	10.5	<5	8.73	<5	-	-	-	-
06-B07084-S00091	TP 1088	5M	7.8	<5	8.68	<5	-	-	-	-
IDL	TP 1091	0.40								18.5
06-B07084-S00031	TP 1093	1.5M	11.5	<5	8.65	<5	-	-	-	-
	TP 1100	1.00								72.9
06-B07084-S00011	TP 1111	1M	12.9	<5	8.43	<5	-	-	0.64	-
06-B07084-S00081	TP 1111	2M	17.7	<5	8.54	<5	-	-	-	-
NMTL 249	TP 1132	1.00			8.7	0.08				
06-B06861-S00151	TP 1150	0.40	10.2	16	8.51	16				
06-B06861-S00131	TP 1162	1.00	13.4	15	8.37	15				
NMTL 249	TP 1219	0.6-1.0			8.4	0.18				
IDL	TP 1230	1.60			8.15	0.02				
idl	TP 1236	0.5-0.8			7.96	0.01				
idl	TP 1243	0.50			8.24	0.00				
idl	TP 1257	1.70			8.46	0.34				
idl	TP 1263	0.50			8.35	0.00				
06-B06861-S00161	TP 1275	0.50	14.1	18	8.25	18				
06-B06861-S00121	TP 1288	0.60	12.1	22	8.08	22				
06-B06861-S00101	TP 1298	0.80	8.5	24	8.50	24				
06-B06861-S00191	TP 1301	0.50	7.0	22	8.51	22				

N6 Galway City Outer Bypass Chemical Test Results

ALcontrol Reference	Sample Identity	Other ID	Natural Moisture Content %	pH pH Units	Acid Soluble Sulphide mg/kg	Soluble Sulphate 2:1 Extract g/l	Chloride mg/kg	Total Organic Carbon** %	Loss on Ignition** %
06-B06861-S0018	TP 1303	1.00	10.0	8.40	24				
IDL	TP 1412	0.50		7.5		0.02			
idl	TP 1412	0.7				0.00			
06-B06861-S0011	TP 1429	1.00-1.20	676.1	8.26	<5				81.83
IDL	TP 1435	1.0							53.7
idl	TP 1447	1.00							78.5

Project Name: GCOB		Project No:		K4 SOILS LABORATORY	
Client: Irish Drilling		Reference: 4949			
Borehole No:	Sample No:	Depth m	Description	pH	Sulphate Content *
RC936	C	40.0-41.0			0.01
RC936	C	6.0-7.0			0.01
RC936	C	24.0-25.0			0.01
RC936	C	51.0-52.0			2.93
RC937	C	11.0-12.0			0.01
RC937	C	19.0-20.0			0.01
RC937	C	32.0-33.0			0.01
RC940	C	14.0-15.0			2.00
* expressed as %.					
09/02/2007	Total Sulphate Content BS 1377 : Part 3 : Clause 5 : 1990 Determination of sulphate content by acid extract				Approved Initials : kp

Project Name: GCOB	Project No: GCOB	K4 SOILS LABORATORY
Client: Irish Drilling	Reference: 4949	

Borehole No:	Sample No:	Depth m	Description	Organic Content (%)
RC936	C	6.0-7.0	Grey clayey sandy very silty GRAVEL	0.40
RC936	C	24.0-25.0	Grey slightly silty slightly clayey gravelly SAND	1.15
RC936	C	40.0-41.0	Grey slightly sandy clayey SILT	17.51
RC936	C	51.0-52.0	Dark grey slightly gravelly very sandy clayey SILT	17.68
RC937	C	11.0-12.0	Dark grey very sandy silty CLAY	4.90
RC937	C	19.0-20.0	Dark grey slightly gravelly very sandy clayey SILT	25.69
RC937	C	32.0-33.0	Dark grey slightly sandy clayey SILT	17.21
RC937	C	36.0-37.0	Dark grey slightly gravelly slightly sandy clayey SILT	12.35
RC940	C	10.0-11.0	Dark grey brown slightly sandy clayey SILT	17.47
RC940	C	19.0-20.0	Dark grey clayey very silty SAND	8.97

* expressed as %

2/6/2007	Organic Content of Soil BS 1377 : Part 3 : Clause 4 : 1990 Determination of the mass loss on ignition	Approved Initials :KP
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Project Name:	GCOB			K4 SOILS LABORATORY
Client:	Irish Drilling	Project No:	GCOB	
		Reference:	4949	

Borehole No.	Sample No.	Depth m	Description	pH	Sulphate content (g/l)
RC936		6.00	Grey clayey sandy very silty GRAVEL	7.6	
RC936		24.00	Grey slightly silty slightly clayey gravelly SAND	7.4	
RC936		40.00	Grey slightly sandy clayey SILT	6.7	
RC936		51.00	Dark grey slightly gravelly very sandy clayey SILT	6.4	
RC937		11.00	Dark grey very sandy silty CLAY	7.1	
RC937		19.00	Dark grey slightly gravelly very sandy clayey SILT	6.7	
RC937		32.00	Dark grey slightly sandy clayey SILT	6.7	
RC940		14.00	Dark grey slightly sandy clayey SILT	6.8	

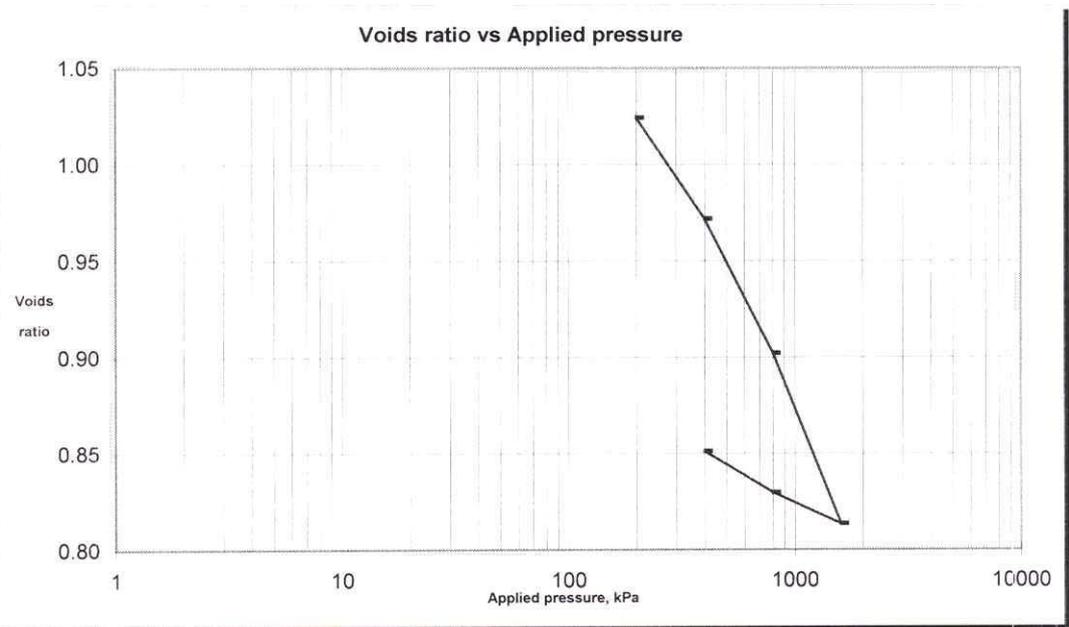
Date 2/5/2007	Summary of Test Results	Checked and Approved Initials : kp
BS 1377 : Part 3 : Clause 5 : 1990 Determination of sulphate content of soil and ground water : gravimetric method		

Client name & address: Irish Drilling		Date received: 12/1/2006	K4 SOILS 
Project Name: GCOB		Date sampled: 1/4/2007	
Project No: - Our Job / report no: 4949		Date tested: 1/22/2007	
		Date reported: 2/6/2007	
Sample description: Grey slightly sandy clayey SILT		Sample no/ type: C	BH no: RC936
			Depth (m): 40

Test details
 Depth within original sample m : 40.10 Orientation within original sample : Vertical

<u>Specimen details</u>		Initial	Final
Height	mm :	19.0	16.3
Diameter	mm :	75.0	-
Bulk density	Mg/m ³ :	1.68	1.98
Moisture content	% :	33	34
Dry density	Mg/m ³ :	1.27	1.48
Voids Ratio	:	1.16	0.85
Degree of saturation	% :	77.0	-
Particle density	Mg/m ³ :	2.74	-
Swelling pressure	kPa :	0	-

<u>Consolidation Stage</u>									
Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility	Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility
Number	kPa		m ² /year	m ² /MN	Number	kPa		m ² /year	m ² /MN
1	200	1.0241	4.47	0.317	11				
2	400	0.9718	0.65	0.129	12				
3	800	0.9022	0.15	0.088	13				
4	1600	0.8135	0.14	0.058	14				
5	800	0.8296	1.01	0.011	15				
6	400	0.8510	0.19	0.029	16				
7					17				
8					18				
9					19				
10					20				



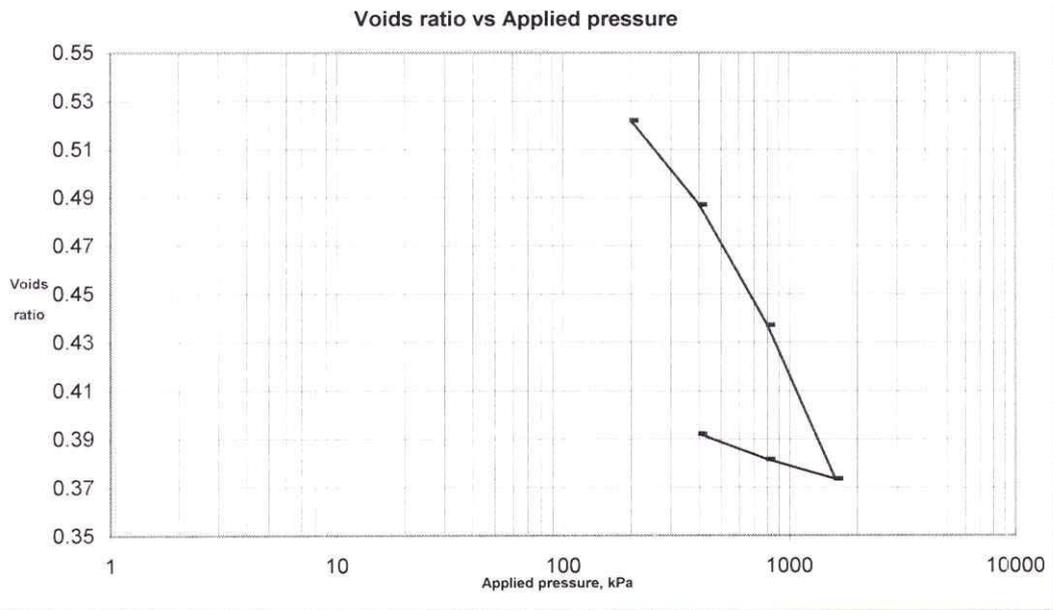
	One-Dimensional Consolidation Test	Approved by
	BS 1377 : Part 5 : Clause 3 : 1990	Initials : kp
	Determination of the one-dimensional consolidation properties	Date : 2/6/2007

Client name & address: Irish Drilling		Date received: 12/1/2006	K4 SOILS 
Project Name: GCOB		Date sampled: 1/4/2007	
Project No: - Our Job / report no: 4949		Date tested: 1/22/2007	
		Date reported: 2/6/2007	
Sample description: Dark grey slightly gravelly very sandy clayey SILT		Sample no/ type: C	BH no: RC936
			Depth (m): 51

Test details
 Depth within original sample m : 51.10 Orientation within original sample : Vertical

Specimen details		<u>Initial</u>	<u>Final</u>
Height	mm :	19.0	16.3
Diameter	mm :	75.0	-
Bulk density	Mg/m ³ :	2.17	2.42
Moisture content	% :	28	23
Dry density	Mg/m ³ :	1.69	1.97
Voids Ratio	:	0.62	0.39
Degree of saturation	% :	124.9	-
Particle density	Mg/m ³ :	2.74	-
Swelling pressure	kPa :	0	-

Consolidation Stage									
Stage Number	Applied Pressure kPa	Voids Ratio	Coefficient of Consolidation m ² /year	Coefficient of Compressibility m ² /MN	Stage Number	Applied Pressure kPa	Voids Ratio	Coefficient of Consolidation m ² /year	Coefficient of Compressibility m ² /MN
1	200	0.5219	4.51	0.301	11				
2	400	0.4870	1.78	0.115	12				
3	800	0.4370	3.11	0.084	13				
4	1600	0.3736	1.29	0.055	14				
5	800	0.3816	13.98	0.007	15				
6	400	0.3922	1.84	0.019	16				
7					17				
8					18				
9					19				
10					20				



	One-Dimensional Consolidation Test	Approved by
	BS 1377 : Part 5 : Clause 3 : 1990	Initials : kp
	Determination of the one-dimensional consolidation properties	Date : 2/6/2007

Test Report by **K4 SOILS LABORATORY** Unit 8 Olds Close Olds Approach Watford WD18 9RU Sheet 2/2

Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) Bhavika.R.(Qual.Mgr)

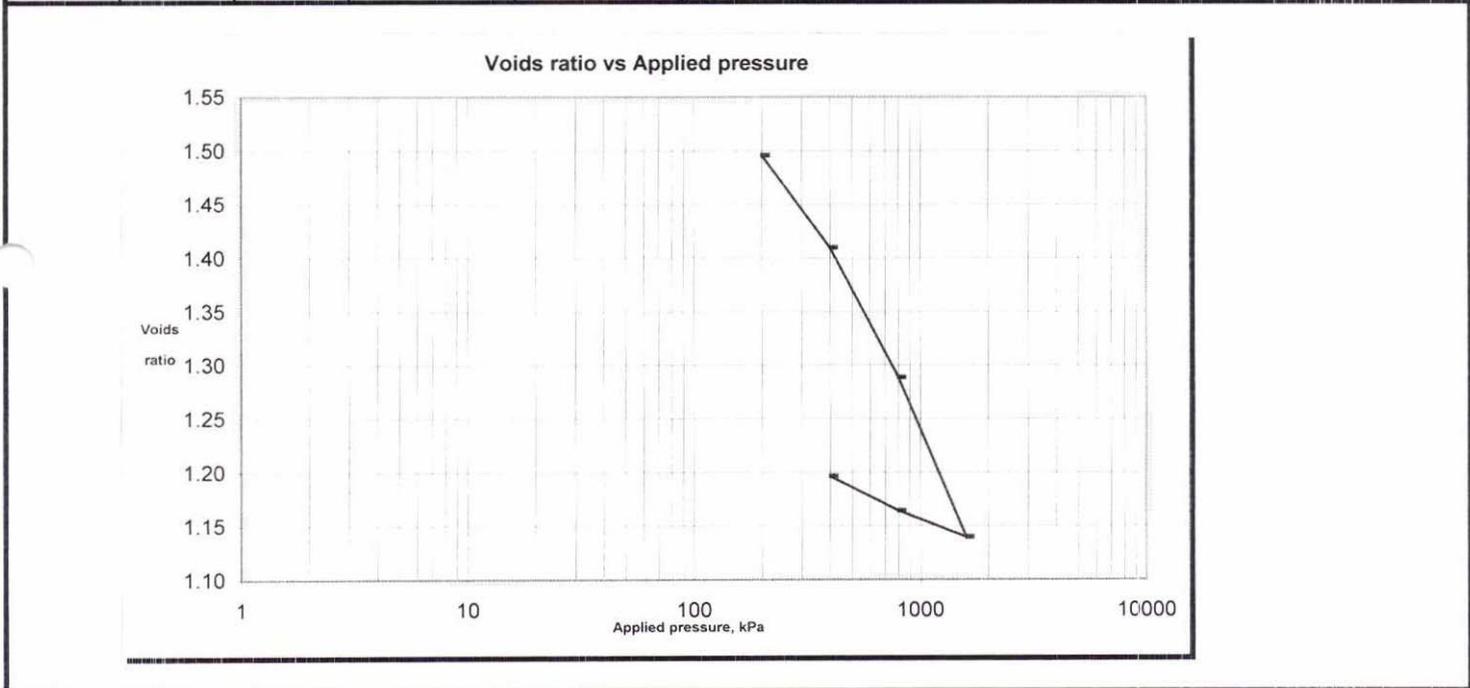
All samples connected with this report, incl any on 'hold' will be stored and disposed off according to Company policy. Acopy of this policy is available on request.

Client name & address:		Date received:	12/1/2006	K4 SOILS 	
Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/22/2007		
Project No:	-	Our Job / report no:	4949		
Sample description:		Sample no/ type:	C	BH no:	RC937
Dark grey slightly gravelly very sandy clayey SILT				Depth (m):	19

Test details
 Depth within original sample m : 19.10 Orientation within original sample : Vertical

Specimen details		Initial	Final
Height	mm :	19.0	15.3
Diameter	mm :	75.0	-
Bulk density	Mg/m ³ :	1.45	1.84
Moisture content	% :	44	48
Dry density	Mg/m ³ :	1.01	1.25
Voids Ratio	:	1.72	1.20
Degree of saturation	% :	70.6	-
Particle density	Mg/m ³ :	2.74	-
Swelling pressure	kPa :	0	-

Stage Number	Applied Pressure kPa	Voids Ratio	Coefficient of Consolidation m ² /year	Coefficient of Compressibility m ² /MN	Stage Number	Applied Pressure kPa	Voids Ratio	Coefficient of Consolidation m ² /year	Coefficient of Compressibility m ² /MN
1	200	1.4958	9.58	0.416	11				
2	400	1.4098	1.39	0.172	12				
3	800	1.2886	5.90	0.126	13				
4	1600	1.1396	1.66	0.081	14				
5	800	1.1642	12.08	0.014	15				
6	400	1.1963	0.92	0.037	16				
7					17				
8					18				
9					19				
10					20				



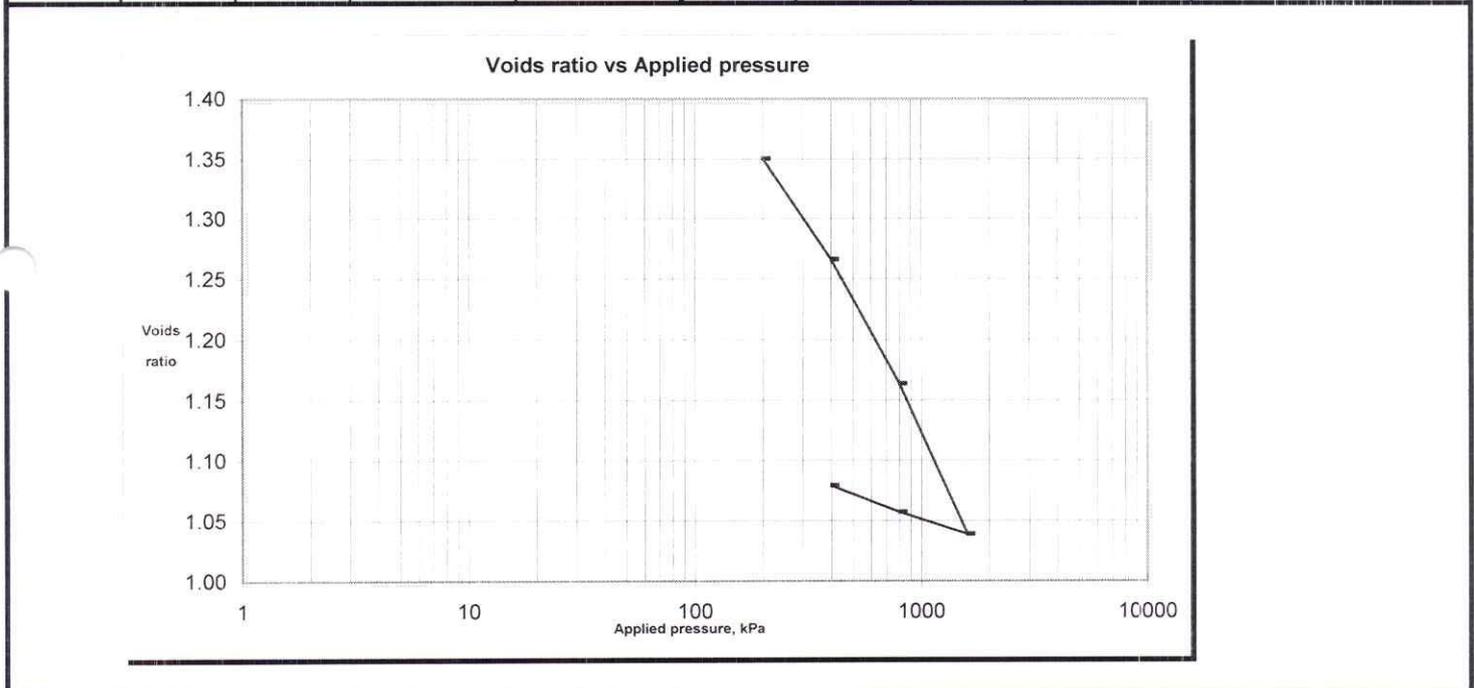
	One-Dimensional Consolidation Test	Approved by
	BS 1377 : Part 5 : Clause 3 : 1990	Initials : kp
	Determination of the one-dimensional consolidation properties	Date : 2/6/2007

Client name & address: Irish Drilling		Date received: 12/1/2006	K4 SOILS 
Project Name: GCOB		Date sampled: 1/4/2007	
Project No: - Our Job / report no: 4949		Date tested: 1/22/2007	
		Date reported: 2/6/2007	
Sample description: Dark grey slightly sandy clayey SILT		Sample no/ type: C	BH no: RC937
			Depth (m): 32

Test details
 Depth within original sample m : 32.10 Orientation within original sample : Vertical

Specimen details		<u>Initial</u>	<u>Final</u>
Height	mm :	19.0	15.8
Diameter	mm :	75.0	-
Bulk density	Mg/m ³ :	1.45	1.83
Moisture content	% :	32	39
Dry density	Mg/m ³ :	1.10	1.32
Voids Ratio	:	1.50	1.08
Degree of saturation	% :	59.2	-
Particle density	Mg/m ³ :	2.74	-
Swelling pressure	kPa :	0	-

Consolidation Stage									
Stage Number	Applied Pressure kPa	Voids Ratio	Coefficient of Consolidation m ² /year	Coefficient of Compressibility m ² /MN	Stage Number	Applied Pressure kPa	Voids Ratio	Coefficient of Consolidation m ² /year	Coefficient of Compressibility m ² /MN
1	200	1.3502	18.20	0.296	11				
2	400	1.2661	3.26	0.179	12				
3	800	1.1635	0.19	0.113	13				
4	1600	1.0389	1.21	0.072	14				
5	800	1.0573	2.57	0.011	15				
6	400	1.0794	1.17	0.027	16				
7					17				
8					18				
9					19				
10					20				



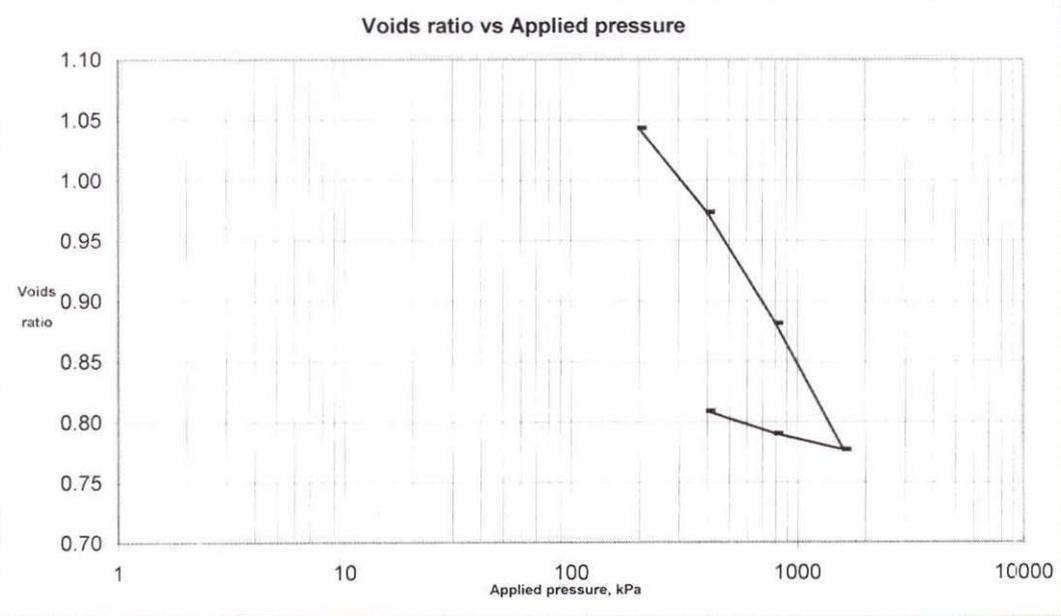
	One-Dimensional Consolidation Test	Approved by
	BS 1377 : Part 5 : Clause 3 : 1990	Initials : kp
	Determination of the one-dimensional consolidation properties	Date : 2/6/2007

Client name & address:		Date received:	12/1/2006	K4 SOILS 	
Irish Drilling		Date sampled:	1/4/2007		
Project Name: GCOB		Date tested:	1/22/2007		
Project No: - Our Job / report no: 4949		Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC940
Dark grey slightly sandy clayey SILT				Depth (m):	14

Test details
 Depth within original sample m : 14.10 Orientation within original sample : Vertical

Specimen details		Initial	Final
Height	mm :	20.0	16.4
Diameter	mm :	75.0	-
Bulk density	Mg/m ³ :	1.61	1.99
Moisture content	% :	30	32
Dry density	Mg/m ³ :	1.24	1.51
Voids Ratio	:	1.21	0.81
Degree of saturation	% :	68.0	-
Particle density	Mg/m ³ :	2.74	-
Swelling pressure	kPa :	0	-

Stage Number	Applied Pressure kPa	Voids Ratio	Coefficient of Consolidation m ² /year	Coefficient of Compressibility m ² /MN	Stage Number	Applied Pressure kPa	Voids Ratio	Coefficient of Consolidation m ² /year	Coefficient of Compressibility m ² /MN
1	200	1.0434	14.42	0.369	11				
2	400	0.9734	0.40	0.171	12				
3	800	0.8816	0.16	0.116	13				
4	1600	0.7773	0.26	0.069	14				
5	800	0.7903	3.48	0.009	15				
6	400	0.8088	45.03	0.026	16				
7					17				
8					18				
9					19				
10					20				



	One-Dimensional Consolidation Test	Approved by
	BS 1377 : Part 5 : Clause 3 : 1990	Initials : kp
	Determination of the one-dimensional consolidation properties	Date : 2/6/2007

Test Report by **K4 SOILS LABORATORY** Unit 8 Olds Close Olds Approach Watford WD18 9RU Sheet 2/2

Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) Bhavika R.(Qual.Mgr)

All samples connected with this report ,incl any on 'hold' will be stored and disposed off according to Company policy.Acopy of this policy is available on request.

SUMMARY OF TEST RESULTS

Borehole No	Depth m	Moisture %	<425um %	Index Properties			Density Mg/m ³	Cell Pressure KPa	Undrained Triaxial Tests		Cu KPa	Mode of Failure	
				LL %	PL %	PI %			Compressive Stress KPa	Strain at Failure %			
BH888	3.5-4.5	194.1				1.24						HV=3.0 KPa	
BH939	1.5-1.95	205.7				1.19						HV=4KPa	
BH943a	4.0-5.0	429.2				1.22						HV=3.5KPa	
NM/TL	Notes :											Table	
	1. All BS tests carried out using preferred (definitive) method unless otherwise stated.											1	
	Job ref No.	NM/TL 259		Location	GCOB-Gateway								

SHEAR BOX TEST

Test Method BS 1377 : Part 7 : 1990 : Method 4

Preparation procedure Remoulded with 2.5 kg rammer at natural moisture content.

60mm² shear box tested.

Description Light grey occasionally dark grey sandy slightly gravelly SILT/CLAY.

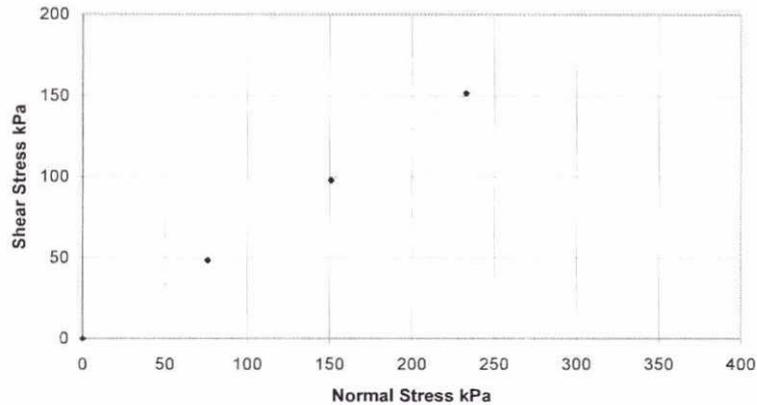
Weighings	Stage 1	Stage 2	Stage 3	Nominal Dimensions		
	Wet soil	186.0	186.3	186.0	Length	L1 mm
Dry soil	152.8	153.0	152.8		L2 mm	60
				Area	A mm ²	3600
Wet soil	186.0	186.3	186.0	Height	H mm	25.4
Dry soil	152.8	153.0	152.8	Volume	V cm ³	91.44
Water	33.2	33.2	33.2	Sg	Mg/m ³	2.65
MC : Measured %	21.7	21.72	21.74			
Density Mg/m ³	2.03	2.04	2.03			
Dry Density Mg/m ³	1.67	1.67	1.67			
Voids ratio e	0.5854	0.5836	0.5864			
Degree of saturation %	98	99	98			

Final Details

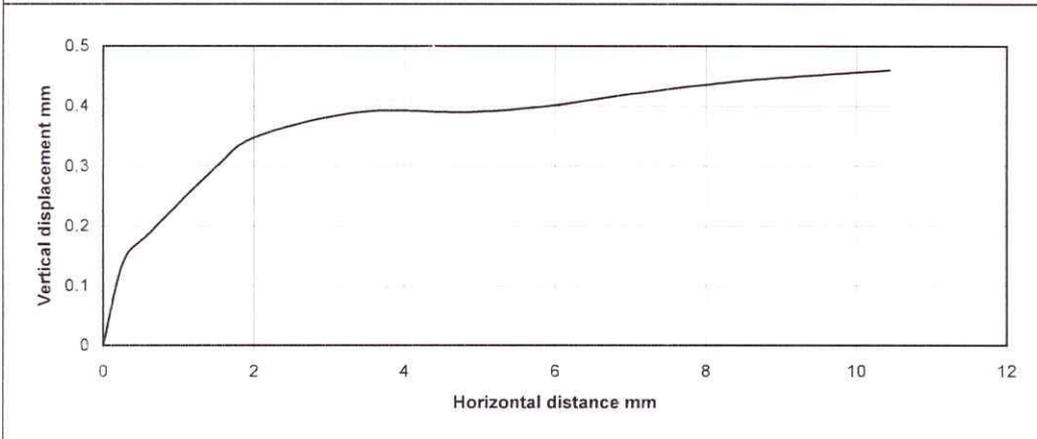
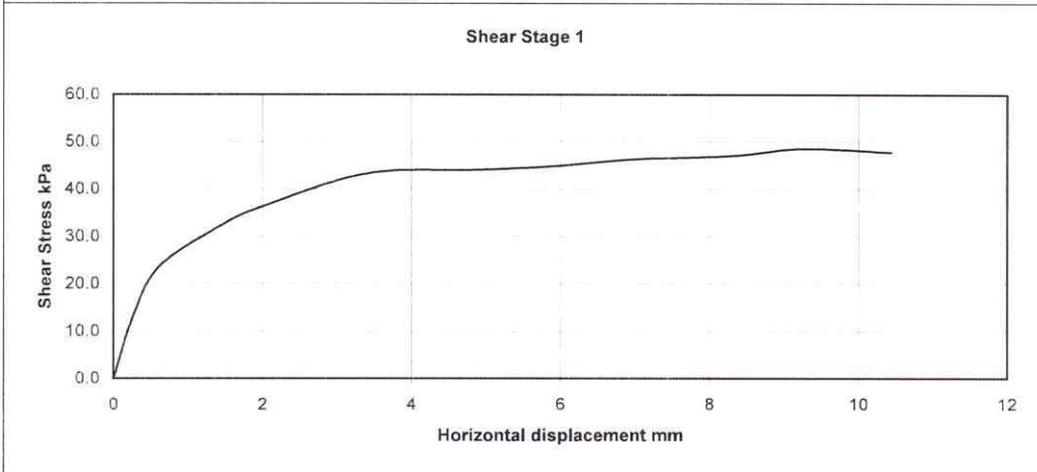
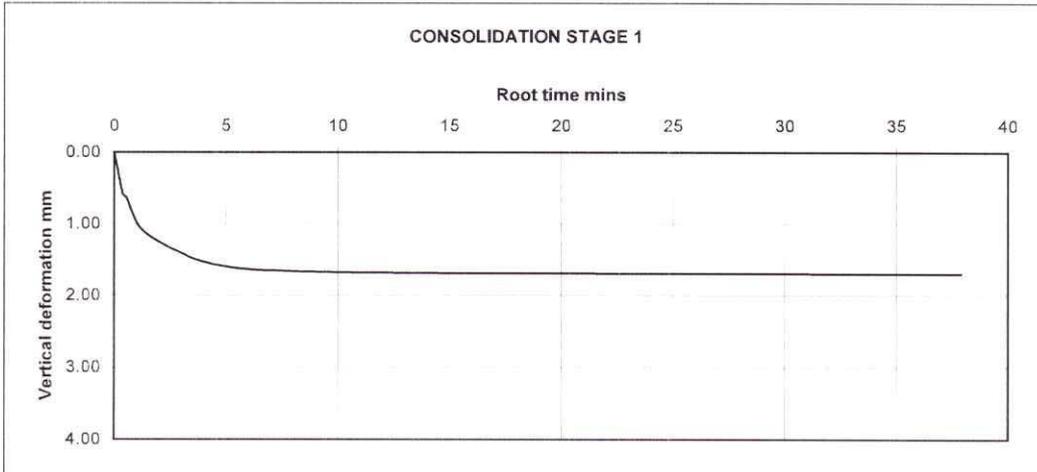
	Stage 1	Stage 2	Stage 3
Normal Loads kPa	76	151	233
Shear stress kPa	48.6	97.9	151.7
Displacement mm	9.25	5.95	5.67
Rate of displacement mm/ min	0.01		

Peak
Cohesion c' (kPa) 1.5
Friction angle phi' 32.3

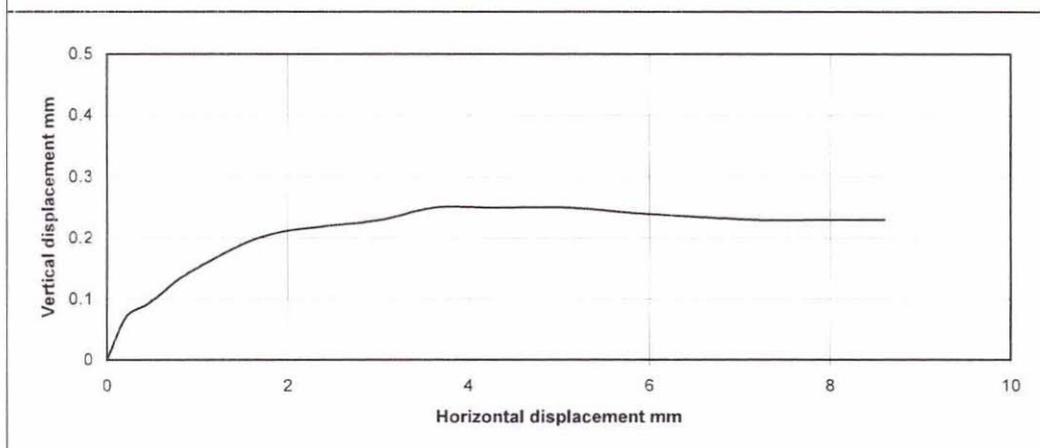
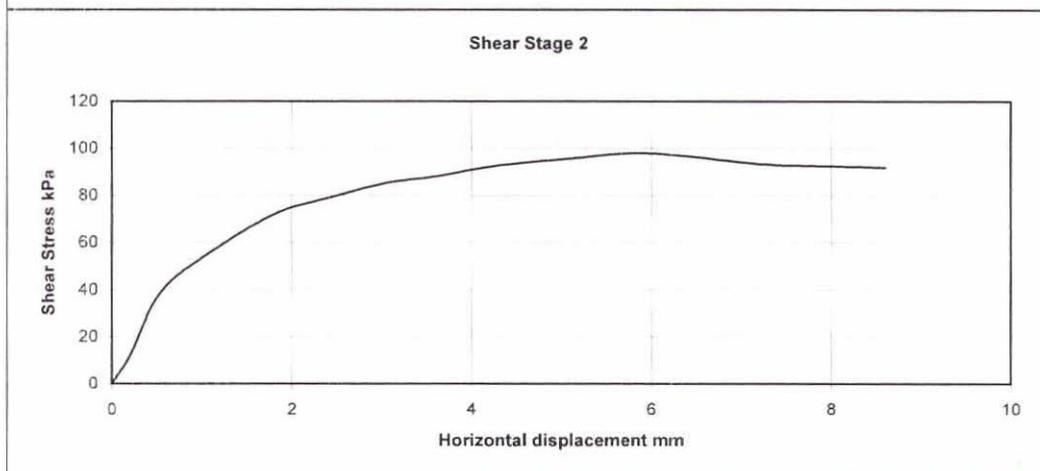
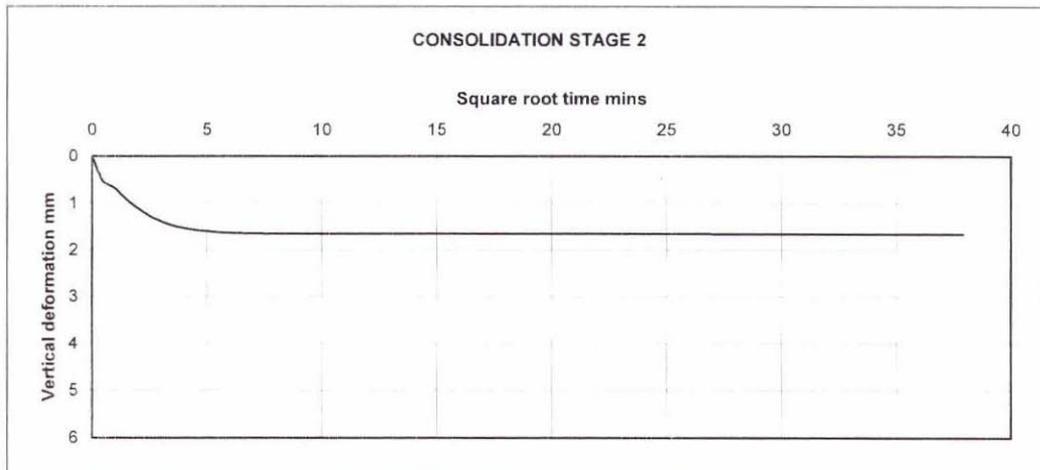
Mohr Envelope



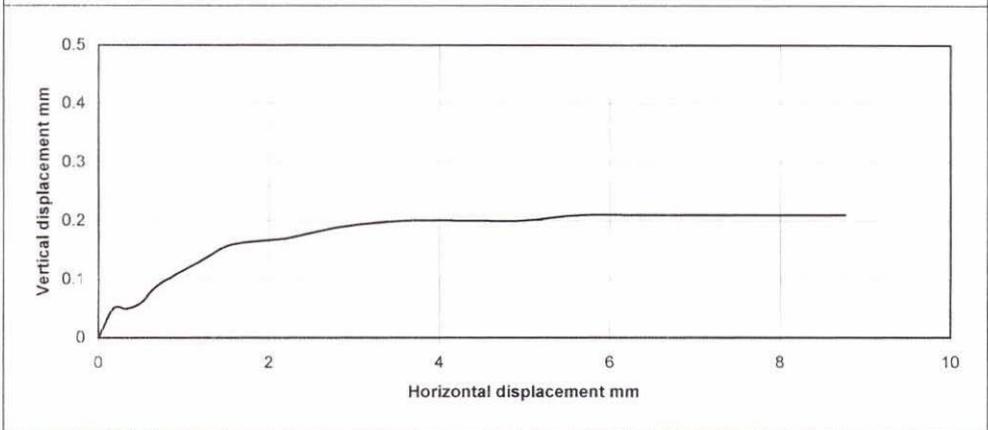
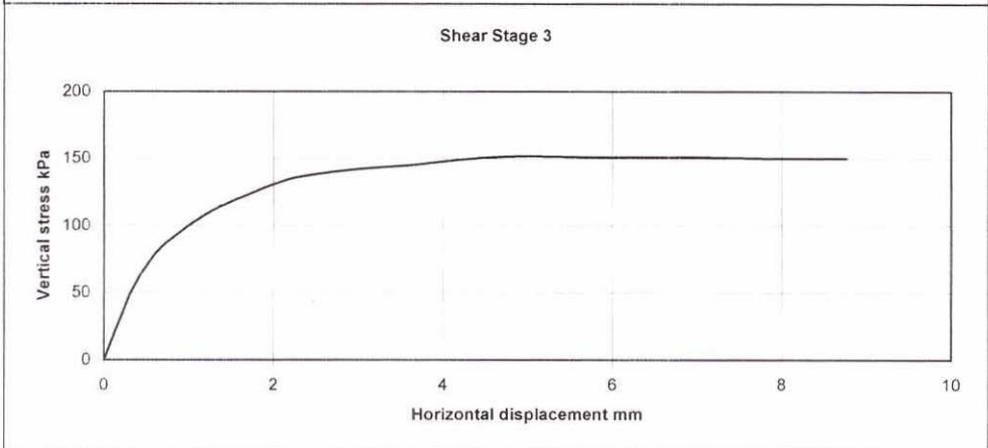
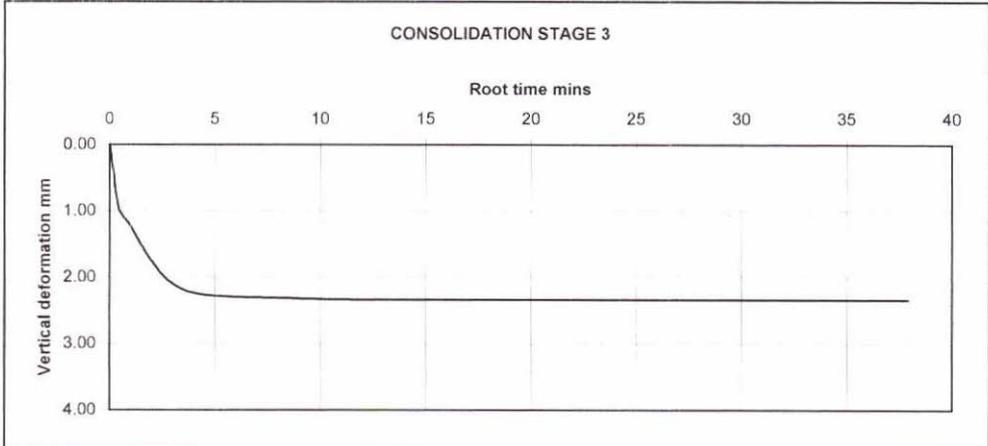
NM T L	Consolidated · Consolidated drained Shear Box Test		Job No.	NMTL 259
	in 60 mm square Box		Borehole No	BH 943a
Ltd	Project GCOB Galway		Sample No.	B
Operator Jo	Checked Bc	Approved	Depth.	11.50m



NM T L	Consolidated Consolidated drained Shear Box Test in 60 mm square Box		Job No.	NMTL 259
	Ltd	Project	GCOB Galway	Borehole No
Operator		Jo	Checked	Bc
			Sample No.	B
			Depth.	11.50m



NM	T L	Consolidated Consolidated drained Shear Box Test		Job No.	NMTL 259	
		in 60 mm square Box		Borehole No	BH 943a	
	Ltd	Project GCOB Galway		Sample No.	B	
Operator	Jo	Checked	Bc	Approved	Depth.	11.50m



NM	T L	Consolidated / Consolidated drained Shear Box Test		Job No.	NMTL 259
		in 60 mm square Box		Borehole No	BH 943a
Ltd	Jo	Project GCOB Galway		Sample No.	B
		Checked Bc	Approved	Depth.	11.50m

Client name & address:		Date received:	12/1/2006	K4 SOILS 
Irish Drilling		Date sampled:	1/4/2007	
Project Name:	GCOB	Date tested:	1/21/2007	
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007	
Sample description:		Sample no/ type:	C	BH no: RC936
Grey slightly silty slightly clayey gravelly SAND		Sample size:	60mmx60mm	Depth(m): 24.0-25.0

Test details

Depth within original sample : N/A Orientation within original sample : N/A
 Specimen preparation : <2mm material remoulded
 Type of Specimen Undisturbed / Remoulded / Compacted

Initial specimen details

Specimen Number	1	2	3
Height mm	20	20	20
Length mm	60	60	60
Width mm	60	60	60
Bulk density Mg/m ³	1.81	1.85	1.80
Moisture content %	7.0	7.0	7.0
Dry density Mg/m ³	1.69	1.73	1.68
Field density Mg/m ³	2.65	(assumed)	

Pre-Shearing Stage

Applied normal stress kPa	200	400	600
Height at end of stage mm	20	20	20

Shearing Stage

Applied normal stress kPa	200	400	600
Rate of horizontal displacement mm/min	1.52	1.52	1.52
Height at end of stage mm	17.2	16.4	16.3

CONDITIONS AT FAILURE Criterion : Maximum shear stress

Shear stress kPa	156	304	461
Horizontal relative displacement mm	7.25	6.25	6.5

Final specimen details

Bulk density Mg/m ³	-	-	-
Moisture content %	16	16	15
Dry density Mg/m ³	-	-	-

Shear strength parameters

Cohesion intercept, c' kPa	0
Angle of shearing resistance, ϕ' degrees	38.5

Notes : Specimens tested saturated.

*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	Initials : kp Date : 2/6/2007

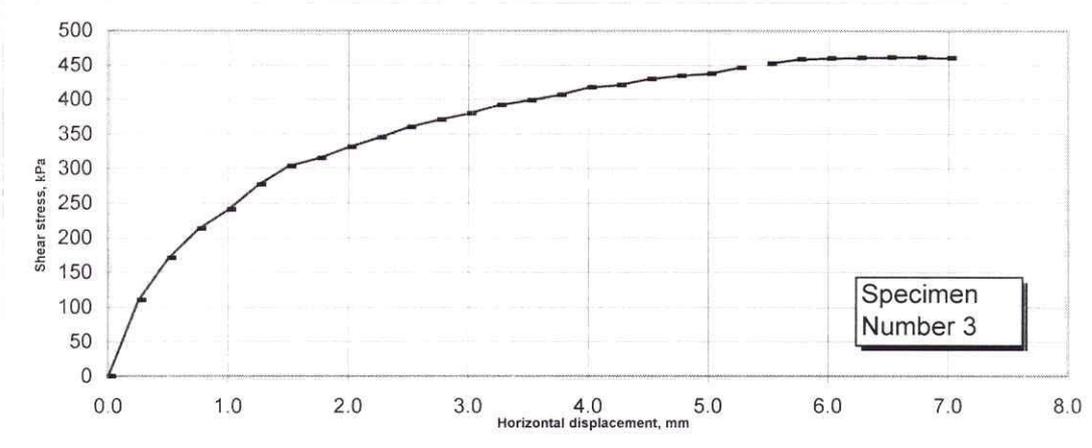
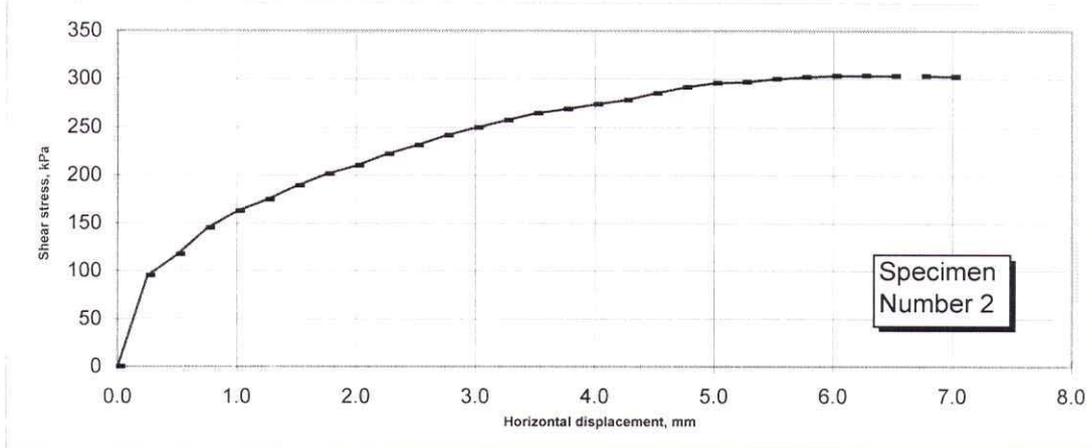
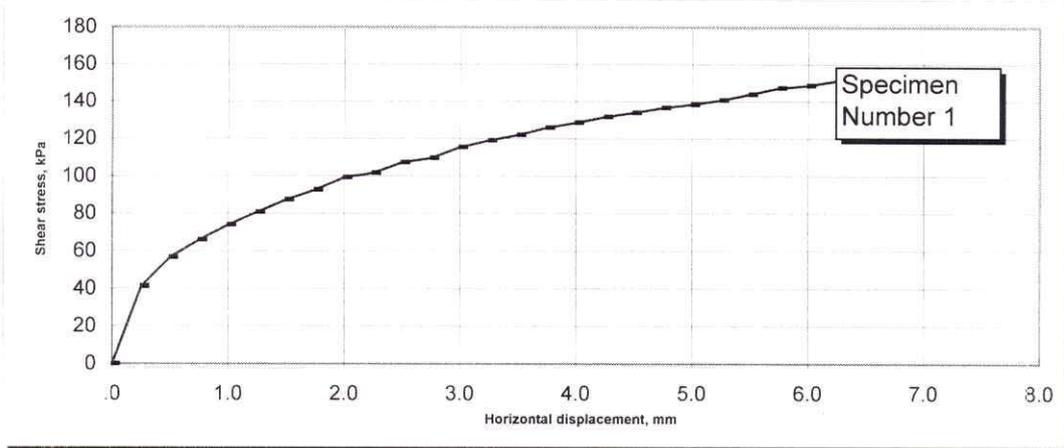
Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU**

Sheet 1/4

Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) Bhavika.R.(Qual.Mgr)

All samples connected with this report, incl any on 'hold' will be stored and disposed off according to Company policy. A copy of this policy is available on request.

Client name & address:		Date received:	12/1/2006	K4 SOILS 	
Irish Drilling		Date sampled:	1/4/2007		
Project Name: GCOB		Date tested:	1/21/2007		
Project No: - Our Job / report no: 4949		Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC936
Grey slightly silty slightly clayey gravelly SAND		Sample size:	60mmx60mm	Depth(m):	24.0-25.0



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990	Initials : kp
	Determination of shear strength by direct shear (small shearbox apparatus)	Date : 2/6/2007

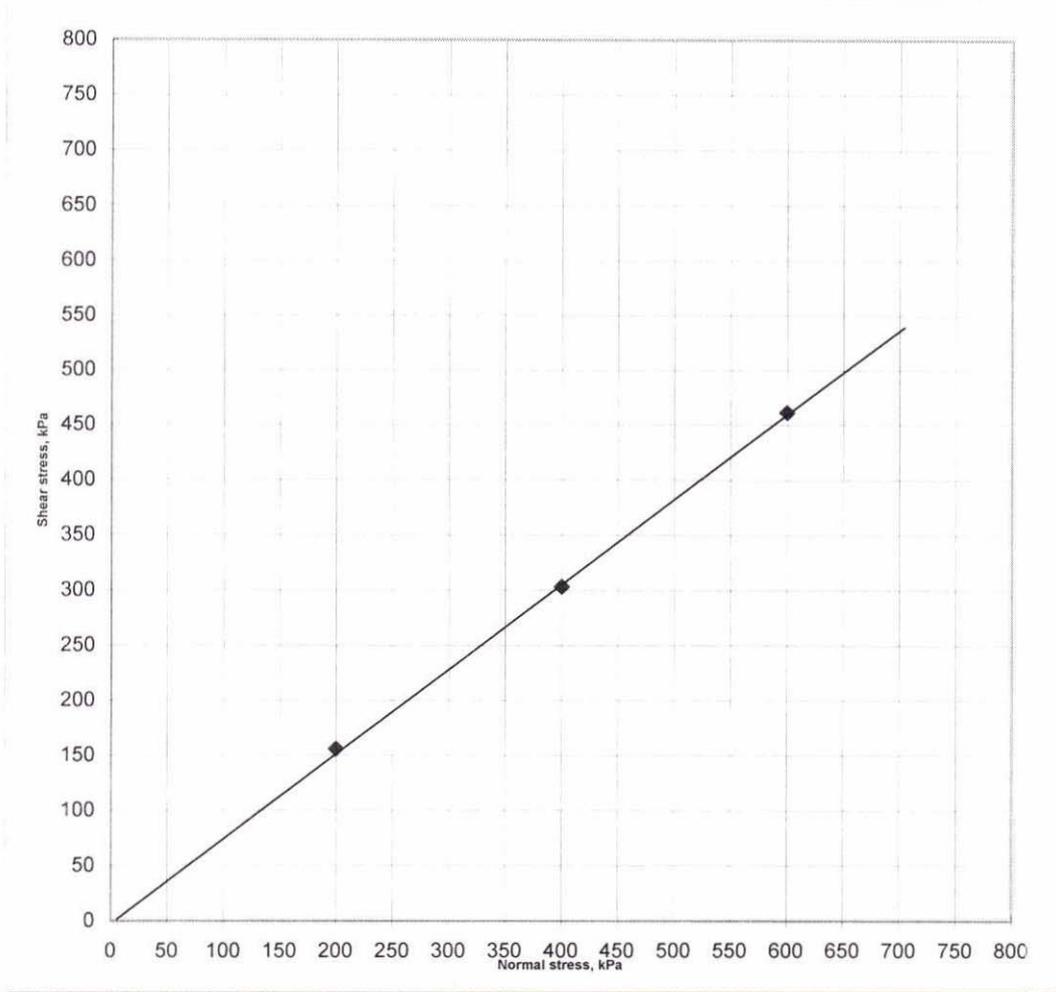
Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU** Sheet 2/4

Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) Bhavika.R.(Qual.Mgr)

All samples connected with this report ,incl any on 'hold' will be stored and disposed off according to Company policy A copy of this policy is available on request.

Client name & address: 0	Date received: 12/1/2006	K4 SOILS 		
	Date sampled: 1/4/2007			
Project Name: GCOB	Date tested: 1/21/2007			
Project No: -	Our Job / report no: 4949	Date reported: 2/6/2007		
Sample description: Grey slightly silty slightly clayey gravelly SAND	Sample no/ type: C	BH no: RC936		
	Sample size: 60mmx60mm	Depth(m): 24.0-25.0		

Shear Stress vs Normal Stress



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990	Initials : kp
	Determination of shear strength by direct shear (small shearbox apparatus)	Date : 2/6/2007

Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU** Sheet3/4

Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech Mgr) J.Phaure (Lab.Mgr) Bhavika R.(Qual.Mgr)

All samples connected with this report ,incl any on 'hold' will be stored and disposed off according to Company policy A copy of this policy is available on request.

Client name & address:		Date received:	12/1/2006	K4 SOILS 
Irish Drilling		Date sampled:	1/4/2007	
Project Name:	GCOB	Date tested:	1/21/2007	
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007	
Sample description:		Sample no/ type:	C	BH no: RC936
Dark grey slightly sandy clayey SILT		Sample size:	60mmx60mm	Depth(m): 46.0-47.0

Test details

Depth within original sample : N/A Orientation within original sample : N/A
 Specimen preparation : <2mm material remoulded
 Type of Specimen Undisturbed / Remoulded / Compacted

Initial specimen details

Specimen Number	1	2	3
Height mm :	20	20	20
Length mm :	60	60	60
Width mm :	60	60	60
Bulk density Mg/m ³ :	1.43	1.47	1.45
Moisture content % :	23	23	23
Dry density Mg/m ³ :	1.16	1.19	1.18
Particle density Mg/m ³ :	2.65	(assumed)	

Pre-Shearing Stage

Applied normal stress kPa :	250	500	750
Height at end of stage mm :	20	20	20

Shearing Stage

Applied normal stress kPa :	250	500	750
Rate of horizontal displacement mm/min :	1.52	1.52	1.52
Height at end of stage mm :	17.5	17.7	16.3

CONDITIONS AT FAILURE Criterion : Maximum shear stress

Shear stress kPa :	141	320	443
Horizontal relative displacement mm :	4.50	3.25	3.25

Final specimen details

Bulk density Mg/m ³ :	-	-	-
Moisture content % :	39	39	33
Dry density Mg/m ³ :	-	-	-

Shear strength parameters

Cohesion intercept, c' kPa :	0
Angle of shearing resistance, ϕ' degrees :	31.5

Notes : Specimens tested saturated.

*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	Initials : kp Date : 2/6/2007

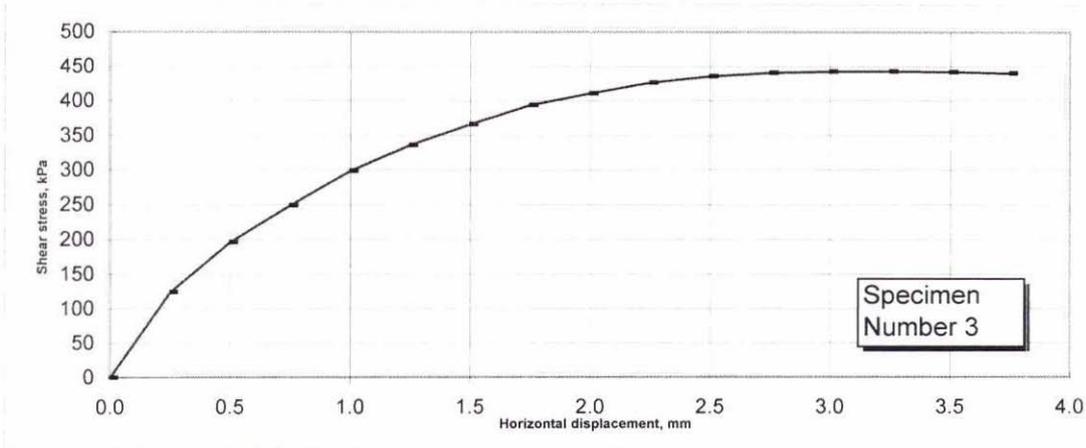
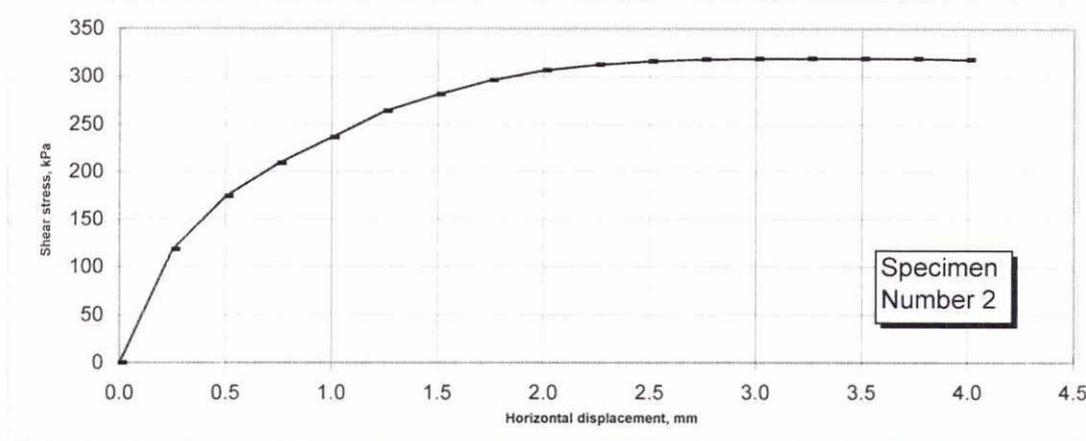
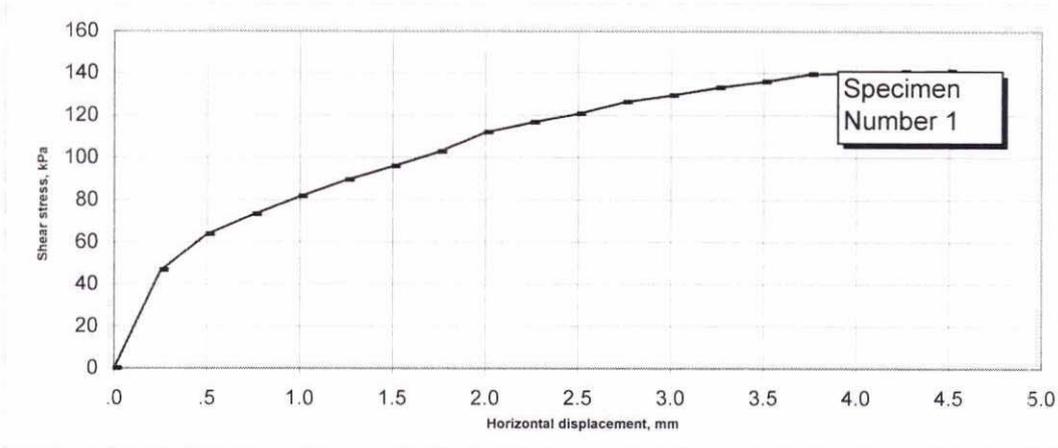
Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU**

Sheet 1/4

Test Results relate only to the sample numbers shown above. Approved Signatories: K Phaure (Tech.Mgr) J Phaure (Lab Mgr) Bhavika R. (Qual.Mgr)

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Client name & address:		Date received:	12/1/2006	K4 SOILS 	
Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC936
Dark grey slightly sandy clayey SILT		Sample size:	60mmx60mm	Depth(m):	46.0-47.0



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990	Initials : kp
	Determination of shear strength by direct shear (small shearbox apparatus)	Date : 2/6/2007

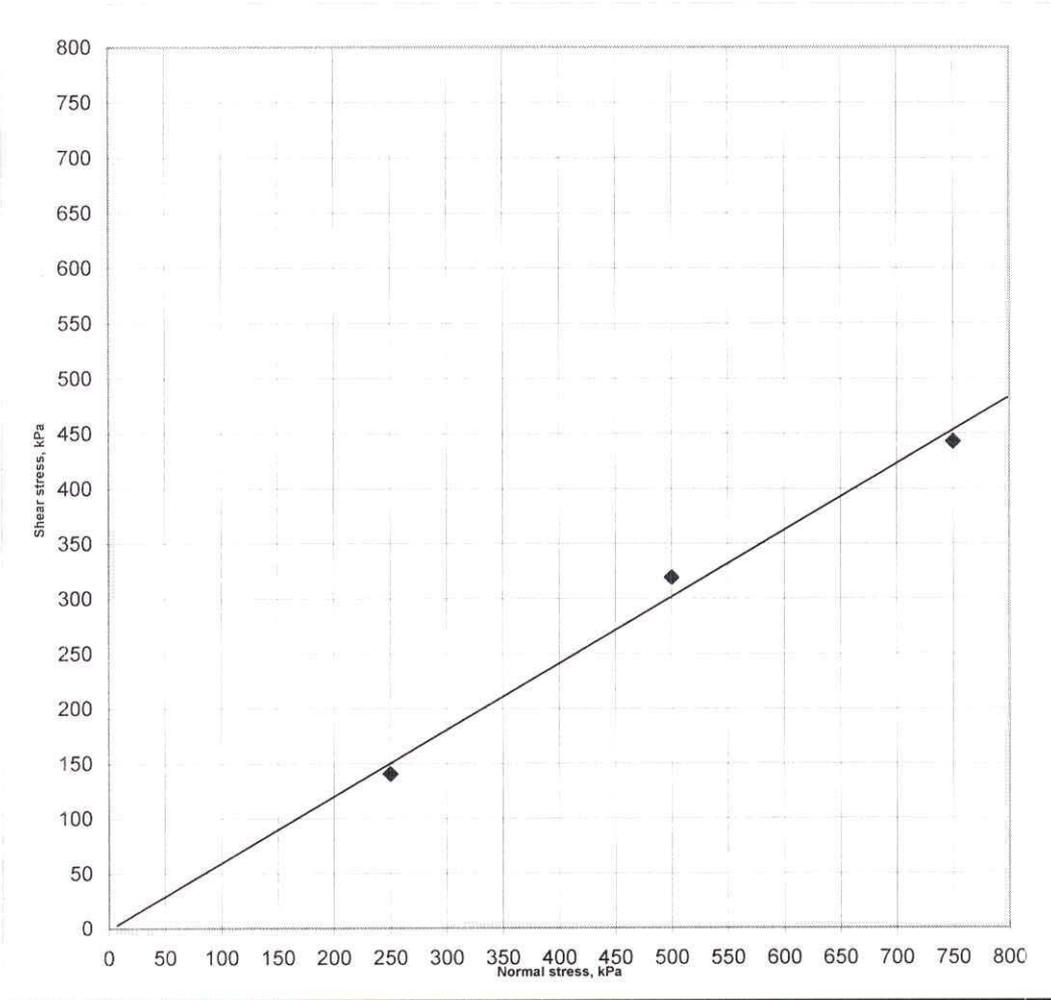
Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU** Sheet2/4

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Client name & address: 0		Date received: 12/1/2006	K4 SOILS 	
		Date sampled: 1/4/2007		
Project Name: GCOB		Date tested: 1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported: 2/6/2007		
Sample description: Dark grey slightly sandy clayey SILT		Sample no/ type: C	BH no: RC936	
		Sample size: 60mmx60mm	Depth(m): 46.0-47.0	

Shear Stress vs Normal Stress



Rapid Shearbox Test

BS 1377 : Part 7 : Clause 4.5.4 : 1990

Determination of shear strength by direct shear (small shearbox apparatus)

*Set of three specimens

Approved by

Initials : kp

Date : 2/6/2007

Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU**

Sheet 3/4

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Bhavika R (Qual. Mgr)

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Client name & address:	Date received:	12/1/2006	K4 SOILS 
Irish Drilling	Date sampled:	1/4/2007	
Project Name: GCOB	Date tested:	1/21/2007	
Project No: - Our Job / report no: 4949	Date reported:	2/6/2007	
Sample description:	Sample no/ type:	C	BH no: RC936
Grey clayey silty very sandy GRAVEL	Sample size:	60mmx60mm	Depth(m): 55.5-56.5

Test details

Depth within original sample : N/A Orientation within original sample : N/A
 Specimen preparation : <2mm material remoulded
 Type of Specimen Undisturbed / Remoulded / Compacted

Initial specimen details

Specimen Number	1	2	3
Height mm	20	20	20
Length mm	60	60	60
Width mm	60	60	60
Bulk density Mg/m ³	2.11	2.01	2.08
Moisture content %	32	32	32
Dry density Mg/m ³	1.59	1.52	1.57
Field density Mg/m ³	2.65	(assumed)	

Pre-Shearing Stage

Applied normal stress kPa	300	600	900
Height at end of stage mm	20	20	20

Shearing Stage

Applied normal stress kPa	300	600	900
Rate of horizontal displacement mm/min	1.52	1.52	1.52
Height at end of stage mm	17.1	17.2	16.1

CONDITIONS AT FAILURE Criterion : Maximum shear stress

Shear stress kPa	203	434	642
Horizontal relative displacement mm	4.75	7.75	5.25

Final specimen details

Bulk density Mg/m ³	-	-	-
Moisture content %	22	17	17
Dry density Mg/m ³	-	-	-

Shear strength parameters

Cohesion intercept, c' kPa	0
Angle of shearing resistance, ϕ' degrees	36.5

Notes : Specimens tested saturated.

*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	Initials : kp Date : 2/6/2007

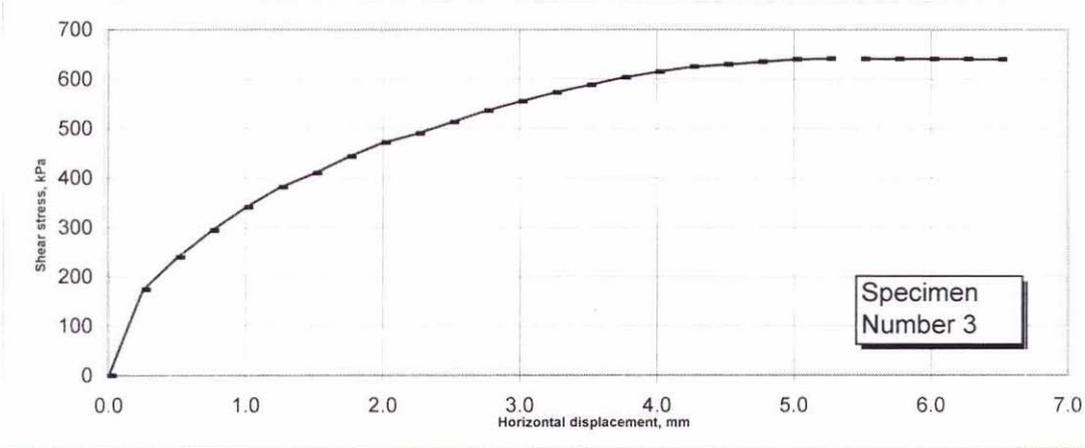
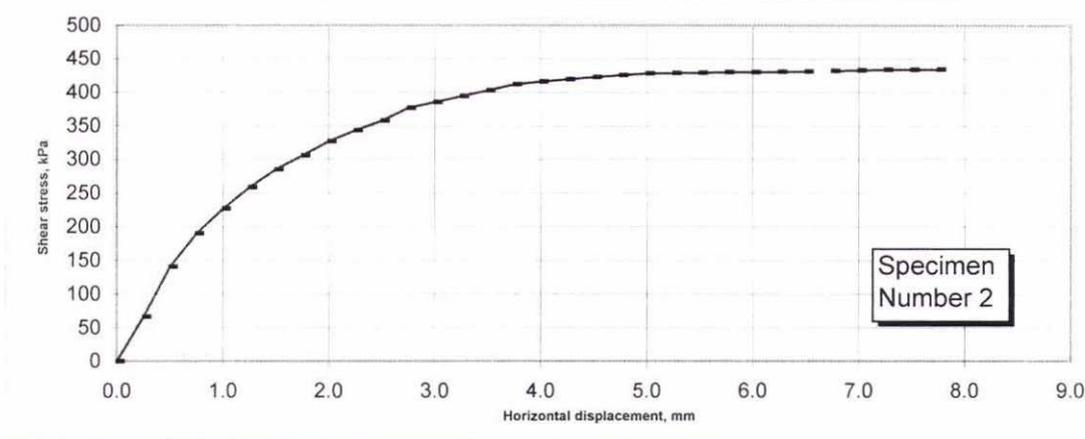
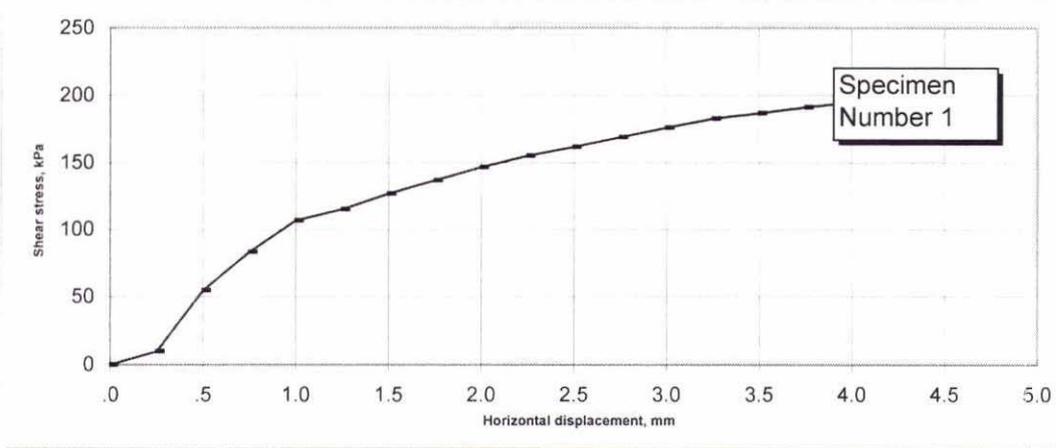
Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU**

Sheet 1/4

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Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC936
Grey clayey silty very sandy GRAVEL		Sample size:	60mmx60mm	Depth(m):	55.5-56.5



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990	Initials : kp
	Determination of shear strength by direct shear (small shearbox apparatus)	Date : 2/6/2007

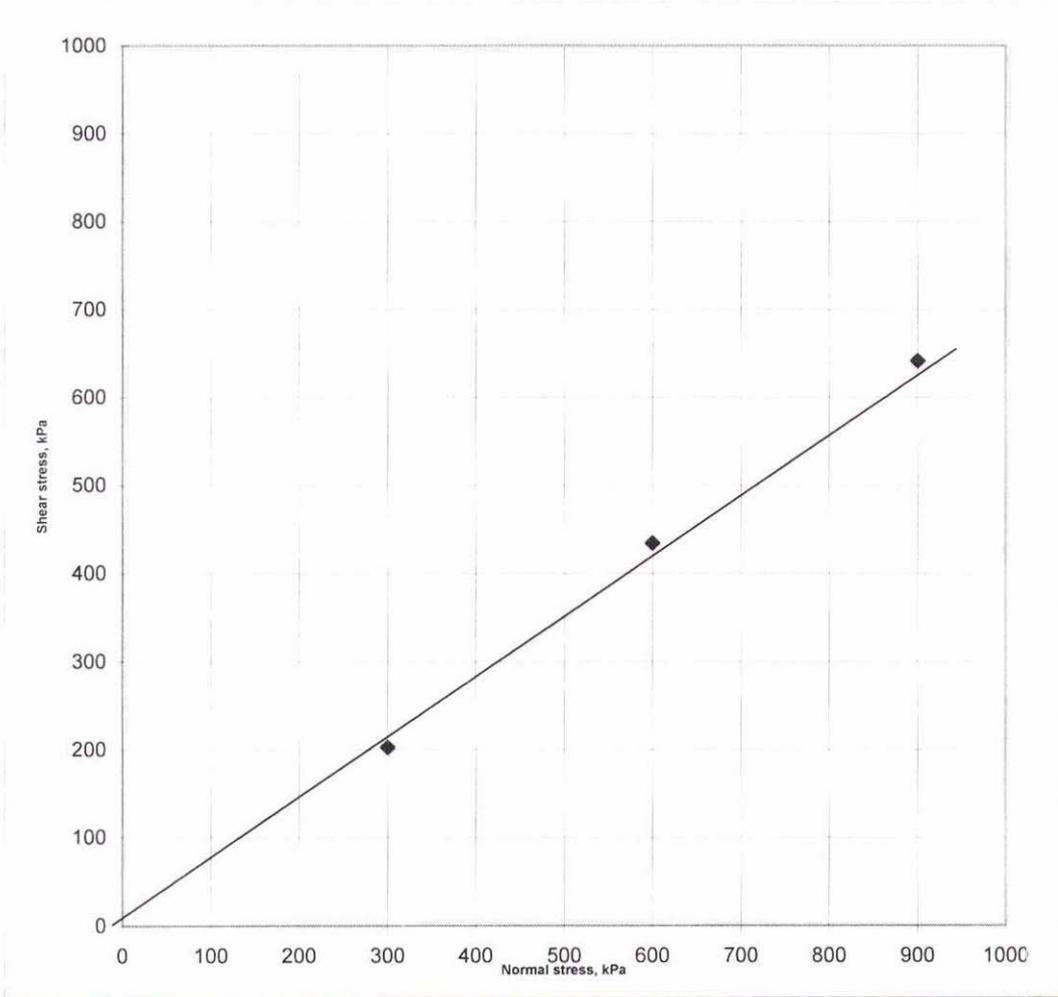
Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU** Sheet2/4

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Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC936
Grey clayey silty very sandy GRAVEL		Sample size:	60mmx60mm	Depth(m):	55.5-56.5

Shear Stress vs Normal Stress



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990	Initials : kp
	Determination of shear strength by direct shear (small shearbox apparatus)	Date : 2/6/2007

Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU** Sheet3/4

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Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC937
Dark grey slightly sandy clayey SILT		Sample size:	60mmx60mm	Depth(m):	26-27

Test details

Depth within original sample : N/A Orientation within original sample : N/A
 Specimen preparation : <2mm material remoulded
 Type of Specimen Undisturbed / Remoulded / Compacted

Initial specimen details

Specimen Number	1	2	3
Height mm	20	20	20
Length mm	60	60	60
Width mm	60	60	60
Bulk density Mg/m ³	1.52	1.49	1.50
Moisture content %	29	29	29
Dry density Mg/m ³	1.18	1.16	1.16
Particle density Mg/m ³	2.65	(assumed)	

Pre-Shearing Stage

Applied normal stress kPa	200	400	600
Height at end of stage mm	20	20	20

Shearing Stage

Applied normal stress kPa	200	400	600
Rate of horizontal displacement mm/min	1.52	1.52	1.52
Height at end of stage mm	18.7	18.1	16.6

CONDITIONS AT FAILURE Criterion : Maximum shear stress

Shear stress kPa	163	234	326
Horizontal relative displacement mm	3.25	6.75	7.75

Final specimen details

Bulk density Mg/m ³	-	-	-
Moisture content %	38	45	38
Dry density Mg/m ³	-	-	-

Shear strength parameters

Cohesion intercept, c' kPa	70
Angle of shearing resistance, ϕ' degrees	23.5

Notes : Specimens tested saturated.

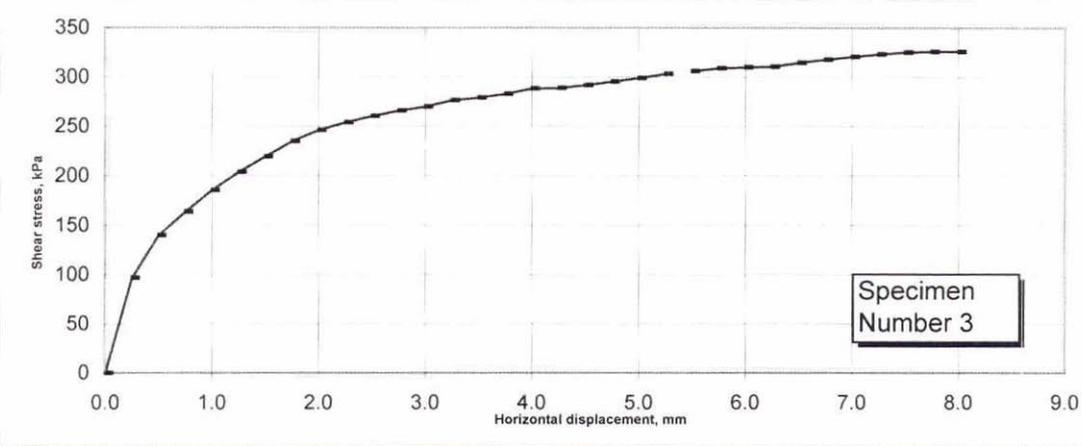
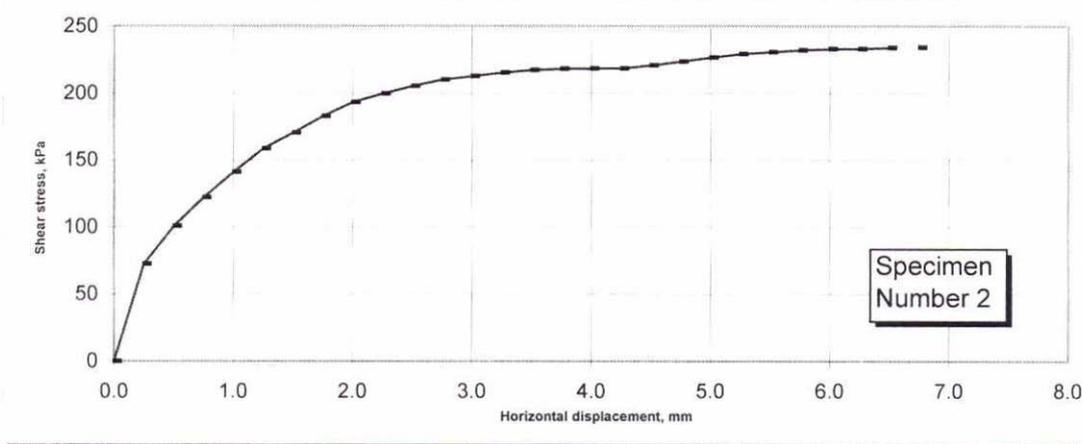
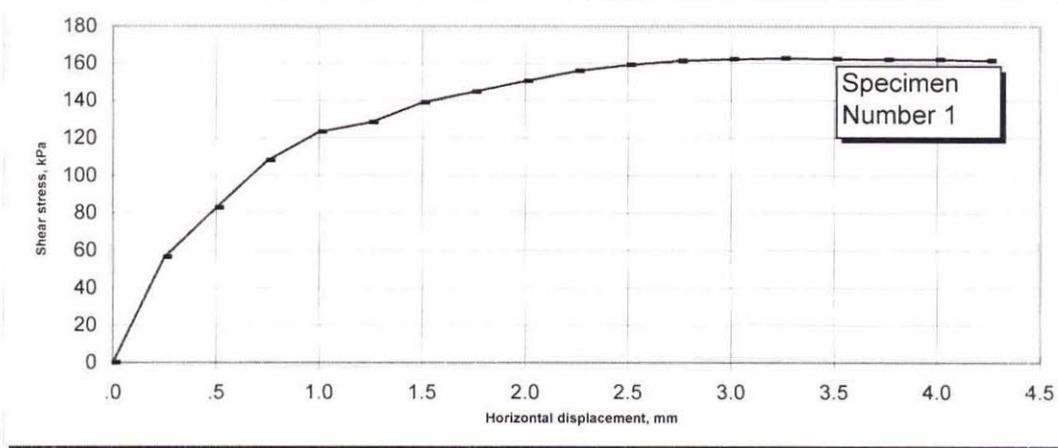
*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	Initials : kp Date : 2/6/2007

Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU**

Sheet 1/4

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Client name & address:		Date received:	12/1/2006	K4 SOILS 	
Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC937
Dark grey slightly sandy clayey SILT		Sample size:	60mmx60mm	Depth(m):	26-27



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	Initials : kp Date : 2/6/2007

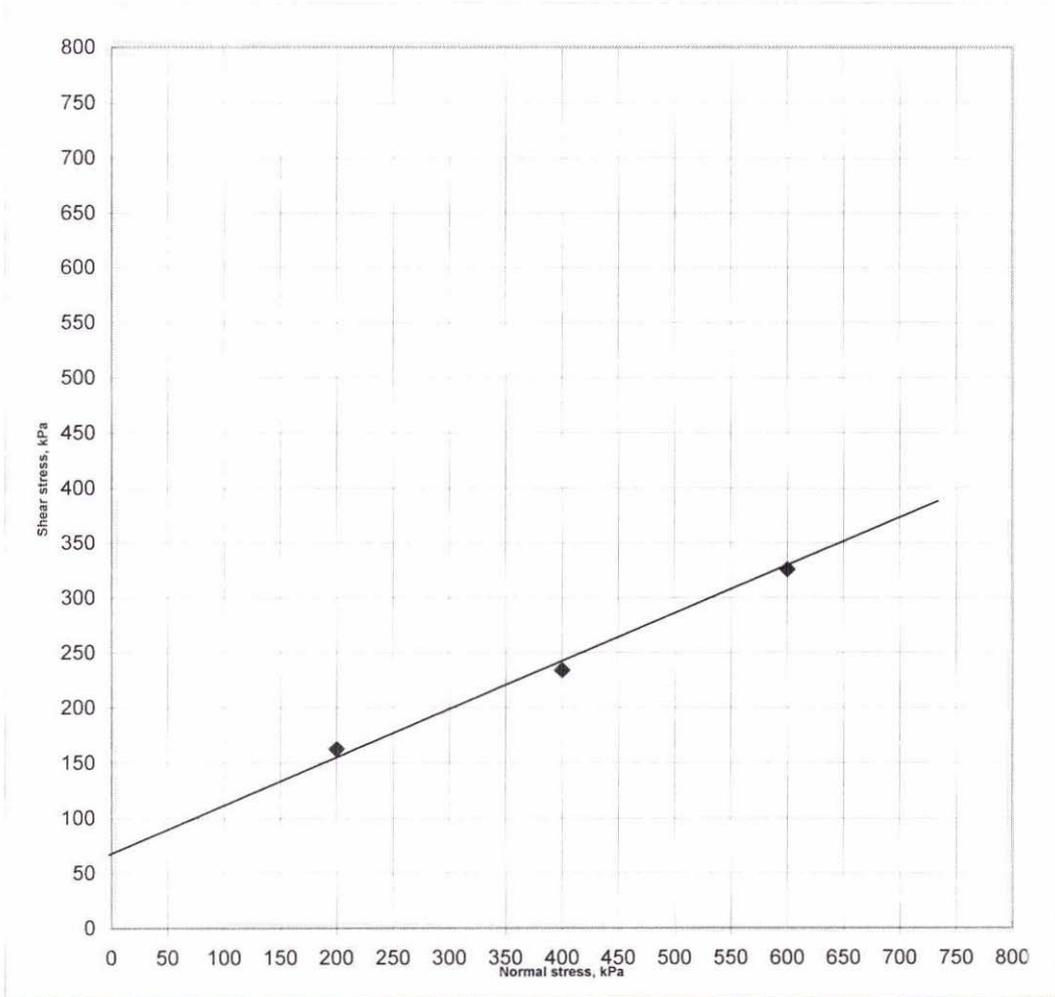
Test Report by **K4 SOILS LABORATORY** Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU Sheet2/4

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Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC937
Dark grey slightly sandy clayey SILT		Sample size:	60mmx60mm	Depth(m):	26-27

Shear Stress vs Normal Stress



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	Initials : kp Date : 2/6/2007

Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU** Sheet 3/4

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Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC937
Dark grey slightly sandy clayey SILT		Sample size:	60mmx60mm	Depth(m):	49-50

Test details

Depth within original sample : N/A Orientation within original sample : N/A
Specimen preparation : <2mm material remoulded
Type of Specimen Undisturbed / Remoulded / Compacted

Initial specimen details

Specimen Number	1	2	3
Height mm :	20	20	20
Length mm :	60	60	60
Width mm :	60	60	60
Bulk density Mg/m ³ :	1.81	1.80	1.83
Moisture content % :	14	14	14
Dry density Mg/m ³ :	1.59	1.58	1.61
Particle density	Mg/m ³ :	2.65	(assumed)

Pre-Shearing Stage

Applied normal stress kPa :	300	600	900
Height at end of stage mm :	20	20	20

Shearing Stage

Applied normal stress kPa :	300	600	900
Rate of horizontal displacement mm/min :	1.52	1.52	1.52
Height at end of stage mm :	17.6	17.8	17.2

CONDITIONS AT FAILURE *Criterion* : Maximum shear stress

Shear stress kPa :	198	289	671
Horizontal relative displacement mm :	5.75	7.50	5.00

Final specimen details

Bulk density Mg/m ³ :	-	-	-
Moisture content % :	22	21	18
Dry density Mg/m ³ :	-	-	-

Shear strength parameters

Cohesion intercept, c' kPa :	0
Angle of shearing resistance, ϕ' degrees :	36

Notes : Specimens tested saturated.

*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	Initials : kp Date : 2/6/2007

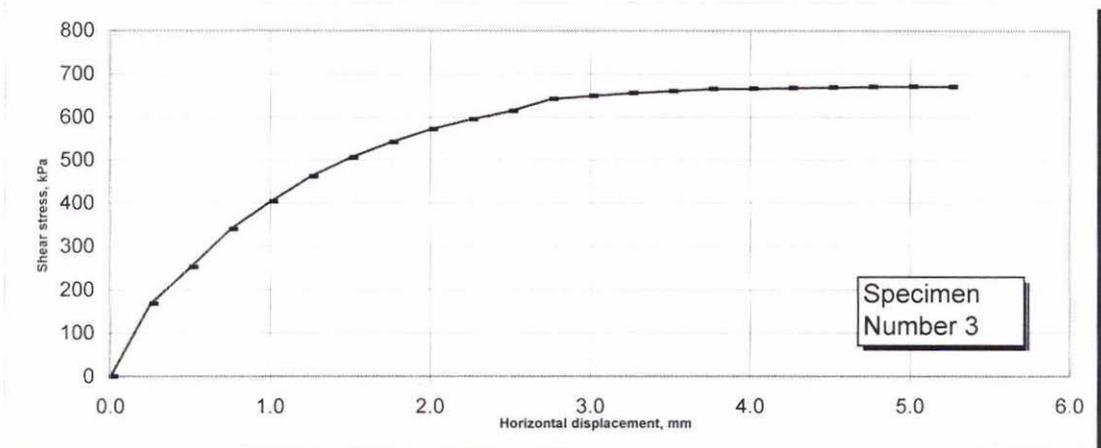
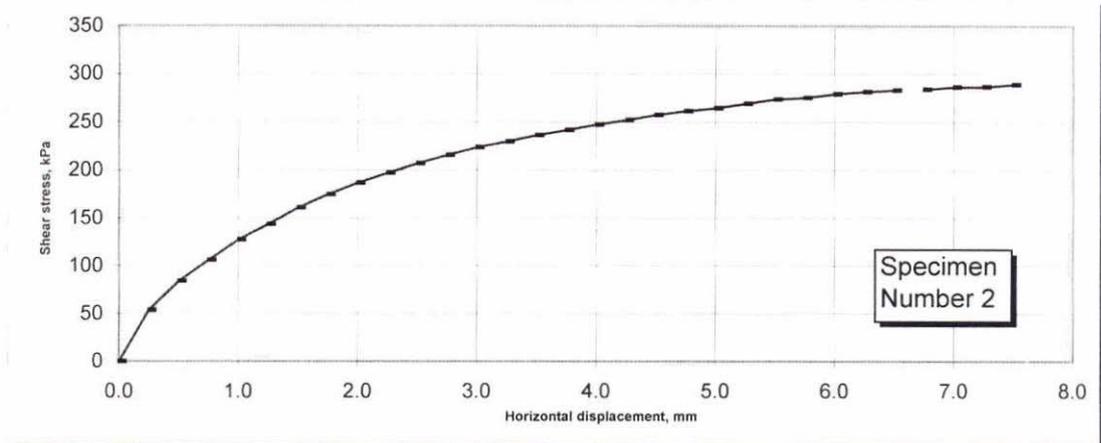
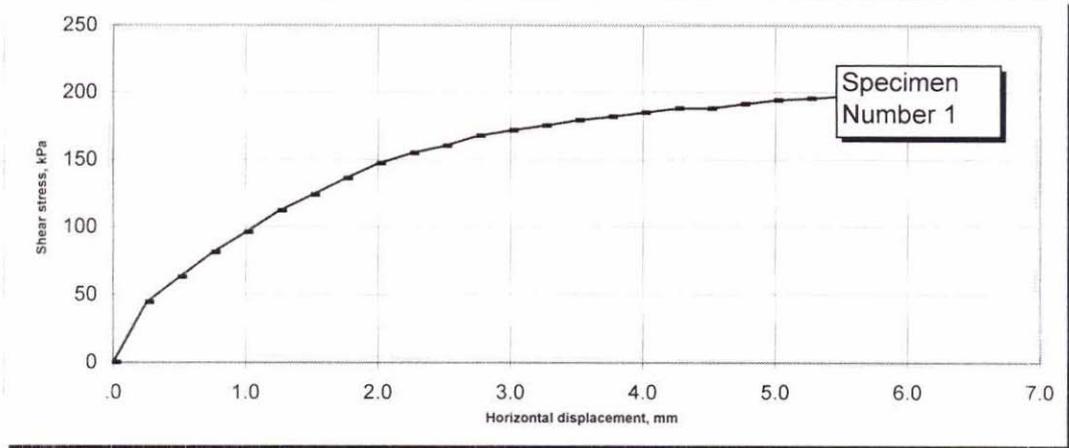
Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU**

Sheet 1/4

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Client name & address:		Date received:	12/1/2006	K4 SOILS 	
Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC937
Dark grey slightly sandy clayey SILT		Sample size:	60mmx60mm	Depth(m):	49-50



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	Initials : kp Date : 2/6/2007

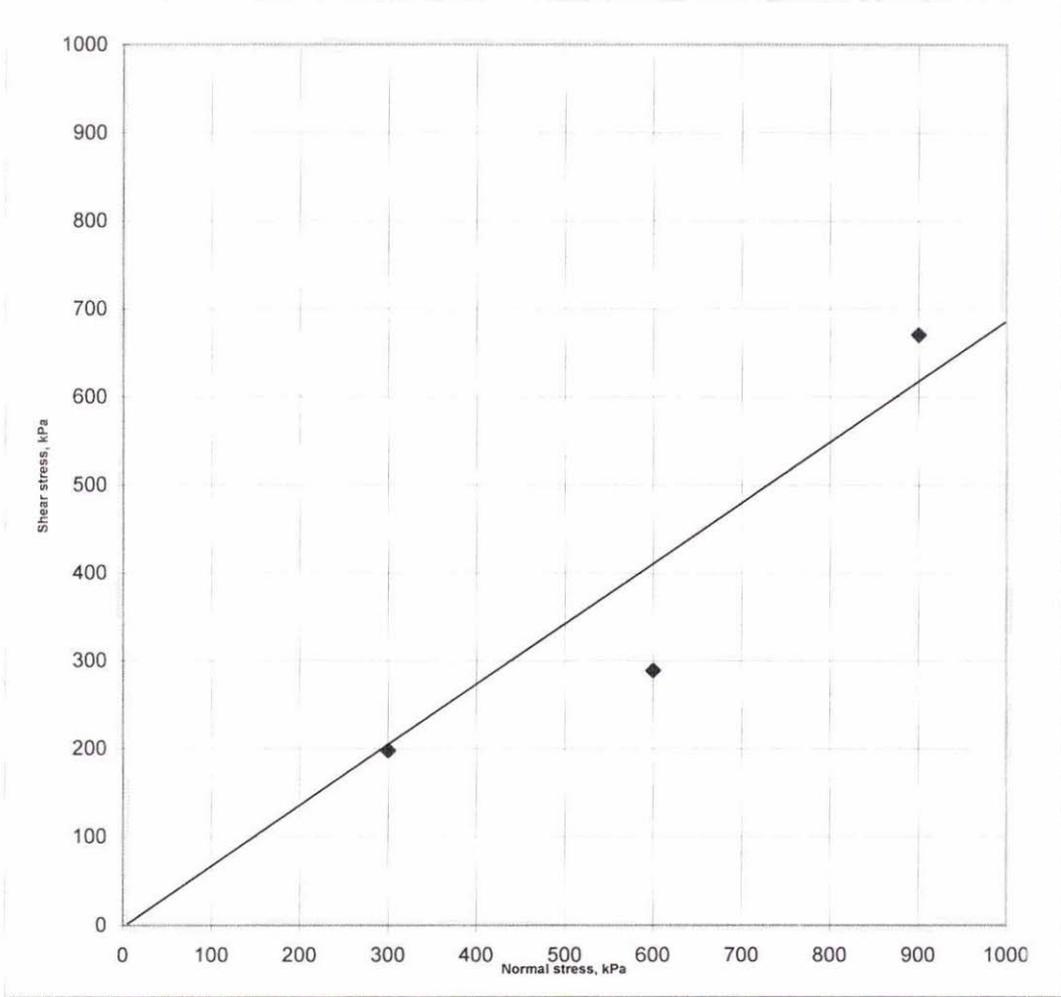
Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU** Sheet2/4

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Client name & address:		Date received:	12/1/2006	K4 SOILS 	
Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC937
Dark grey slightly sandy clayey SILT		Sample size:	60mmx60mm	Depth(m):	49-50

Shear Stress vs Normal Stress



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	Initials : kp Date : 2/6/2007

Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU** Sheet 3/4

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Client name & address:		Date received:	12/1/2006	K4 SOILS 
Irish Drilling		Date sampled:	1/4/2007	
Project Name:	GCOB	Date tested:	1/21/2007	
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007	
Sample description:		Sample no/ type:	C	BH no: RC940
Dark grey clayey very silty SAND		Sample size:	60mmx60mm	Depth(m): 19.0-20.0

Test details

Depth within original sample : N/A Orientation within original sample : N/A
 Specimen preparation : <2mm material remoulded
 Type of Specimen Undisturbed / Remoulded / Compacted

Initial specimen details

Specimen Number	1	2	3
Height mm :	20	20	20
Length mm :	60	60	60
Width mm :	60	60	60
Bulk density Mg/m ³ :	1.65	1.58	1.64
Moisture content % :	21	21	21
Dry density Mg/m ³ :	1.36	1.30	1.35
Final density Mg/m ³ :	2.65	(assumed)	

Pre-Shearing Stage

Applied normal stress kPa :	200	400	600
Height at end of stage mm :	20	20	20

Shearing Stage

Applied normal stress kPa :	200	400	600
Rate of horizontal displacement mm/min :	1.52	1.52	1.52
Height at end of stage mm :	18.6	17.4	18.5

CONDITIONS AT FAILURE Criterion : Maximum shear stress

Shear stress kPa :	143	250	335
Horizontal relative displacement mm :	3.50	6.00	4.75

Final specimen details

Bulk density Mg/m ³ :	-	-	-
Moisture content % :	40	36	35
Dry density Mg/m ³ :	-	-	-

Shear strength parameters

Cohesion intercept, c' kPa :	50
Angle of shearing resistance, ϕ' degrees :	26

Notes : Specimens tested saturated.

*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	Initials : kp Date : 2/6/2007

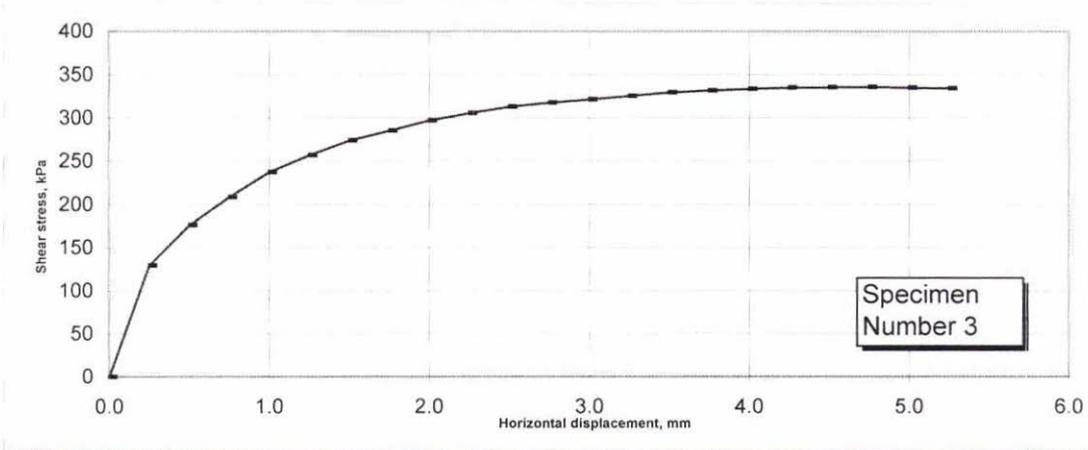
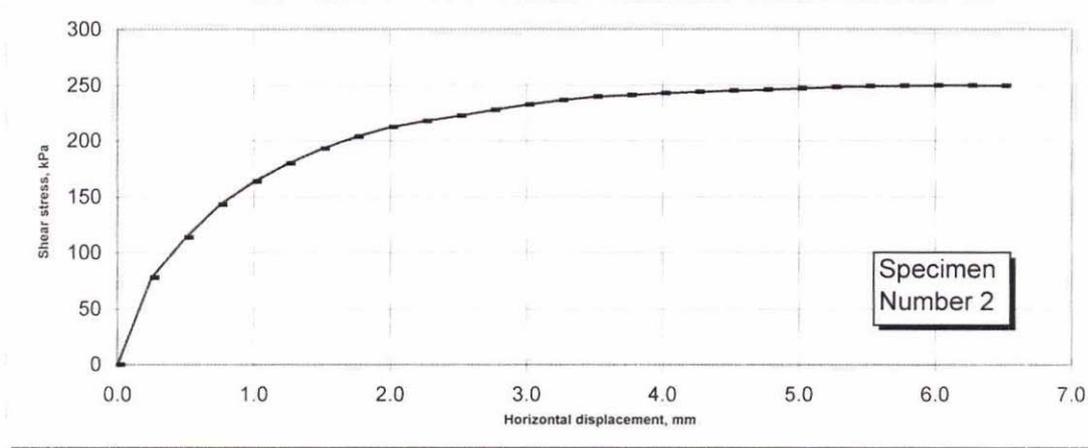
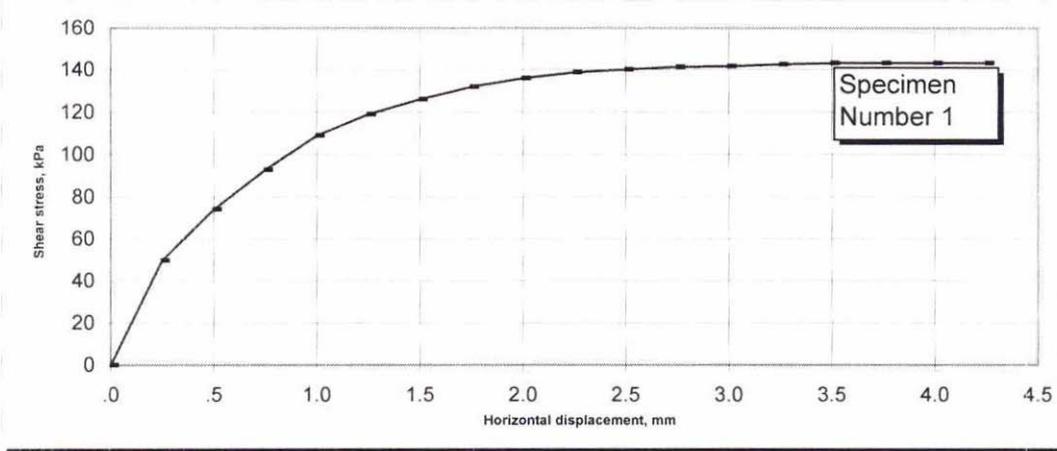
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Sheet 1/4

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Client name & address:		Date received:	12/1/2006	K4 SOILS 	
Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC940
Dark grey clayey very silty SAND		Sample size:	60mmx60mm	Depth(m):	19.0-20.0



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990 Determination of shear strength by direct shear (small shearbox apparatus)	

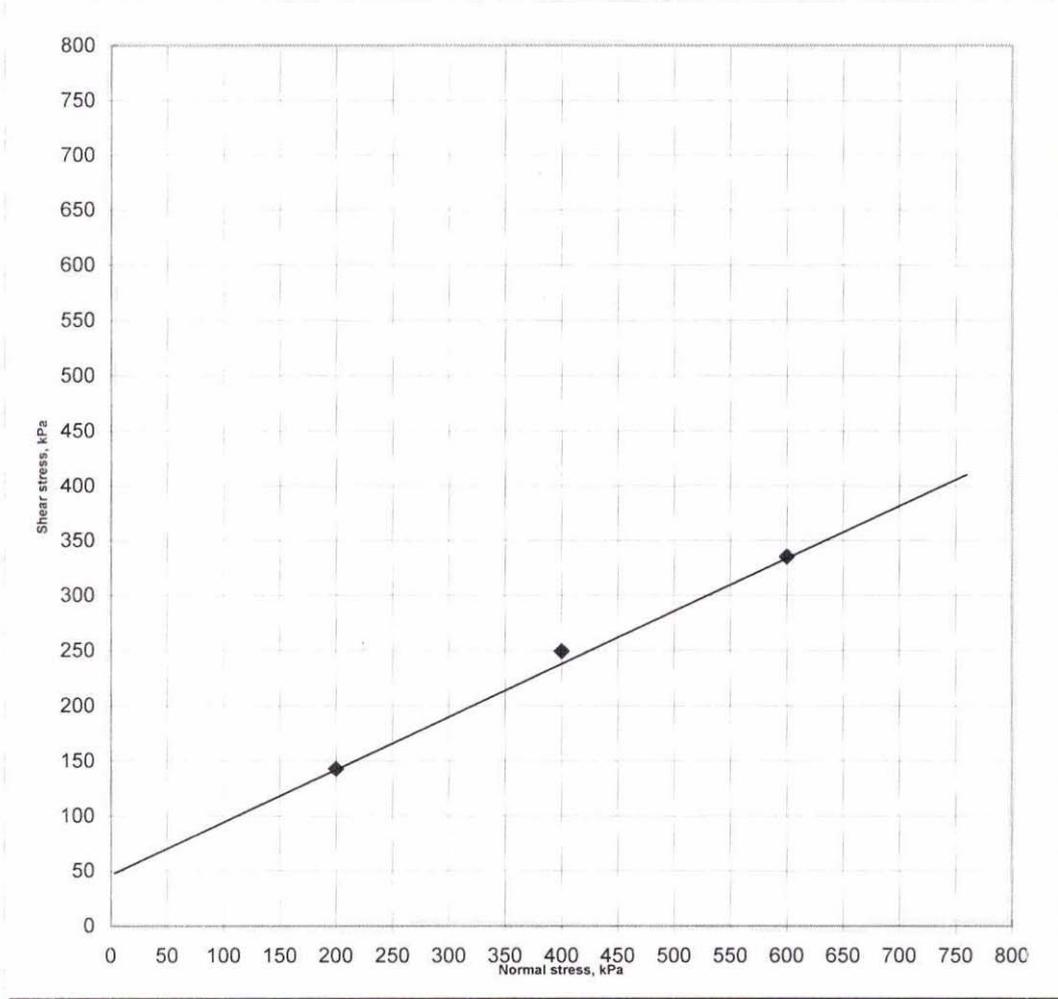
Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU** Sheet2/4

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Irish Drilling		Date sampled:	1/4/2007		
Project Name:	GCOB	Date tested:	1/21/2007		
Project No: -	Our Job / report no: 4949	Date reported:	2/6/2007		
Sample description:		Sample no/ type:	C	BH no:	RC940
Dark grey clayey very silty SAND		Sample size:	60mmx60mm	Depth(m):	19.0-20.0

Shear Stress vs Normal Stress



*Set of three specimens	Rapid Shearbox Test	Approved by
	BS 1377 : Part 7 : Clause 4.5.4 : 1990	Initials : kp
	Determination of shear strength by direct shear (small shearbox apparatus)	Date : 2/6/2007

Test Report by **K4 SOILS LABORATORY Unit 8 Olds Close Olds Approach Watford Herts WD18 9RU** Sheet3/4

Test Results relate only to the sample numbers shown above. Approved Signatories: K.Phaure (Tech.Mgr) J.Phaure (Lab.Mgr) Bhavika R (Qual.Mgr)

All samples connected with this report ,incl any on 'hold' will be stored and disposed off according to Company policy.A copy of this policy is available on request.

IRISH DRILLING LTD.
Loughrea Co. Galway

Tel: (091) 841274 Fax: (091) 847687

Contract:	N6 Galway City Outer Bypass
Client:	
Engineer:	
Date:	13/12/2006
Tested by:	EAT
Checked:	DJ

Point Load Tests

Borehole	Depth	D	W	De ²	P	Is	F	Is(50)	UCS	Remarks
						MPa		MPa	MPa	
RC 510	1.6-1.8	63	63	3969	24.10	6.07	1.110	6.74	165.07	Very Strong
RC 510	3.6-3.87	63	63	3969	25.50	6.42	1.110	7.13	174.66	Very Strong
RC 511	2.5-2.8	63.38	63.4	4017	29.90	7.44	1.113	8.28	202.90	Extremely Strong
RC 513	0.3-0.63	63	63	3969	27.00	6.80	1.110	7.55	184.93	Very Strong
RC 513	1.5-1.8	63	63	3969	21.70	5.47	1.110	6.07	148.63	Very Strong
RC 515	2.85-3.0	63	63	3969	33.80	8.52	1.110	9.45	231.51	Extremely Strong
RC 515	3.15-3.31	63	63	3969	30.40	7.66	1.110	8.50	208.22	Extremely Strong
RC 548	3.25-3.55	63	63	3969	36.50	9.20	1.110	10.20	250.00	Extremely Strong
RC 595	1.7-1.97	63	63	3969	9.95	2.25	1.110	2.50	61.30	Strong
RC 595	2.8-3.0	63	63	3969	4.10	1.03	1.110	1.15	28.08	Moderately Strong
RC 638	2.2-2.36	63.55	63.6	4038.6	17.50	4.33	1.114	4.83	118.26	Very Strong
RC 638	3.75-3.9	63.77	63.8	4066.6	15.25	3.75	1.116	4.18	102.50	Very Strong

Borehole	Depth	D	W	De ²	P	Is	F	Is ₍₅₀₎	UCS	Remarks
						MPa		MPa	MPa	
RC 830	12.7-13.0									No suitable sample.
RC 830	14.75-14.89	63	63	3969	5.05	1.27	1.110	1.41	34.59	Moderately Strong
RC 830	17.25-17.49	62	62	3844	3.25	0.85	1.102	0.93	22.82	Moderately Strong
RC 830	18.6-18.75	62	62	3844	7.85	2.04	1.102	2.25	55.12	Strong
RC 839	2.3-2.49	62.5	62.5	3906.3	17.85	4.57	1.106	5.05	123.78	Very Strong
RC 839	3.95-4.36	63	63	3969	17.05	4.30	1.110	4.77	116.78	Very Strong
RC 839	5.8-6.1	63	63	3969	13.00	3.28	1.110	3.63	89.04	Strong
RC 839	7.0-7.28	62.5	62.5	3906.3	19.25	4.93	1.106	5.45	133.49	Very Strong
RC 898	3.0-3.18	62	62	3844	19.30	5.02	1.102	5.53	135.51	Very Strong
RC 898	3.85-4.24	62.5	62.5	3906.3	18.95	4.85	1.106	5.36	131.41	Very Strong
RC 903	6.0-6.2	62.5	62.5	3906.3	19.55	5.00	1.106	5.53	135.57	Very Strong
RC 910	4.3-4.64	63	63	3969	22.30	5.62	1.110	6.23	152.74	Very Strong
RC 910	7.1-7.33	63	63	3969	19.30	4.86	1.110	5.40	132.19	Very Strong
RC 912	11.2-11.36	63	63	3969	13.85	3.49	1.110	3.87	94.86	Strong
RC 912	16.21-16.5	63	63	3969	15.75	3.97	1.110	4.40	107.88	Very Strong
RC 912	16.9-17.18	62.5	62.5	3906.3	17.40	4.45	1.106	4.92	120.66	Very Strong
RC 914	7.15-7.36	63	63	3969	7.80	1.97	1.110	2.18	53.43	Strong
RC 914	9.0-9.31	62.5	62.5	3906.3	19.50	4.99	1.106	5.52	135.22	Very Strong
RC 914	10.6-10.75	63	63	3969	17.50	4.41	1.110	4.89	119.86	Very Strong
RC 916	8.3-8.6	63	63	3969	15.90	4.01	1.110	4.45	108.91	Very Strong
RC 916	10.5-11.0									No suitable sample.
RC 916	11.18-11.21	63	63	3969	22.35	5.63	1.110	6.25	153.08	Very Strong
RC 916	11.8-12.0	63	63	3969	17.60	4.43	1.110	4.92	120.55	Very Strong
RC 916	13.5-13.7	63	63	3969	17.80	4.48	1.110	4.98	121.92	Very Strong

Borehole	Depth	D	W	De ²	P	Is MPa	F	Is(50) MPa	UCS MPa	Remarks
RC 926	2.73-3.0	63.3	63.3	4006.9	22.95	5.73	1.112	6.37	156.04	Very Strong
RC 926	5.22-5.39	63.38	63.4	4017	8.7	2.17	1.113	2.41	59.04	Strong
RC 926	8.25-8.5	63.35	63.4	4013.2	17.9	4.46	1.112	4.96	121.56	Very Strong
RC 933	11.55-11.71	63.36	63.4	4014.5	18.8	4.68	1.112	5.21	127.64	Very Strong
RC 936	59.0-59.28	47.57	47.6	2262.9	14.1	6.23	0.978	6.09	149.27	Very Strong
RC 936	63.35-63.65	47.47	47.5	2253.4	14.85	6.59	0.977	6.44	157.73	Very Strong
RC 937	78.1-78.23	42.51	42.5	1807.1	15.05	8.33	0.930	7.74	189.67	Very Strong
RC 937	83.56-83.87	42.35	42.4	1793.5	12.15	6.77	0.928	6.29	154.02	Very Strong
RC 940	22.37-22.5	63.59	63.6	4043.7	22.5	5.56	1.114	6.20	151.90	Very Strong
RC 940	24.0-24.31	63.35	63.4	4013.2	17.4	4.34	1.112	4.82	118.16	Very Strong
RC 942	5.05-5.33	63.06	63.1	3976.6	17.95	4.51	1.110	5.01	122.77	Very Strong
RC 942	7.5-7.62	63.63	63.6	4048.8	12.55	3.10	1.115	3.45	84.64	Strong
RC 942	12.0-12.21	63.06	63.1	3976.6	19.7	4.95	1.110	5.50	134.73	Very Strong
RC 942	16.5-16.78	63.02	63	3971.5	15.45	3.89	1.110	4.32	105.77	Very Strong
RC 950	2.71-2.9	63	63	3969	17.65	4.45	1.110	4.93	120.89	Very Strong
RC 950	4.5-4.83	63	63	3969	24.05	6.06	1.110	6.72	164.73	Very Strong
RC 952	2.8-3.0	63	63	3969	11.20	2.82	1.110	3.13	76.71	Strong
RC 952	4.45-4.63	63	63	3969	18.20	4.59	1.110	5.09	124.66	Very Strong
RC 954	2.73-2.89	63	63	3969	17.80	4.48	1.110	4.98	121.92	Very Strong
RC 954	3.52-3.71	63	63	3969	14.00	3.53	1.110	3.91	95.89	Strong
RC 959	2.9-3.06	62.61	62.6	3920	2.10	0.54	1.107	0.59	14.52	Moderately Strong
RC 959	4.0-4.16	62.56	62.6	3913.8	13.60	3.47	1.106	3.84	94.17	Strong
RC 959	5.5-5.7	62.61	62.6	3920	13.60	3.47	1.107	3.84	94.05	Strong
RC 959	6.4-6.63	62.64	62.6	3923.8	14.60	3.72	1.107	4.12	100.89	Very Strong
RC 959	7.75-8.05	62.64	62.6	3923.8	16.40	4.18	1.107	4.63	113.33	Very Strong
RC 959	10.0-10.3	62.79	62.8	3942.6	20.10	5.10	1.108	5.65	138.39	Very Strong

Borehole	Depth	D	W	De ²	P	Is MPa	F	Is(50) MPa	UCS MPa	Remarks
RC 959 A	5.3-6.5									No suitable sample.
RC 959 A	7.8-8.0	61.5	61.5	3782.3	17.00	4.49	1.098	4.93	120.87	Very Strong
RC 961	0.9-1.03	62.5	62.5	3906.3	6.60	1.69	1.106	1.87	45.77	Moderately Strong
RC 961	2.0-2.13	62	62	3844	15.15	3.94	1.102	4.34	106.37	Very Strong
RC 968	1.35-1.5	63	63	3969	3.90	0.98	1.110	1.09	26.71	Moderately Strong
RC 968	1.68-1.77	63	63	3969	9.70	2.44	1.110	2.71	66.44	Strong
RC 970	4.5-4.75	61.5	61.5	3782.3	20.90	5.53	1.098	6.07	148.60	Very Strong
RC 972	3.5-3.65	63.45	63.5	4025.9	18.45	4.58	1.113	5.10	124.98	Very Strong
RC 972	5.0-5.24	63.73	63.7	4061.5	17.2	4.23	1.115	4.72	115.72	Very Strong
RC 973	3.1-3.3									No suitable sample. RQD=0
RC 973	4.5-4.73	63.27	63.3	4003.1	22.55	5.63	1.112	6.26	153.43	Very Strong
RC 977	3.6-3.88	63	63	3969	13.50	3.40	1.110	3.77	92.47	Strong
RC 977	5.6-5.8	63	63	3969	9.40	2.37	1.110	2.63	64.38	Strong
RC 979	1.87-2.0	62.69	62.7	3930	17.35	4.41	1.107	4.89	119.75	Very Strong
RC 979	2.0-2.17	62.64	62.6	3923.8	18.30	4.66	1.107	5.16	126.46	Very Strong
RC 981	1.84-2.0	63.52	63.5	4034.8	13.20	3.27	1.114	3.64	89.27	Strong
RC 981	3.07-3.2	63.51	63.5	4033.5	18.65	4.62	1.114	5.15	126.15	Very Strong
RC 981	3.2-4.7									No suitable sample
RC 982	1.9-2.04	62.5	62.5	3906.3	9.05	2.32	1.106	2.56	62.76	Strong
RC 982	3.15-3.37	63	63	3969	17.45	4.40	1.110	4.88	119.52	Very Strong
RC 985	0.8-1.4									No suitable sample.
RC 985	2.33-2.47	63	63	3969	4.85	1.22	1.110	1.36	33.22	Moderately Strong
RC 986	0.4-1.5									No suitable sample.
RC 986	3.1-3.3	62.5	62.5	3906.3	16.65	4.26	1.106	4.71	115.46	Very Strong
RC 986	5.73-6.0	62.5	62.5	3906.3	16.60	4.25	1.106	4.70	115.11	Very Strong

Unconfined Compressive Strength of rock cores

Project Name:

N6 Galway City Outer Bypass

Date: 01/12/2006

Borehole No:	Depth (m)	Sample Diameter (mm)	Sample Length (mm)	Weight (g) IN AIR	Weight (g) IN WATER	Bulk Density Mg/m ³	Test Duration (secs)	Mode of Failure	Maximum Load (kN)	Uniaxial Compressive Strength (Mpa)
RC 0510	3.06-3.33	63.32	182.74	1537	947	2.605	557	SHATTERED	401.50	127.400
RC 0511	2.8-3.0	63.43	182.20	1531	944	2.608	963	Diagonal shear	247.60	78.340
RC 0548	3.4-3.59	63.45	156.37	1318	807	2.579	644	Explosive Shear	435.10	137.600
RC 0638	3.17-3.37	63.47	178.40	1500	922	2.595	528	Vertical Shear	234.10	73.950
RC 0640	2.8-3.0	63.69	160.9	1345	826	2.592	593	Fractured Shear	166.6	52.27
RC 0687	4.3-4.51	63.54	180.94	1495	910	2.556	526	Explosive Shear	344.60	108.650
RC 0689	5.98-6.26	63.52	192.49	1598	976	2.56	596	Explosive Shear	255.80	80.690
RC 0694	2.95-3.2	63.60	201.95	1716	1060	2.615	379	Vertical Shear	191.40	60.230
RC 0694	4.22-4.43	63.48	192.90	1614	989	2.582	618	Explosive Shear	313.80	99.110
RC 0707	2.85-3.0	63.24	139.44	1150	694	2.521	581	Diagonal shear	126.30	40.190
RC 0733 A	6.55-6.75	63.53	181.90	1491	905	2.544	312	Vertical Shear	194.60	61.360
RC 0734	4.0-4.26	63.83	180.81	1504	920	2.575	375	Diagonal shear	82.60	25.800

Very Strong

Strong

Very Strong

Strong

Strong

Very Strong

Strong

Strong

Moderately Strong

Strong

Moderately Strong

Project Name:

N6 Galway City Outer Bypass

Date:

01/12/2006

Borehole No:	Depth (m)	Sample Diameter (mm)	Sample Length (mm)	Weight (g) IN AIR	Weight (g) IN WATER	Bulk Density Mg/m ³	Test Duration (secs)	Mode of Failure	Maximum Load (kN)	Uniaxial Compressive Strength (Mpa)	
RC 0813	10.6-10.73	63.67	153.57	1258	763	2.54	581	Vertical Shear	154.8	48.6	Moderately Strong
RC 0813	5.9-6.4	63.59	124.68	1023	620	2.538	630	Vertical Shear	117.8	37.08	Moderately Strong
RC 0814	3.73-3.8	63.36	108.87	893	541	2.54	177	Lateral Shear	81.10	25.710	Moderately Strong
RC 0814	7.5-7.63	63.38	135.04	1112	673	2.533	223	Diagonal shear	44.40	14.060	Moderately Strong
RC 0817	10.25-10.43	63.45	175.90	1435	869	2.540	359	Vertical Shear	100.30	31.700	Moderately Strong
RC 0817	4.2-4.38	64	164.215	1344	815	2.54	278	Lateral Shear along Vein	30.3	9.41	Moderately Weak
RC 0818	6.21-6.4	63.62	149.29	1233	753	2.56	1048	Core Exploded	483	151.9	Very Strong
RC 0819	5.74-5.96	62.99	172.91	1432	881	2.598	721	Vertical Shear	236.30	75.790	Strong
RC 0827	14.45-14.75	62.93	178.09	1496	924	2.615	543	Vertical Shear	283.60	91.140	Strong
RC 0910	5.6-5.93	63.96	180.84	1520	942	2.629	610	Explosive Shear	188.90	60.600	Strong
RC 0910	8.72-9.06	63.38	182.82	1551	964	2.642	632	Vertical Shear	141.10	44.710	Moderately Strong
RC 0912	12.0-12.16	63.29	140.50	1144	688	2.509	481	Vertical Shear	134.80	42.800	Moderately Strong
RC 0912	14.6-15.0	63.27	187.41	1570	973	2.629	548	Vertical Shear	165.00	52.400	Strong
RC 0914	5.66-6.0	63.17	182.90	1549	962	2.639	542	Vertical Shear	120.60	38.470	Moderately Strong
RC 0914	8.64-9.0	63.34	184.70	1560	967	2.631	638	Vertical Shear	161.20	51.150	Strong
RC 0916	11.4-11.65	63.24	177.90	1496	927	2.629	639	Vertical Shear	221.70	70.500	Strong

Project Name:

N6 Galway City Outer Bypass

Date:

01/12/2006

Borehole No:	Depth (m)	Sample Diameter (mm)	Sample Length (mm)	Weight (g) IN AIR	Weight (g) IN WATER	Bulk Density Mg/m ³	Test Duration (secs)	Mode of Failure	Maximum Load (kN)	Uniaxial Compressive Strength (Mpa)
RC 0916	9.23-9.54	63.28	183.70	1575	987	2.679	356	Vertical Shear	243.80	77.480
RC 0924	2.95-3.25	63.55	132.45	1118	690	2.612	444	SHATTERED	408.70	128.800
RC 0924	5.6-5.84	63.17	135.96	1147	709	2.618	634	SHATTERED	251.40	80.180
RC 0925	5.02-5.24	62.97	132.38	1117	688	2.604	393	Explosive Shear	324.70	104.200
RC 0926	5.0-5.22	63.33	136.50	1145	707	2.614	454	Explosive Shear	245.80	78.013
RC 0940	21.8-22.0	63.17	134.78	1131	697	2.533	470	Explosive Shear	215.80	68.830
RC 0942	13.5-13.77	63.19	133.43	1119	691	2.614	313	SHATTERED	216.50	69.000
RC 0942	7.62-7.79	63.16	133.46	1115	687	2.605	413	Explosive Shear	313.40	99.980
RC 0950	3.85-4.12	63.37	121.25	1.032	632	2.58	676	Vertical Shear	202.40	64.150
RC 0952	1.9-2.11	63.57	183.11	1566	971	2.632	516	SHATTERED	240.80	75.850
RC 0954	3.3-3.5	63.51	176.50	1495	921	2.605	406	Vertical Shear	293.70	92.670
RC 0959	6.78-6.95	63.78	180.88	1521	938	2.609	683	Vertical Shear	168.80	52.810
RC 0968	2.23-2.44	63.37	170.11	1438	884	2.596	672	Diagonal shear	189.20	59.960
RC 0970	3.29-3.5	62.09	166.06	1263	768	2.552	213	Diagonal shear	71.80	23.700

Moderately Strong

Strong

Very Strong

Strong

Very Strong

Strong

Strong

Strong

Strong

Strong

Strong

Strong

Strong

Strong

Project Name:

N6 Galway City Outer Bypass

Date:

01/12/2006

Borehole No.:	Depth (m)	Sample Diameter (mm)	Sample Length (mm)	Weight (g) IN AIR	Weight (g) IN WATER	Bulk Density Mg/m ³	Test Duration (secs)	Mode of Failure	Maximum Load (kN)	Uniaxial Compressive Strength (Mpa)	
RC 0972	3.3-3.5	63.30	134.37	1137	701	2.608	860	SHATTERED	403.40	127.970	Very Strong
RC 0973	3.75-3.93	63.39	133.90	1126	693	2.6	612	Explosive Shear	183.60	127.800	Very Strong
RC 0986	2.7-2.88	63.11	124.43	1023	621	2.545	404	Vertical Shear	120.80	38.600	Moderately Strong
RC 0988	3.7-3.9	63.17	185.97	1563	968	2.627	652	Vertical Shear	151.8	48.42	Moderately Strong
RC 0990	2.3-2.47	63.84	171.35	1440	893	2.633	1044	Core Exploded	304.1	94.97	Strong
RC 0991	6.1-6.3	63.31	181.1	1520	941	2.625	392	Vertical Shear	139.9	44.42	Moderately Strong
RC 0991	12.6-12.85	63.53	181.59	1528	947	2.629	315	Fractured Shear	71.9	22.67	Moderately Strong
RC 0991	4.5-4.68	63.25	154.26	1294	799	2.614	781	Vertical Shear	266.4	84.76	Strong
RC 0991	7.4-7.58	63.42	160.75	1348	833	2.617	525	Fractured Shear	196.1	62.06	Strong
RC 0993	4.4-4.59	63.26	133.64	1122	691	2.603	587	Explosive Shear	275.30	87.560	Strong
RC 1002	4.1-4.16	63.17	153.42	1282	789	2.6	605	Vertical Shear	173.10	55.200	Strong
RC 1067	2.86-3.1	63.29	184.30	1558	964	2.623	384	Diagonal shear	83.00	26.370	Moderately Strong
RC 1075	3.81-4.0	63.51	169.09	1419	879	2.629	310	Vertical Shear	291.50	91.990	Strong
RC 1077	3.69-3.92	63.23	183.95	1547	959	2.631	653	Vertical Shear	173.60	55.270	Strong

TEN PERCENT FINES VALUE
BS812 : PART III : 1990

SAMPLE REFERENCE	10% FINES VALUE	DESCRIPTION
RC972	210	Grey GRANITE

Input by	<i>Mw</i>	Date	21/12/2006	Checked by	<i>S</i>	Date	23.1.07
Project	N6 GCOB		Contract No	Figure No	IRE065058	Pg 4 of 4	
							

Product Support Laboratory



Tarmac Northern Ltd

Product Support Laboratory
Coxhoe Quarry, Coxhoe
Co. Durham, DH6 4BB

Test Report Number :

Client Details : Fugro Engineering Services Ltd

Details of the Submitted Sample :

Sample Number : C/2104 Client Reference : IRE 065058
Material : Rock Cores
Source : RC 510
Sampled at : 1.8m
Date Received : 05-Jan-07 Date Sampled : Not Specified

The sample was not accompanied by a certificate of sampling

Test Procedure : BS 812, Testing Aggregate
Part 111:1990, Methods for the Determination of Ten per cent fines Value
Clause 7.1,Aggregates in Dry Condition

Test Results :

Ten percent Fines Value 210 (TFV)

Signature :

(and printed name)

C Abbott

Materials Technologist

Date of Test : 10-Jan-07

Date of Report : 29-Jan-07

- 1) This report only relates to the submitted sample.
- 2) This report must be reproduced in full.
- 3) The remainder of the submitted sample will be retained for twenty eight days from the date give above, unless specific arrangements are agreed with the laboratory manager.
- 4) Test's marked ' Not UKAS' in this report are not included in the UKAS accreditation schedule for this laboratory

Product Support Laboratory



Tarmac Northern Ltd

Product Support Laboratory
Coxhoe Quarry, Coxhoe
Co. Durham, DH6 4BB

Test Report Number :

Client Details : **Fugro Engineering Services Ltd**

Details of the Submitted Sample :

Sample Number :	C/2119	Client Reference :	IRE 065058
Material :	Rock Cores		
Source :	RC 972		
Sampled at :	1.9m		
Date Received :	05-Jan-07	Date Sampled :	Not Specified

The sample was not accompanied by a certificate of sampling

Test Procedure : BS 812, Testing Aggregate
Part 111:1990, Methods for the Determination of Ten per cent fines Value
Clause 7.1,Aggregates in Dry Condition

Test Results :

Ten percent Fines Value	200	(TFV)
-------------------------	-----	-------

Signature :

(and printed name)

C Abbott

Materials Technologist

Date of Test : 17-Jan-07

Date of Report : 29-Jan-07

- 1) This report only relates to the submitted sample.
- 2) This report must be reproduced in full.
- 3) The remainder of the submitted sample will be retained for twenty eight days from the date give above, unless specific arrangements are agreed with the laboratory manager.
- 4) Test's marked ' Not UKAS' in this report are not included in the UKAS accreditation schedule for this laboratory



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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 911	
Job No	Date 13-10-06 13-10-06	Ground Level (m) 6.58	Co-Ordinates () E 127,880.7 N 228,219.7		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.50 0.70		N50/ 0 (2, 23, 50) N75/ 75 (25, 50)	Water	6.08		(0.50)	Grass over soft peaty TOPSOIL.		
				5.88		0.70	OBSTRUCTION - possible large boulder.		
							Refusal - possible boulders.		

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	
13-10-06	09.00	0.00	0.00			0.5	.7	1		
13-10-06	13.00	0.70	0.70							

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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AGS3 UK BH GALWAYBYPASSN6_SA.GPJ AGS 3 1 GDT 31/01/07



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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 911A	
Job No	Date 16-10-06 16-10-06	Ground Level (m) 6.56	Co-Ordinates () E 127,888.4 N 228,239.9		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 1.50m 2nd: 3rd:	Rose to (@ 20 min.): 1.30m	Sealed at: Sheet 1 of 1

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-0.50	B		↓		\ / \ / \ /		Grass over very soft PEAT (H3,B1,F3,R2,W0,N1,TV1,TH0,A0,P0).		
0.50-1.00	B	N0 (0, 0, 0, 0, 0)			\ / \ / \ /	(1.50)			
1.50-2.00	B W	N39 (4, 5, 8, 10, 11)		↓	5.06	\ / \ / \ /	1.50		Dense grey silty very sandy GRAVEL with subrounded to subangular cobbles and possible boulders.
2.50-3.00	B	N29 (4, 7, 8, 7, 6, 8)			\ / \ / \ /	(2.20)	2.50 medium dense.		
3.50		N50/ 85 (12, 16, 35, 15)		2.86	\ / \ / \ /	3.70	Refusal - possible rock or boulders.		

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	
16-10-06	09.00	0.00	0.00			1.8	2	0.5		
16-10-06	13.00	3.70	3.50			3.3	3.5	1		

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 911AA	
Job No	Date 16-10-06 16-10-06	Ground Level (m) 6.57	Co-Ordinates () E 127,881.0 N 228,219.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
Sheet 1 of 1					

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-0.50	B					(0.50)	Grass over soft peaty TOPSOIL.		
0.50		N50/ 10		6.07		0.50	OBSTRUCTION - possible large boulder.		
0.80		(18, 7, 50) N75/ 75 (25, 50)		5.77		0.80	Refusal - possible boulders.		

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	
16-10-06	09.00	0.00	0.00			0.6	.8	1		
16-10-06	13.00	0.80	0.80							

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 911B	
Job No	Date 16-10-06 16-10-06	Ground Level (m) 6.56	Co-Ordinates () E 127,888.5 N 228,239.5		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 1.50m 2nd: 3rd:	Rose to (@ 20 min.): 1.30m	Sealed at:
Sheet 1 of 1					

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-0.50	B			6.06		(0.50) 0.50	Grass over very soft PEAT (H3,B1,F3,R2,W0,N1,TV1,TH0,A0,P0).		
0.50-1.00 0.50	B	N27 (2, 4, 8, 8, 5, 6)				(1.70)	Medium dense grey silty very gravelly SAND with subrounded to subangular cobbles and possible boulders. Sand is medium to coarse. 0.50 brown silty very gravelly medium and coarse sand.		
1.50-2.00 1.50 1.50	B W	N48 (8, 18, 16, 7, 12, 13)		4.36		2.20	1.50 becoming dense.		
1.90		N68/ 170 (10, 7, 18, 29, 21)					Refusal - possible rock or boulders.		

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Water Dpt	From	To	Hours	From	To	
16-10-06	09.00	0.00	0.00		1.1	1.3	0.5			Water strike at 1.50m; rose 200mm in 20mins. Borehole backfilled with arisings.
16-10-06	13.00	2.20	1.90		1.7	1.9	1			

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 934	
Job No	Date 12-10-06 12-10-06	Ground Level (m) 6.31	Co-Ordinates () E 128,266.9 N 228,124.6		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-0.50	B				// //		Grass and reeds over very soft PEAT.		
0.50-1.00	B	N0			// //				
0.50		(0, 0, 0, 0, 0, 0)			// //	(2.00)			
1.50-2.00	B				// //				
1.50-1.95	U	no recovery		4.31	// //	2.00			
2.50-3.00	B	N1		3.81	x x x	(0.50)	Very soft white yellow grey slightly sandy calcareous organic SILT with shells.		
2.50		(0, 0, 1, 0, 0, 0)			x x x	2.50			
3.50-4.00	B				x x x				
3.50-3.95	U	no recovery			x x x				
4.00	D				x x x	(3.30)			
4.50-5.00	B	N0			x x x				
4.50		(0, 0, 0, 0, 0, 0)			x x x				
5.00	D				x x x				
5.50		N50/ 255		0.51	x x x	5.80			
		(1, 1, 2, 8, 18, 22)			x x x				
6.10		N75/ 75		0.21	x x x	6.10	OBSTRUCTION - possible boulder.		
		(25, 50)			x x x		Refusal - possible rock or boulders.		

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	
12-10-06	09.00	0.00				5.8	6.1	1.5		
12-10-06	13.00	6.10	6.00							

Moved and set up at BH 934a. Borehole backfilled with arisings.

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design Design	Logged By RK
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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 934A	
Job No	Date 12-10-06 12-10-06	Ground Level (m) 6.31	Co-Ordinates () E 128,267.0 N 228,125.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
0.00-0.50	B						Grass and reeds over very soft PEAT.	
0.50-1.00	B							
0.50-0.95	U	6 blows						
1.50-2.00	B					(2.70)		
1.50		N0 (0, 0, 0, 0, 0, 0)						
2.50-3.00	B			3.61		2.70		
2.50-2.95	U	no recovery					Very soft white yellow grey slightly sandy calcareous organic SILT with shells.	
3.50-4.50	B			3.01		(0.60)		
3.50-4.50	P	no recovery				3.30	Soft grey slightly sandy slightly gravelly organic SILT/CLAY.	
4.50-5.00	B					(1.70)		
4.50	VANE	HV 18		1.31		5.00		
5.40		N75/ 75 (25, 50)		0.91		(0.40) 5.40	OBSTRUCTION.	
							Refusal - possible rock or boulders.	

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From		To
12-10-06	09.00	0.00	0.00			5	5.4	1			
12-10-06	13.00	5.40	5.40								

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 938	
Job No	Date 05-10-06 05-10-06	Ground Level (m) 6.40	Co-Ordinates () E 128,340.8 N 228,137.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.50		N8 (7, 4, 3, 3, 1, 1)				(1.10)	Grass over possible loose cobbles and boulders.		
1.10		N75/ 75 (25, 50)		5.30		1.10	Refusal - possible rock or boulders. Boulders 'pushing' ahead of casing - unable to obtain samples.		

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	
05-10-06	09.00	0.00	0.00			0.8	1.1	1		
05-10-06	13.00	1.10	1.10							

Borehole terminated-pushing boulder ahead of casing. Moved and set up at BH 938a. Borehole backfilled with arisings.

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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AGS3 UK BH GALWAYBYPASSN6_SA.GPJ AGS 3_1.GDT 31/01/07



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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 938a	
Job No	Date 05-10-06 05-10-06	Ground Level (m) 6.38	Co-Ordinates () E 128,340.9 N 228,137.4		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.50		N2 (2, 2, 1, 1, 0, 0)					Grass over possible loose cobbles and boulders.		
1.50		N1 (1, 0, 0, 1, 0, 0)				(3.50)			
2.50		N1 (0, 1, 0, 0, 0, 1)							
3.50		N75/ 75 (25, 50)		2.88		3.50	Refusal - possible rock or boulders. Boulders 'pushing' ahead of casing - unable to obtain samples.		

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	
05-10-06	09.00	0.00	0.00			3.1	3.5	1.5		
05-10-06	13.00	3.50	3.50							

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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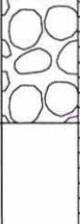
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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 938b	
Job No	Date 05-10-06 05-10-06	Ground Level (m) 6.40	Co-Ordinates () E 128,341.0 N 228,137.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.50		N2 (1, 2, 1, 0, 0, 1)					Grass over possible loose cobbles and boulders.		
1.50		N4 (0, 1, 0, 1, 2, 1)				(3.80)			
2.50		N7 (1, 2, 2, 1, 0, 4)							
3.50		N50/ 85 (6, 11, 37, 13)		2.60		3.80	3.50 becoming very dense.		
3.80		N75/ 75 (25, 50)					Refusal - possible rock or boulders. Boulders 'pushing' ahead of casing - unable to obtain samples.		

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	
05-10-06	09.00	0.00				3.6	3.8	1		
05-10-06	13.00	3.80	0.00							
			3.50							

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 939	
Job No	Date 11-10-06 11-10-06	Ground Level (m) 6.34	Co-Ordinates () E 128,323.9 N 228,074.5		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
0.00-0.50	B				\ / \ / \ /		Grass over very soft PEAT.		
0.50-1.00	B	N1			\ / \ / \ /				
0.50		(1, 0, 0, 0, 1, 0)			\ / \ / \ /				
1.00	D				\ / \ / \ /	(2.30)			
1.50-2.00	B				\ / \ / \ /				
1.50-1.95	U	8 blows			\ / \ / \ /				
2.00	D			4.04	\ / \ / \ /	2.30			
2.50-3.00	B	N21			x x x x		Stiff grey slightly sandy slightly gravelly SILT with subrounded to subangular cobbles and possible boulders.		
2.50		(4, 6, 5, 5, 5, 6)			x x x x				
3.00	D				x x x x				
3.50-4.00	B	N34			x x x x	(2.65)	3.50 becoming very stiff.		
3.50		(5, 6, 7, 7, 9, 11)			x x x x				
4.00	D				x x x x				
4.50		N52/ 290			x x x x				
		(8, 10, 10, 11, 16, 15)		1.39	x x x x	4.95	Refusal - possible rock or boulders.		

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	
11-10-06	09.00	0.00	0.00			4.2	4.5	1		
11-10-06	13.00	4.50	4.50							

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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AGS3 UK BH GALWAYBYPASSN6_SA.GPJ AGS.3 1.GDT 31/01/07



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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 943	
Job No	Date 10-10-06 10-10-06	Ground Level (m) 6.54	Co-Ordinates () E 128,327.0 N 228,109.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION		
				6.04		(0.50) 0.50	Grass and reeds over very soft brown PEAT.		
							Borehole abandoned - very unsafe ground conditions (rig sinking).		

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing		From	To	Hours	From	To	
			Depth	Dia. mm						
10-10-06	09.00	0.00	0.00							
10-10-06	13.00	0.50	0.50							

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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BOREHOLE LOG

Project N6 Galway City Outer Bypass				BOREHOLE No BH 943A	
Job No	Date 10-10-06 11-10-06	Ground Level (m) 6.54	Co-Ordinates () E 128,326.5 N 228,109.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 9.00m 2nd: 3rd:	Rose to (@ 20 min.): 3.20m	Sealed at: Sheet 1 of 2

SAMPLES & TESTS			Water	STRATA			Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)		
0.00-0.50	D			▽				
0.50-1.00	B VANE			▽				
0.50		HV 10		▽				
1.00	D			▽				
1.50-2.50	B P			▽				
1.50-2.50		no recovery		▽				
2.50	D			▽				
3.00-3.50	B VANE		1 ▽	▽				
3.00		HV 16		▽				
3.50	D			▽	(7.20)			
4.00-5.00	B P			▽				
4.00-5.00				▽				
5.00	D			▽				
5.50-6.00	B VANE			▽				
5.50		HV 16		▽				
6.00	D			▽				
6.50-7.50	B P			▽				
6.50-7.50		no recovery		▽				
			-0.66	▽				
7.50	D			x o x o x o x o	7.20	Soft grey slightly sandy slightly gravelly organic SILT.		

IDL AGS3 UK BH GALWAYPASSN6_SA.GPJ IDL TP TEMPLATE.GDT 09/02/07

Boring Progress and Water Observations					Chiselling			Water Added		GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From		To
10-10-06	09.00	0.00	0.00								Water strike at 8.00m: rose to 3.20m in 20mins. Borehole backfilled with arisings.

All dimensions in metres Scale 1:50	Client Galway County Council	Method/ Plant Used Dando 2000	Bit Design	Logged By RK
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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 517	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 41.80	Co-Ordinates () E 121,141.5 N 223,493.7		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	3 2 1 0								
1	1 1 1 1								
1	1 1 2 4 3								
2	6 10 8 16 11								
2	25								for 30mm.
3									
4									
5									
6									
7									
8									
9									

AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS 3_1.GDT 08/12/06

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 518	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 41.00	Co-Ordinates () E 121,154.9 N 223,495.2		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2 2 1 2								
1	1 1 0 1 2								
2	2 1 2 3 8								
12	25								
2									for 20mm.
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2	GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320	
Cone Dia (mm)		
Cone Type		
Damper		

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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AGS3 DYNAMIC PROBE INGGCOB.DPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 519	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 42.00	Co-Ordinates () E 121,139.8 N 223,514.3		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2 2 2 1								
1	2 2 17	[Diagram showing a horizontal bar spanning from 5 to 15 on the N100 scale]							for 90mm.
2									
3									
4									
5									
6									
7									
8									
9									

AGSS DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3 1 GDT 08/12/06

Hammer Wt (kg)	4.2			GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320			
Cone Dia (mm)				
Cone Type				
Damper				
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By	



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 520	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 42.00	Co-Ordinates () E 121,152.9 N 223,515.1		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	4 5 4 3								
1	2 2 1 1								
2	2 1 2 2 5								
8	14 10 25								
2									for 10mm.
3									
4									
5									
6									
7									
8									
9									

AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS.3.1.GDT 08/12/06

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 521	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 42.60	Co-Ordinates () E 121,139.1 N 223,533.0		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	3 2 2 1								
1	2 3 5 14								for 100mm.
2									
3									
4									
5									
6									
7									
8									
9									

AGS3 DYNAMIC PROBE IN6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out. No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 522	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 42.30	Co-Ordinates () E 121,152.3 N 223,535.0		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	3 2 2 13								
1	25								for 40mm.
2									
3									
4									
5									
6									
7									
8									
9									

AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS3_1.GDT 08/12/06

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 523	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 42.80	Co-Ordinates () E 121,137.8 N 223,555.7		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2 2 1 1								
1	1 1 0 1 2								
1	1 2 4 6 10								
25									
2									
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2	GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320	
Cone Dia (mm)		
Cone Type		
Damper		

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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AGSS DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 524	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 42.60	Co-Ordinates () E 121,150.4 N 223,555.0		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2 2 1 1								
0	1 1 1 0								
1	1 1 2 1								
2	1 2 2 2								
2	2 3 6 4								
3	16								for 80mm.
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2	GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320	
Cone Dia (mm)		
Cone Type		
Damper		

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 526	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 43.20	Co-Ordinates () E 121,137.5 N 223,574.1		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	3 2 2 2								
1	1 2 1 1								
1	0 1 2 2 1								
2	1 2 3 6 11								
2	25								for 70mm.
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2		GENERAL REMARKS
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 527	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 43.50	Co-Ordinates () E 121,150.8 N 223,575.4		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	5 4 2 1								
1	2 2 1 2 2 3 4 5 2								
2	3 2 3 2 2 1 2 1 1 2								
3	8 14								for 60mm.
4									
5									
6									
7									
8									
9									

AGSS DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06

Hammer Wt (kg)	4.2				GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320				
Cone Dia (mm)					
Cone Type					
Damper					
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By		



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 528	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 43.70	Co-Ordinates () E 121,136.1 N 223,595.3		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	3 2 2 1								
1	1 1 2 3 2 2								
2	3 4 12 25								for 30mm.
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 529	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 43.40	Co-Ordinates () E 121,149.1 N 223,597.2		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2								
1	1 1 2								
2	1 2 1 3								
3	2 2 2 3								
4	6 12 25								
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2	GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320	
Cone Dia (mm)		
Cone Type		
Damper		

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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AGSS DYNAMIC PROBE NSGCCOB.PPJ AGS 3.1 GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 530	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 43.90	Co-Ordinates () E 121,135.0 N 223,614.6		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
0	2 3 5 4							
1	2 4 11 25							for 60mm.
2								
3								
4								
5								
6								
7								
8								
9								

Hammer Wt (kg)	4.2		GENERAL REMARKS
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 531	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 44.60	Co-Ordinates () E 121,149.5 N 223,615.4		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
0	5 4 10 25							
1								for 20mm.
2								
3								
4								
5								
6								
7								
8								
9								

Hammer Wt (kg)	4.2		GENERAL REMARKS
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
		Macintosh probing carried out.No access for DPH Rig.	

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS.3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 532	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 45.80	Co-Ordinates () E 121,134.3 N 223,635.8		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	3 2 1 2								
2	1 2 9 14								
25									for 20mm.
1									
2									
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 533	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 45.40	Co-Ordinates () E 121,148.4 N 223,636.0		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
0	5 4 2 3	[Diagram showing blow counts for 5, 10, 15, 20, 25, 30mm increments]						
1	10 25							for 20mm.
2								
3								
4								
5								
6								
7								
8								
9								

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3 1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 534	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 46.00	Co-Ordinates () E 121,132.7 N 223,654.6		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 2								
1	1 2								
1	11 25								for 30mm.
2									
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By

AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 535	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 46.70	Co-Ordinates () E 121,147.8 N 223,656.2		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	5 4 9 25								for 80mm.
1									
2									
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 536	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 46.20	Co-Ordinates () E 121,132.3 N 223,674.9		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	3								
1	1 2 2								
1	1 2 1 1								
1	2 4 9 8								
2	10 13 25								for 30mm.
3									
4									
5									
6									
7									
8									
9									

AGSS DYNAMIC PROBE N6GCOB.DPJ AGS 3.1.GDT 08/12/06

Hammer Wt (kg)	4.2		GENERAL REMARKS
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By

Macintosh probing carried out.No access for DPH Rig.



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 537	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 46.20	Co-Ordinates () E 121,145.7 N 223,675.7		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
0	4 2 1 1							
1	2 3 14 25							for 90mm.
2								
3								
4								
5								
6								
7								
8								
9								

AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS 3.1.GDT 08/12/06

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 538	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 46.50	Co-Ordinates () E 121,130.9 N 223,696.7		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	3 3 2 2								
1	4 10 25								for 30mm.
2									
3									
4									
5									
6									
7									
8									
9									

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 539	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 46.00	Co-Ordinates () E 121,145.3 N 223,697.8		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2 1 1 0								
0	1 0 1 1								
1	1 2 1 1 2								
1	1 1 2 1 2								
2	2 4 12 25								
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	v		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 540	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 47.00	Co-Ordinates () E 121,130.1 N 223,717.8		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	5 4 5 6	[Diagram showing blow counts for 5, 10, 15, 20, 25, 30mm increments]							
1	15 25	[Diagram showing blow counts for 5, 10, 15, 20, 25, 30mm increments]							for 80mm.
2									
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2	GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320	
Cone Dia (mm)		
Cone Type		
Damper		

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3 1.GDT 08/12/06



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 Telephone: 091 841274
 Fax: 091 847687

DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 541	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 46.60	Co-Ordinates () E 121,143.3 N 223,717.7		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	3 2 2 1								
1	1 2 1 1 2 1 2 3 10 25								for 50mm.
2									
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2	GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320	
Cone Dia (mm)		
Cone Type		
Damper		

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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AGS3 DYNAMIC PROBE INGGCOBDF.GPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 542	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 47.20	Co-Ordinates () E 121,129.7 N 223,736.2		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2								
1	1 0 1								
2	2 3 3 8								
11	25								
2									
3									
4									
5									
6									
7									
8									
9									

for 30mm.

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3_1.GDT 08/12/06

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 543	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 47.20	Co-Ordinates () E 121,143.8 N 223,738.2		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
0	3 4 3 2							
1	5 6 17 25							for 70mm.
2								
3								
4								
5								
6								
7								
8								
9								

AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS3_1.GDT 08/12/06

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 544	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 48.70	Co-Ordinates () E 121,128.0 N 223,757.3		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2 2 1 1								
2	2 1 2 3								
11	25								for 30mm.
2									
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2	GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320	
Cone Dia (mm)		
Cone Type		
Damper		

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 545	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 48.90	Co-Ordinates () E 121,141.7 N 223,757.7		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	2 2 1 1								for 30mm.
1	11 25								
2									
3									
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS 3_1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 547	
Job No	Date 14-10-06 14-10-06	Ground Level (m) 49.30	Co-Ordinates () E 121,140.4 N 223,778.5		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	3 2 2 2								
4	11 25								for 20mm.
1									
2									
3									
4									
5									
6									
7									
8									
9									

AGSS DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1 GDT 08/12/06

Hammer Wt (kg)	4.2		GENERAL REMARKS Macintosh probing carried out.No access for DPH Rig.
Hammer Drop (mm)	320		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Macintosh	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1102	
Job No	Date 26-09-06 26-09-06	Ground Level (m) 9.20	Co-Ordinates () E 131,206.6 N 228,897.6		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 1 1 0								
1	1 0 1 1								
2	0 2 1 2								
3	1 2 3 2								
4	3 3 6 7								
5	3 8 7 10								
6	16 13 12 8								
7	25								

for 30mm.

AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS 3_1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1103	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 8.97	Co-Ordinates () E 131,217.3 N 228,897.1		
Contractor IDL				Sheet 1 of 2	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
0	1 0 0 0							
1	0 1 0 1							
2	1 1 2 2							
3	2 3 7 5							
4	9 12 10 9							
5	1 0 1 0							
6	0 1 1 1							
7	3 3 3 3							
8	4 4 4 4							
9	4 4 4 3							

for 50mm.

AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS 3.1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1103	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 8.97	Co-Ordinates () E 131,217.3 N 228,897.1		
Contractor IDL				Sheet 2 of 2	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
11	5 5 7 10 4 25								
12									
13									
14									
15									
16									
17									
18									
19									

AGSS DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1 GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1105	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.40	Co-Ordinates () E 131,195.1 N 228,877.8		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	0 0 0 0 0								
1	1 1 1 2 2								
2	2 1 2 2 2								
3	3 2 2 4 4								
4	4 5 10 9 4								
5	5 4 4 4 6								
6	6 7 7 9 9								
7	7 13 13 14 15								
8	8 14 14 12 14								
9	9 25								

for 40mm.

AGS3 DYNAMIC PROBE N6GCOB DP GPJ AGS 3 1 GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By
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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1106	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.37	Co-Ordinates () E 131,204.5 N 228,876.4		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	0 0 0 0 0								
1	0 0 0 0 0								
2	1 1 2 1								rods fell under own weight.
2	2 2 6 4								
3	4 10 4 4 6								
3	7 8 10 9 10								
4	10 13 12 25								
4									
5									
6									
7									
8									
9									

AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS 3, 1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1107	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.33	Co-Ordinates () E 131,214.1 N 228,874.4		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0 0								
1	0 0 0 0 0								
2	1 0 0 0 0								
3	1 3 2 2 1								
4	2 3 7 4 4								
5	3 3 4 5 12								
6	25								
7									
8									
9									

for 60mm.

Hammer Wt (kg)	50	GENERAL REMARKS
Hammer Drop (mm)	500	
Cone Dia (mm)		
Cone Type		
Damper		

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By
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AGS3 DYNAMIC PROBE N6GCOB/GPJ AGS 3 1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1108	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.53	Co-Ordinates () E 131,195.0 N 228,857.5		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
0	1 0 0 0							
1	0 0 1 0							
2	0 1 1 1							
3	2 1 2 2							
4	2 2 2 2							
5	2 2 8 5							
6	4 4 6 4							
7	5 5 5 5							
8	5 5 5 5							
9	7 6 7 6							
10	6 6 6 11							
11	25 7							

for 20mm.

AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS 3 1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1109	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.41	Co-Ordinates () E 131,201.4 N 228,855.9		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0								
1	0 1 0 1								
2	0 1 0 2								
3	1 1 3 2								
4	2 5 6 5								
5	7 7 5 2								
6	3 3 3 3								
7	7 8 25								
8									
9									

for 20mm.

AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS 3_1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1110	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.38	Co-Ordinates () E 131,211.5 N 228,854.9		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0 1								
0	0 0 0 0 0								
1	0 1 0 0 0								
0	1 0 0 0 0								
2	2 2 1 1 1								
3	4 4 7 4 4								
4	9 10 9 10 13								
5	8 25								
6									
7									
8									
9									

for 30mm.

AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS 3, 1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1112	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.33	Co-Ordinates () E 131,188.9 N 228,836.5		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0 1								
0	0 0 1 0 0								
1	0 1 0 1 0								
1	1 0 1 0 1								
2	1 1 2 3 3								
4	4 4 3 4 3								
3	4 4 4 5 4								
4	4 5 5 5 5								
4	5 5 5 6 6								
9	7 6 7 8								
5	25								for 60mm.
6									
7									
8									
9									

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1113	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.45	Co-Ordinates () E 131,198.6 N 228,835.7		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
1	0 0 0 0 0 0								
2	0 1 1 1 1 1								
3	1 1 1 1 2 2								
4	1 3 2 1 2 2								
5	2 2 1 2 2 2								
6	1 5 3 2 2 2								
7	3 3 2 2 3 3								
8	5 3 3 4 4 4								
9	4 4 4 4 4 4								
10	4 4 4 5 6 6								
11	6 7 6 7 6 6								
12	6 6 7 8 9 8								
13	8 8 9 9 10 8								
14	8 9 9 10 11 12								
15	11 6 25								

for 20mm.

AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS 3.1 GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1114	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.49	Co-Ordinates () E 131,208.6 N 228,834.0		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0 1								
0	1 0 0 0 1								
1	1 1 1 1 2								
5	2 2 3 4								
2	3 4 4 4								
5	10 12 6 5								
3	5 6 7 6								
6	6 10 8 10								
4	25								for 80mm.
5									
6									
7									
8									
9									

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1115	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.67	Co-Ordinates () E 131,186.9 N 228,815.5		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 1								
0	0 0 0 1 0								
0	1 0 1 0								
0	1 1 1 0								
0	1 1 3 2								
1	1 1 1 1								
1	2 3 3 2								
2	2 4 5 3								
2	3 6 7 3								
3	4 3 3 4								
3	4 4 4 4								
4	4 4 5 5								
4	5 6 6 8								
5	6 8 25								
6									for 30mm.
7									
8									
9									

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1116	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.63	Co-Ordinates () E 131,195.4 N 228,814.5		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0								
0	1 0 1 0								
1	0 1 0 0								
1	0 1 0 1								
2	0 0 0 1								
2	0 1 0 1								
3	1 1 0 1								
3	1 1 2 2								
4	2 1 2 2								
4	2 2 2 2								
5	2 2 8 2								
5	2 3 3 3								
6	3 3 2 1								
6	3 2 4 3								
7	3 4 4 4								
7	4 8 25								for 50mm.

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3 1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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 Fax: 091 847687

DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1117	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.50	Co-Ordinates () E 131,204.8 N 228,813.5		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0 0								
0	0 0 0 0 0								
1	0 0 0 0 0								
0	0 0 0 0 0								
2	0 0 0 0 0								
0	0 0 0 0 0								
3	1 2 5 5								
5	6 10 8 9								
7	7 6 3 2								
4	1 2 2 2								
3	2 3 2 3								
5	4 4 3 4								
3	3 3 4 4								
6	3 4 3 5								
4	4 4 4 4								
7	4 3 3 4								
2	3 3 4 2								
8	2 3 3 2								
3	3 4 4 4								
5	5 5 5 7								
9	25								for 40mm.

AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS 3_1.GDT 06/12/06

Hammer Wt (kg)	50	GENERAL REMARKS	
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1119	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.83	Co-Ordinates () E 131,183.7 N 228,796.7		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 1								
0	0 0 0 1								
0	0 0 0 0								
0	0 0 0 0								
0	0 0 0 0								
1	1 1 2 3								
1	2 2 2 2								
1	1 2 3 4								
1	5 5 12 25								
2									
3									
4									for 70mm.
5									
6									
7									
8									
9									

AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS 3_1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1120	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.42	Co-Ordinates () E 131,192.4 N 228,795.2		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0								
1	0 0 0 1 0								
2	0 1 0 1 0								
3	1 0 1 0 1								
4	1 1 1 1 1								
5	0 1 2 2 3								
6	4 3 3 9 7								
7	25								
8									
9									

for 40mm.

AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS 3 1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1121	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.24	Co-Ordinates () E 131,202.9 N 228,794.0		
Contractor IDL				Sheet 1 of 2	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0								
1	0 0 0 0								
2	0 1 0 0								
3	0 0 1 0								
4	0 0 1 0								
5	0 1 1 1								
6	0 1 0 1								
7	3 3 3 3								
8	4 4 4 4								
9	4 3 3 4								

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1121	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 9.24	Co-Ordinates () E 131,202.9 N 228,794.0		
Contractor IDL				Sheet 2 of 2	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
11	5 5 7 10 25								
12									
13									
14									
15									
16									
17									
18									
19									

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS3_1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1123	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.80	Co-Ordinates () E 131,179.9 N 228,776.3		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1								
1	1								
2	1								
3	2								
4	2								
5	4								
6	5								
7	8								
8	14								
9	15								

AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS 3_1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1124	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.50	Co-Ordinates () E 131,189.8 N 228,774.9		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0 0								
1	0 0 0 0 0 0 1 0 0 0								
2	0 0 0 0 0 0 1 0 1 0								
3	1 0 1 1 2 3 9 12 25								for 60mm.
4									
5									
6									
7									
8									
9									

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS.3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1124A	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.50	Co-Ordinates () E 131,190.0 N 228,775.0		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0								
1	0 0 0 0								
2	0 1 0 0								
3	0 0 1 0								
4	0 3 6 15 7								
5	25								
6									
7									
8									
9									

for 30mm.

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1125	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.50	Co-Ordinates () E 131,199.9 N 228,773.7		
Contractor IDL				Sheet 1 of 2	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
1	0 1 0 0 0							
2	0 0 0 0 0							
3	0 1 0 0 0							
4	0 1 1 1 1							
5	1 1 1 1 0							
6	1 0 1 0 1							
7	1 1 1 1 1							
8	1 2 1 2 1							
9	2 2 3 3 3							
	4 3 3 4 3							

AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS 3_1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By
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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1125	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.50	Co-Ordinates () E 131,199.9 N 228,773.7		
Contractor IDL				Sheet 2 of 2	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
11	3 4 3 4 3 4 4 3 4 3 4 5 5 6 6 7 7 7 8							for 60mm.
12	25							
13								
14								
15								
16								
17								
18								
19								

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3_1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1126
Job No	Date 18-10-06 18-10-06	Ground Level (m) 10.20	Co-Ordinates () E 131,177.5 N 228,756.5	
Contractor IDL				Sheet 1 of 1

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 1 0								
1	4 3 1 1 1 1 1 1 1 1								
2	1 4 4 3 3 4 4 4 4 4 5 4 4 5 4 5								
3	4 4 4 4 4 5 4 4 6 6 6 6 8 10 12 9 9								
4	4 4 4 3 4 4 4 5 5 6 4 6 6 6 8 11 8 8 11 10 9 9 10 9 9 9 10 10 11 10 9 9 16 15 17 20 15 12 13 14 16 10 25								
5									
6									
7									
8									
9									

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			

AGS3 DYNAMIC PROBE INGGCOB.DPJ AGS 3 1.GDT 08/12/06

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By
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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1127	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.40	Co-Ordinates () E 131,187.5 N 228,755.3		
Contractor IDL				Sheet 1 of 2	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
0	1 0 0 0 0							
1	0 0 0 0 0							
1	1 0 1 2 1							
2	2 2 1 2 1							
2	2 1 2 2 6							
3	6 3 4 4 3							
3	4 4 4 4 4							
4	4 5 5 5 5							
4	7 6 7 6 7							
5	6 6 7 7 7							
5	8 8 12 10 25							
6	1 0 1 0 1							
6	0 1 1 1 1							
7	1 1 1 1 1							
7	1 1 1 1 1							
8	1 2 1 2 1							
8	1 2 2 2 2							
9	2 2 3 3 3							
9	3 3 4 4 3							
9	4 3 3 4							

for 90mm.

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3 1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1127	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.40	Co-Ordinates () E 131,187.5 N 228,755.3		
Contractor IDL				Sheet 2 of 2	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
11	3 4 3 4 3 4 4 3 4 3 4 5 5 6 6 7 7 7 8 25								
12									for 60mm.
13									
14									
15									
16									
17									
18									
19									

AGS3 DYNAMIC PROBE N6GCOBDF.GPJ AGS3_1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1128
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.50	Co-Ordinates () E 131,197.1 N 228,754.3	
Contractor IDL				Sheet 1 of 2

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	0 0 0 0 0								
1	0 1 0 0 0 0 0 1 0 0								
2	0 0 0 0 0 0 0 1 1 0								
3	1 0 0 1 0 0 1 1 0 1								
4	1 0 1 1 2 5 6 11 11 14								
5	15 14 15 13 9 8 6 9 11 11								
6	7 7 7 5 6 6 7 7 6 7								
7	7 6 7 7 8 7 7 10 7 7								
8	7 7 7 7 7 6 7 7 7 6								
9	7 7 8 7 7 7 7 7 7 7 7 11 8 10								

AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1128	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.50	Co-Ordinates () E 131,197.1 N 228,754.3		
Contractor IDL				Sheet 2 of 2	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)					Torque (Nm)	Remarks
		5	10	15	20	25		
8	9							
9	10							
10	10							
11	11							
12	13							
13	13							
14	15							
15	15							
16	15							
17	20							
18								
19								

for 80mm.

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By
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AGS3 DYNAMIC PROBE N6GCOB.DP.GPJ AGS3_1.GDT 08/12/06



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1129	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 11.10	Co-Ordinates () E 131,173.0 N 228,736.5		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 1 1 1								
1	2 1 2 1 2								
2	1 1 0 1 1								
3	0 2 3 3 3								
4	3 3 5 4 4								
5	4 4 4 4 4								
6	5 5 9 6 7								
7	7 7 7 7 6								
8	7 7 8 14 10								
9	12 12 12 11								
10	12 13 10 10 12								
11	12 12 12 11 12								
12	13 11 12 12 12								
13	12 13 15 19 25								

AGS3 DYNAMIC PROBE N6GCOB.DPJ AGS 3_1.GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1130	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.50	Co-Ordinates () E 131,182.8 N 228,733.8		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
0	1 0 0 0 1								
0	0 0 0 1 0								
1	0 1 1 1 1								
1	1 0 1 0 1								
2	1 1 1 2 3								
2	2 2 2 2 16								
3	12 3 2 3 2								
3	3 5 4 4 3								
4	4 4 6 5 12								
4	12 7 11 8 7								
5	6 6 6 7 8								
5	7 20 12 9 12								
6	16 21 13 12 11								
6	10 10 25								
7									
8									
9									

AGS3 DYNAMIC PROBE IN GCOB DP GFI AGS 3.1 GDT 08/12/06

Hammer Wt (kg)	50	GENERAL REMARKS	
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DYNAMIC PROBE LOG

Project N6 GCOB				PROBE No DP 1131	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 9.30	Co-Ordinates () E 131,192.6 N 228,731.5		
Contractor IDL				Sheet 1 of 1	

Depth (m)	Readings (blows/100mm)	Diagram (N100 Values)						Torque (Nm)	Remarks
		5	10	15	20	25	30		
1	0 0 0 0 0								rods fell under own weight.
2	0 0 0 0 0								
3	0 0 0 0 0								
4	0 0 0 0 0								
5	0 0 0 0 0								
6	0 0 0 0 0								
7	0 0 0 0 0								
8	0 0 0 0 0								
9	0 0 0 0 0								
10	0 0 0 0 0								
11	0 0 0 0 0								
12	0 0 0 0 0								
13	0 0 0 0 0								
14	0 0 0 0 0								
15	0 0 0 0 0								
16	0 0 0 0 0								
17	0 0 0 0 0								
18	0 0 0 0 0								
19	0 0 0 0 0								

AGSS DYNAMIC PROBE N6GCOB.DP.GPJ AGS 3.1 GDT 08/12/06

Hammer Wt (kg)	50		GENERAL REMARKS
Hammer Drop (mm)	500		
Cone Dia (mm)			
Cone Type			
Damper			
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used DPH Rig	Logged By



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No MW 01	
Job No	Date 06-10-06 09-10-06	Ground Level (m) 16.14	Co-Ordinates () E 128,703.9 N 227,927.7		
Contractor IDL				Sheet 1 of 2	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
0.00	0					0.00 - 0.50	Open hole drilling - no recovery.			
0.50	(-)	NA	15.64		(0.50) 0.50	0.50 - 13.80 Closely spaced to 2.8m, medium spaced to 7.6m, then widely spaced, dipping 30 to 32o, undulating, locally irregular, smooth, with a little grey silt.	Very strong fresh grey thickly bedded fine to coarse grained slightly sandy LIMESTONE with some shelly debris.			
1.40	100 (57) 50	1								
		10								
2.90	100 (98) 53	6								
		3								
4.40	100 (99) 96									
		2								
6.00	100 (94) 88	4								
		1								
7.60	100 (98) 83	3								
		1								
9.20	100 (96) 95									
		3								
	100									

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												50mm standpipe installed to 13.80m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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IDL AGS3 UK DH N6GCOB ROTARY2006.GPJ IDL TP TEMPLATE.GDT 09/02/07



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No MW 01	
Job No	Date 06-10-06 09-10-06	Ground Level (m) 16.14	Co-Ordinates () E 128,703.9 N 227,927.7		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS					STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
10.80	(96) 95	1						Very strong fresh grey thickly bedded fine to coarse grained slightly sandy LIMESTONE with some shelly debris. (continued)		
12.20	100 (99) 98	1								
13.80	100 (99) 98	0	2.34		13.80			BH terminated at 13.8m bgl on RE's Instruction.		

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												50mm standpipe installed to 13.80m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No MW 02	
Job No	Date 04-10-06 04-10-06	Ground Level (m) 13.37	Co-Ordinates () E 128,749.2 N 228,066.3		
Contractor IDL				Sheet 1 of 2	

RUN DETAILS						STRATA			Geology	Instrument/	Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION					
						Discontinuities	Detail	Main			
0.00	0 (-) -	NA			(1.80)	0.00 - 1.80		Open hole drilling - no recovery. Drillers comment: gravel.			
1.80	30		11.57		1.80	1.80 - 3.80 Possible weathered rock?		Possible weathered LIMESTONE. Recovered as angular with occasional subangular limestone gravel and cobbles and a little light brown silt.			
2.00	(-)										
2.90	72 (-) -	NA			(2.00)						
3.80	50 (-) -		9.57		3.80	3.80 - 15.20 Medium spaced to 7.6m, then widely spaced, dipping 24 to 26 degs, irregular, locally undulating, rough, with a little light brown silt. 11.70 - 11.70 with a little shelly debris. 3.81 to 4.0m: Joint: subvertical, planar, smooth, minor iron stain, open. 4.80 to 5.8m: Joint: subvertical, planar, stepped, smooth, with a little grey silt and minor iron stain, open. Non-intact. 5.80 to 6.0m: as subangular limestone gravel. 6.70 to 6.8m: as orange brown slightly sandy silt. 7.20 to 7.35m: as orange brown slightly sandy silt with some subangular limestone gravel. 7.50 to 7.65m: Joint: subvertical, undulating, rough, with greenish grey silt smear, open. 9.80 to 10.15m: Joint: subvertical,		Very strong slightly weathered grey thickly bedded fine to coarse grained LIMESTONE.			
4.60	100 (95) 54	6									
5.60	100 (49) 0										
6.00	100 (12) 0	NI									
7.60	100 (73) 63	4									
		NI									
		4									
9.20	100 (87) 78	1									
		6			(11.40)						
	100										

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												50mm standpipe installed to 15.00m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No MW 02	
Job No	Date 04-10-06 04-10-06	Ground Level (m) 13.37	Co-Ordinates () E 128,749.2 N 228,066.3		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
10.80	(98) 50	3				planar, smooth, with a little brown silt and minor iron stain, open. 9.90 to 10.75m: Joint: subvertical, undulating, tight. Drilling induced - open.	Very strong slightly weathered grey thickly bedded fine to coarse grained LIMESTONE. (continued)			
12.30	100 (99) 98	1				11.25 to 11.7m: Joint: subvertical, undulating, tight, with brown silt smear along fracture. 15.20 - 15.20 with some shelly debris.				
13.80	100 (99) 95	3 1								
15.20	100 (97) 95	2	-1.83		15.20					
							BH terminated at 15.2m bgl on RE's Instruction.			

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type		Returns
												50mm standpipe installed to 15.00m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No MW 03	
Job No	Date 05-10-06 05-10-06	Ground Level (m) 6.70	Co-Ordinates () E 128,953.6 N 227,941.5		
Contractor IDL				Sheet 1 of 2	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	0				(0.50)	0.00 - 0.50		Open hole drilling - no recovery.		
0.50	(-)	NA	6.20		0.50					
1.10	100 (56) 50	3				0.50 - 12.10 Medium spaced, dipping 38 to 40degs, irregular, rough, with black silt smear and greenish grey silt.		Very strong slightly weathered grey thickly bedded fine to coarse grained LIMESTONE.		
2.60	47 (0) 0	NR/NI				1.10 to 2.6m: Joint: Probable area of core loss as washout of fines during drilling. Non-intact as dark grey slightly gravelly silt.				
3.90	100 (99) 98	1 6				3.35 to 3.7m: Joint: subvertical, irregular, rough, with a grey gravelly silt smear and minor iron stain, open. planar, stepped, smooth, with a little grey silt and minor iron stain, open.				
5.00	100 (63) 25	3 NI				4.60 to 5.3m: Joint: subvertical, undulating, smooth, with a greyish brown slightly sandy gravelly silt comprising 50% of core diameter.				
6.10	100 (51) 20	3 NI				5.80 to 6.2m: Joint: subvertical, irregular, smooth, with orange brown gravelly silt with some subangular limestone gravel, open.				
8.30	100 (86) 78	5 3			(11.60)					
9.10	100 (99) 98	1				8.30 - 8.30 with some shelly debris.				
	100 (93)	2								

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type		Returns
												50mm standpipe installed to 12.00m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No MW 03	
Job No	Date 05-10-06 05-10-06	Ground Level (m) 6.70	Co-Ordinates () E 128,953.6 N 227,941.5		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
10.70	90	1					Very strong slightly weathered grey thickly bedded fine to coarse grained LIMESTONE. (continued)			
12.10	100 (96) 68	8	-5.40		12.10	11.15 to 11.4m: Joint: subvertical, undulating, locally irregular, rough, with grey silt smear to 11.35, then greenish brown slightly sandy gravelly silt, wide to 11.25m, then open.	BH terminated at 12.1m bgl on RE's Instruction.			

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												50mm standpipe installed to 12.00m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used County Tractor	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 507	
Job No	Date 30-11-06 30-11-06	Ground Level (m) 14.58	Co-Ordinates () E 121,271.7 N 222,595.3		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
0.00	80 (69) 61	NI	13.98	++++	(0.60) 0.60	0.00 - 0.60 Weathered rock.			Weathered GRANITE. Recovered as subangular biotite granite gravel and cobbles.	
1.50		1				0.60 - 8.10 Medium spaced, dipping 38 to 40deg's, planar, locally irregular, stepped, polished, smooth with dark brown iron stain, locally talcose.				Extremely strong slightly weathered granular black grey pink and white fine to medium grained BIOTITE GRANITE with pink feldspar phenocrysts up to 60mm in size.
3.10	100 (93) 86	3		++++		3.30 to 3.55m: Joint: subvertical, undulating, stepped, smooth, with a little medium grained sand and minor iron stain, open.			(7.50)	
4.70		2				4.80 to 4.95m: Joint: subvertical, undulating, tight. 5.00 to 5.25m: Joint: subvertical, undulating, tight.				
6.00	100 (99) 96	2		++++		6.50 to 6.6m: Joint: dipping 60deg's, undulating, tight.			(7.50)	
7.60		1				6.50 to 6.6m: Joint: dipping 60deg's, undulating, tight.				
8.10	100 (99) 92	1	6.48	++++	8.10	BH terminated at 8.1m bgl on RE's Instruction.			(7.50)	

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												19mm piezometer installed to 8.10m depth. Pinkish grey water flush returns observed.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 508	
Job No	Date 29-11-06 29-11-06	Ground Level (m) 16.34	Co-Ordinates () E 121,278.2 N 222,682.1		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	0		16.04		0.30	0.00 - 0.30		No recovery.		
0.30	-	NA		+ +		0.30 - 7.50 Medium spaced to 4.9m, then widely spaced, dipping 24 to 26deg's, undulating, locally irregular, smooth with a little brown silt smear.		Very strong slightly weathered granular dark grey groundmass with much black biotite and pink and white feldspar phenocrysts fine to medium grained BIOTITE GRANITE with pink feldspar phenocrysts up to 50mm in size.		
1.50	100 (88) 75	1		+ +						
		4		+ +		1.25 to 1.32m: Joint: dipping 52deg's, planar, locally irregular, smooth, with a brown silt smear and minor iron stain, open.				
2.60	100 (95) 49			+ +		1.80 to 1.9m: Joint: dipping 60deg's, planar, locally irregular, smooth, with a brown silt smear and minor iron stain, open.				
		6		+ +		2.05 to 2.5m: Joint: subvertical, undulating, stepped, smooth, with a little medium grained sand and minor iron stain, open.				
4.25	100 (90) 61	9		+ +	(7.20)	3.50 - 3.50 becoming extremely strong.				
		4		+ +						
6.00	100 (99) 91	1		+ +		5.70 - 5.70 subvertical pink fine grained microgranite.				
		0		+ +						
7.50	100 (99) 99	0	8.84	+ +	7.50					
		0		+ +						
								BH terminated at 7.5m bgl on RE's Instruction.		

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth Dia		Core Dia mm	Water Strike Standing		From	To	Type	Returns	
												Pinkish grey water flush returns observed. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 510	
Job No	Date 21-11-06 21-11-06	Ground Level (m) 23.72	Co-Ordinates () E 121,305.3 N 222,811.2		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	72 (46) 44	NI	22.72	++ ++ ++ ++ ++	(1.00) 1.00	0.00 - 1.00	Probable weathered GRANITE. Recovered as subangular and angular granite gravel and cobbles.			
1.80		2		++ ++ ++ ++ ++		1.00 - 9.00 Widely spaced, dipping 28deg's, undulating, locally irregular, smooth.	Very strong slightly weathered granular grey white pink and black fine to medium grained BIOTITE GRANITE.			
3.30	100 (94) 81	3		++ ++ ++ ++ ++		2.35 to 2.41m: Joint: dipping 54deg's, planar, stepped, rough, with a little light brown sand and iron stain and smear, open				
4.70	100 (99) 98	1		++ ++ ++ ++ ++						
6.20	100 (99) 98	1		++ ++ ++ ++ ++	(8.00)					
7.80	100 (97) 83	4		++ ++ ++ ++ ++		6.30 - 6.30 milky white quartz vein.				
9.00	100 (99) 98	1	14.72	++ ++ ++ ++ ++	9.00					
						BH terminated at 9.0m bgl on RE's Instruction.				

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth Dia		Core Dia mm	Water Strike Standing		From	To	Type	Returns	
												Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 511	
Job No	Date 18-10-06 18-10-06	Ground Level (m) 28.29	Co-Ordinates () E 121,277.9 N 222,913.1		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	0				(0.50)	0.00 - 2.30				
0.50	(-)	NA	27.79		0.50	Open hole drilling - no recovery. Drillers comment: boulders.				
1.20	57				(1.80)	Subangular occasional subrounded granite with rare limestone GRAVEL & COBBLES.				
2.50	34 (12) 8	NA	25.99		2.30	2.30 - 7.20 Medium spaced to 4.7m then widely spaced, dipping 42 to 48deg's, irregular, smooth, with a little creamish brown clay.				
3.30	100 (99) 98	2				2.80 - 2.80 extremely strong.				
		1				3.00 - 3.00 strong.				
		NI				3.45 to 3.65m: 'V' shaped joint: subvertical, irregular, smooth, with cream clay smear, open.				
	100 (83) 66	3			(4.90)	3.65 to 4.0m: Non-intact.				
5.70		3				4.00 - 4.00 highly weathered as subangular gravel.				
7.20	100 (87) 82	2	21.09		7.20					
						BH terminated at 7.2m bgl on RE's Instruction.				

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type		Returns
												50mm standpipe installed to 7.20m depth.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used County Tractor	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 513	
Job No	Date 20-11-06 20-11-06	Ground Level (m) 33.74	Co-Ordinates () E 121,224.4 N 223,113.0		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS				STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION		
0.00	0		33.44	+ +	0.30	0.00 - 0.30	No recovery. Drillers comment: <u>granite.</u>	
0.30	(-)	NA		+ +		0.30 - 5.00 Widely spaced to 1.8m, then very widely spaced.	Very strong fresh granular grey white pink and black fine to medium grained BIOTITE GRANITE.	
	100 (37) 27	0		+ +		0.95 to 1.35m: Joint: subvertical, planar, rough, with minor iron stain, open.		
1.30				+ +		1.30 - 1.30 strong moderately weathered.		
	100 (99) 98	6		+ +		1.85 - 1.85 strong moderately weathered.		
1.80				+ +				
	100 (99) 98	1		+ +	(4.70)			
3.40				+ +				
	100 (99) 98	0		+ +				
5.00			28.74	+ +	5.00		BH terminated at 5.0m bgl on RE's Instruction.	

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type		Returns
												Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 515	
Job No	Date 17-11-06 17-11-06	Ground Level (m) 39.78	Co-Ordinates () E 121,162.3 N 223,394.3		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION			
						Discontinuities	Detail	Main	
0.00	0	NA	39.18	++	(0.60)	0.00 - 0.60		Open hole drilling - no recovery. Drillers comment: granite.	
0.60	(-)								
1.50	56 (0) 0	NR/NI	37.78	[Symbol]	(1.40)	0.60 - 2.00 Core loss possibly due to residual weathering of rock with subsequent washout of fines.		Probable weathered GRANITE. Recovered as subrounded granite gravel and cobbles.	
3.00	100 (65) 55					2	2.00	2.00 - 5.00 Medium spaced, dipping 40 to 42deg's, undulating, locally irregular, smooth, with a grey clay smear.	
4.10	100 (90) 82	NI	34.78	++	(3.00)	3.05 to 3.11m: Non-intact as greenish grey sandy gravelly clay.			
5.00	100 (96) 91	3				5.00			
								BH terminated at 5.0m bgl on RE's Instruction.	

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												50mm standpipe installed to 5.00m depth. White grey water flush returns observed.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 715	
Job No	Date 29-11-06 29-11-06	Ground Level (m) 29.05	Co-Ordinates () E 124,126.3 N 224,797.1		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
0.00	47 (15) 0	NR/NI	26.75		(2.30)	0.00 - 0.90 Weathered rock.				
1.70		NI				0.90 - 2.30 to 2.3m: Non-intact: as angular to subangular granite gravel and cobbles.				
3.50	100 (56) 14	9	26.75		(3.80)	2.30 - 6.10 Closely spaced to 5.1m, then medium spaced, dipping 40 to 42deg's, planar, locally irregular, rough, with a little greenish grey sandy clay.				
5.10		20				5.60 to 6.1m: Joint: subvertical, undulating, locally irregular, smooth, with a very soft greenish grey talcose smear, open. Non-intact-fractured rock.				
6.10	100 (69) 14	12	22.95			Very strong slightly weathered granular pink grey white and black fine to medium grained BIOTITE GRANITE.				
	100 (99) 50	3				BH terminated at 6.1m bgl on RE's Instruction.				
		NI								

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Pinkish grey water flush returns observed. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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IDL AGS3 UK.DH.N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 910	
Job No	Date 22-11-06 22-11-06	Ground Level (m) 6.50	Co-Ordinates () E 127,875.0 N 228,239.7		
Contractor IDL				Sheet 1 of 2	

RUN DETAILS						STRATA			Geology	Instrument/	Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION					
						Discontinuities	Detail	Main			
0.00	0 (-) -	NA			(1.50)	0.00 - 4.30		Open hole drilling - no recovery. Drillers comment: peat.			
1.50			5.00		1.50						
2.60	18 (-) -					(2.80)			Limestone BOULDERS with a little grey slightly sandy silt.		
4.10	67 (-) -		2.20		4.30						
5.60	100 (83) 82	0				4.30 - 10.10 Widely spaced, dipping 40deg's, planar, locally irregular, smooth, with a little brown silt.		Very strong fresh grey thinly bedded fine to coarse grained slightly sandy LIMESTONE.			
7.10	100 (99) 92	1			(5.80)	5.93 - 5.93 strong.					
8.60	100 (93) 82	4				7.55 to 7.67m: Joint: dipping 72deg's, irregular, locally planar, smooth, with a brown silt smear, open.					
	100 (99) 97	0				9.06 - 9.06 strong.					
		1									

IDL AGS3 UK.DH.N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												90mm standpipe installed to 4.60m depth for televiwer.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 910	
Job No	Date 22-11-06 22-11-06	Ground Level (m) 6.50	Co-Ordinates () E 127,875.0 N 228,239.7		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
10.10			-3.60		10.10			BH terminated at 10.1m bgl on RE's Instruction.		

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Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												90mm standpipe installed to 4.60m depth for televiewer.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 912	
Job No	Date 21-11-06 21-11-06	Ground Level (m) 6.59	Co-Ordinates () E 127,882.7 N 228,229.5		
Contractor IDL				Sheet 1 of 2	

RUN DETAILS				STRATA				Geology	Instrument/	Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick-ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	13 (-)				(3.00)	0.00 - 11.20		Open hole drilling - no recovery. Drillers comment: peat and boulders.		
3.00			3.59		(3.20)			Subangular limestone GRAVEL & COBBLES.		
4.50	33 (-)									
5.00	60 (-)									
		NA								
6.20	16 (-)		0.39		(5.00)			Light brown slightly silty uniformly graded fine to medium grained SAND.		
7.40	8 (-)	(17)								
9.00	63 (-)									
	100 (-)									

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												50mm standpipe installed to 12.30m depth.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 912	
Job No	Date 21-11-06 21-11-06	Ground Level (m) 6.59	Co-Ordinates () E 127,882.7 N 228,229.5		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS					STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
10.50								Light brown slightly silty uniformly graded fine to medium grained SAND. (continued)		
	83 (30) 23	NA	-4.61		11.20	11.20 - 11.20 with some limestone cobbles.				
11.70		8				11.20 - 19.50 Closely spaced to 12.0m, then medium spaced, dipping 20 to 22deg's, undulating, locally irregular, rough, with a little brown silt.		Very strong slightly weathered grey thinly bedded fine and medium grained slightly sandy bioclastic LIMESTONE.		
	100 (95) 74	3			(2.40)	11.36 - 11.36 strong.				
13.30		2	-7.01			12.16 - 12.16 moderately strong.				
	52 (47) 41	NR	-7.71		(0.70)	12.60 to 12.7m: Joint: dipping 60deg's, undulating, locally irregular, rough, with brown sandy silt smear, open.		CAVITY.		
15.00		1				12.75 to 13.2m: Joint: vertical, undulating, 2mm thick brown silt infill, tight.				
	100 (99) 97	2				13.60 - 13.60 strong moderately weathered.		Very strong slightly weathered grey thinly bedded fine and medium grained slightly sandy bioclastic LIMESTONE.		
16.50		1				13.60 - 14.30 CAVITY.				
	100 (99) 94	2			(5.20)	14.45 - 14.45 very strong moderately weathered.				
18.00		2				15.00 - 15.00 strong.				
	100 (99) 90	2				17.60 to 18.0m: Joint: subvertical, planar, tight, open as drilling induced.				
19.50		0	-12.91		19.50	18.30 to 18.75m: Joint: subvertical, undulating, stepped, rough, with a little brown silt, open.				
						BH terminated at 19.5m bgl on RE's Instruction.				

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type		Returns
												50mm standpipe installed to 12.30m depth.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

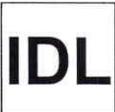
Project N6 Galway City Outer Bypass				DRILLHOLE No RC 933	
Job No	Date 06-10-06 06-10-06	Ground Level (m) 6.42	Co-Ordinates () E 128,273.4 N 228,130.8		
Contractor IDL				Sheet 1 of 2	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00						0.00 - 3.00		Open hole drilling - no recovery.		
3.00	()	NA	3.42		(3.00)	3.00 - 12.00		Grey SILT.		
6.00	10 (-)	(5)	-0.48	x x x x x	(3.90)					
7.20	60 (-)	(12)		x x x x x	6.90			Grey slightly sandy gravelly SILT/CLAY with some subangular to subrounded limestone gravel and cobbles.		
8.40	83 (-)	NA		x x x x x	(3.60)					
9.30	42 (-)	(61/225)		x x x x x						
	58 (-)			x x x x x						

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												2gls polydrill used to assist drilling. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ	Logged By EAT
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IDL AGS3 UK.DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE GDT 12/02/07



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 933	
Job No	Date 06-10-06 06-10-06	Ground Level (m) 6.42	Co-Ordinates () E 128,273.4 N 228,130.8		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS					STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
10.50	-		-4.08		10.50					
	87 (-)	(50/150)			(1.50)		Grey subangular limestone COBBLES and BOULDERS with some dark brown silt.			
12.00			-5.58		12.00		Borehole terminated on R.E. instruction.			

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												2gls polydrill used to assist drilling. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	GoTract	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 933A	
Job No	Date 20-10-06 01-11-06	Ground Level (m) 6.47	Co-Ordinates () E 128,266.8 N 228,132.3		
Contractor IDL				Sheet 1 of 9	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
0.00	0 (-) -				0.00 - 10.00	Open hole drilling - no recovery. Drillers comment: peat.				
3.00			3.47		3.00					
6.00	0 (-) -	NA	0.47		6.00	Open hole drilling - no recovery. Drillers comment: peat and marl.				
7.50	40 (-) -	(50/150)				Greyish brown slightly sandy gravelly SILT/CLAY with subangular to subrounded limestone gravel and cobbles (TILL).				
9.00	67 (-) -	(82)			(4.40)					
9.70	42 (-) -	(48)								
	75 (-) -									

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Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												25gls polydrill used to assist drilling.Reduced to NQ drilling from 77m.Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ/NQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 933A	
Job No	Date 20-10-06 01-11-06	Ground Level (m) 6.47	Co-Ordinates () E 128,266.8 N 228,132.3		
Contractor IDL				Sheet 2 of 9	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
10.10	100 (-)		-3.93		10.40	10.00 - 20.00				
10.60	-							Light greyish brown poorly sorted silty sandy quartz GRAVEL. Gravel is subangular to subrounded.		
11.80	83 (-)	(72)			(2.10)					
12.50	28 (-)		-6.03		12.50			Dark brown organic SILT.		
13.60	90 (-)	(77)	-6.43		12.90			Limestone COBBLES & BOULDERS.		
14.00	75 (-)									
14.90	89 (-)	NA			(3.10)					
16.50	100 (-)		-9.53		16.00					
16.50	-	(44)	-10.03		(0.50) 16.50			Light greyish brown poorly sorted silty/clayey sandy quartz GRAVEL. Gravel is subangular to subrounded.		
18.00	67 (-)				(2.30)	17.20 - 17.20 orange brown.		Brown slightly sandy SILT.		
19.50	100 (-)		-12.33		18.80	18.80 - 18.80 orange brown.		Light grey moderately sorted silty quartz GRAVEL. Gravel is subangular to subrounded.		
		(46)								

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Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												25gls polydrill used to assist drilling.Reduced to NQ drilling from 77m.Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ/NQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 933A	
Job No	Date 20-10-06 01-11-06	Ground Level (m) 6.47	Co-Ordinates () E 128,266.8 N 228,132.3		
Contractor IDL				Sheet 3 of 9	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
21.00	67 (-) -				20.00 - 30.00	Light grey moderately sorted silty quartz GRAVEL. Gravel is subangular to subrounded. (continued)				
22.50	20 (-) -									
24.00	20 (-) -									
25.50	40 (-) -	NA								
27.00	26 (-) -				(14.20)					
28.50	6 (-) -									
30.00	27 (-) -									

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Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												25gls polydrill used to assist drilling.Reduced to NQ drilling from 77m.Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ/NQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 933A	
Job No	Date 20-10-06 01-11-06	Ground Level (m) 6.47	Co-Ordinates () E 128,266.8 N 228,132.3		
Contractor IDL				Sheet	4 of 9

RUN DETAILS				STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION			
						Discontinuities	Detail	Main	
31.50	27 (-) -					30.00 - 40.00		Light grey moderately sorted silty quartz GRAVEL. Gravel is subangular to subrounded. (continued)	
33.00	40 (-) -		-26.53		33.00				
34.50	100 (-) -							Dark brown slightly sandy organic SILT.	
36.00	100 (-) -	NA			(6.00)	37.40 - 37.40 slightly gravelly.			
37.50	100 (-) -								
39.00	93 (-) -		-32.53		39.00			Dark brown organic SILT.	
	100 (-) -								

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Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												25gls polydrill used to assist drilling. Reduced to NQ drilling from 77m. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ/NQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 933A			
Job No	Date 20-10-06 01-11-06	Ground Level (m) 6.47	Co-Ordinates () E 128,266.8 N 228,132.3	Sheet 6 of 9			
Contractor IDL							

RUN DETAILS					STRATA			Geology	Instrument/Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
51.00	100 (-)	NA	-44.53	x x x	51.00	50.00 - 52.50		Dark brown organic SILT. (continued)		
				x x x		51.00 - 51.00 with black woody fragments.				
52.50	100 (-)	NA	-46.03	x x x	(1.50)			Dark brown organic SILT thinly interbedded with fine grained light brown fine grained sand.		
				x x x		52.50 - 52.50 becoming light brown.				
				x x x		52.50 - 60.00				
54.00	100 (34) 0	12 NI	-46.83		(0.80)			POSSIBLE INTERBEDDED LIMESTONE ROCK? Recovered as strong slightly weathered grey fine and medium grained slightly sandy LIMESTONE.		
			-47.13			53.60		Dark brown slightly sandy organic SILT.		
55.50	93 (60) 51	10 NI	-48.53		(1.40)			POSSIBLE INTERBEDDED LIMESTONE ROCK? Recovered as strong slightly weathered grey fine and medium grained slightly sandy LIMESTONE.		
						55.00		Orange brown slightly gravelly SILT.		
57.00	100 (31) 15	15	-49.63		(1.10)					
						56.10		POSSIBLE INTERBEDDED LIMESTONE ROCK? Recovered as strong slightly weathered grey fine and medium grained slightly sandy LIMESTONE.		
58.50	87 (14) 11		-51.43		(1.80)		57.00 - 57.00 moderately weak highly weathered greenish grey gravel sized clasts.			
						57.90				
60.00	100 (0) 0	NI			(2.20)			Greenish grey mottled orange slightly gravelly silty SAND.		

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												25gls polydrill used to assist drilling. Reduced to NQ drilling from 77m. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/Plant Used County Tractor	Bit Design HQ/NQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 933A	
Job No	Date 20-10-06 01-11-06	Ground Level (m) 6.47	Co-Ordinates () E 128,266.8 N 228,132.3		
Contractor IDL				Sheet 7 of 9	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION					
						Discontinuities	Detail	Main			
61.50	100 (38) 27	NI	-53.63		60.10	60.00 - 70.00		POSSIBLE INTERBEDDED LIMESTONE ROCK? Recovered as strong slightly weathered grey fine and medium grained slightly sandy LIMESTONE. Greenish grey mottled orange silty sandy GRAVEL.			
		3	-54.23		60.70						(0.60)
		NI									(0.80)
63.00	87 (41) 28	3	-55.43		61.90	64.20 - 64.20 limestone clasts becoming granule to small pebble grade.		POSSIBLE INTERBEDDED LIMESTONE ROCK? Recovered as strong slightly weathered grey fine and medium grained slightly sandy LIMESTONE. Orange brown silty GRAVEL.			
		NI									(0.80)
			-56.23		62.70						
64.50	93 (60) 58	0			(1.30)			POSSIBLE INTERBEDDED LIMESTONE ROCK? Recovered as strong slightly weathered grey fine and medium grained slightly sandy LIMESTONE. Orange brown slightly sandy SILT. POSSIBLE INTERBEDDED LIMESTONE ROCK? Recovered as strong slightly weathered grey fine and medium grained slightly sandy LIMESTONE.			
		1									
		NI	-57.53		64.00						
66.00	87 (53) 38	0						Thickly interbedded orange greenish brown sandy gravelly non-calcareous SILT/CLAY with subangular limestone cobble and boulder sized clasts.			
		NI	-57.63		64.10						
		NI	-57.73		64.20						
67.50	93 (43) 14	0									
		NI									
		NI	-59.13		65.60						
69.00	100 (0) 0	NI									
		NI									

IDL AGS3 UK.DH.N6GCOB.ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												25gls polydrill used to assist drilling.Reduced to NQ drilling from 77m.Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ/NQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 933A	
Job No	Date 20-10-06 01-11-06	Ground Level (m) 6.47	Co-Ordinates () E 128,266.8 N 228,132.3		
Contractor IDL				Sheet 8 of 9	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill		
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION					
						Discontinuities	Detail	Main			
70.50					(12.70)	70.00 - 78.30			Thickly interbedded orange greenish brown sandy gravelly non-calcareous SILT/CLAY with subangular limestone cobble and boulder sized clasts. <i>(continued)</i>		
72.00	63 (0) 0										
73.00	100 (50) 0										
75.00	63 (45) 0	NR/NI									
77.00	40 (15) 0										
78.80	33 (25) 23		-71.83				78.30				
		2				77.00 REDUCED TO NQ CORE SIZE.					
79.80	76 (63) 29	NR				78.30 - 80.00 Closely spaced to 81.0m, then medium spaced, dipping 18 to 22deg's, undulating, smooth, with a little grey silt. 78.90 to 79.2m: Possible area of core loss with subsequent washout of fines during drilling.					
		9				Strong slightly weathered grey thickly bedded fine to coarse grained LIMESTONE.					

IDL AGS3 UK.DH. N6GCOB. ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												25gls polydrill used to assist drilling.Reduced to NQ drilling from 77m.Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ/NQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 933A	
Job No	Date 20-10-06 01-11-06	Ground Level (m) 6.47	Co-Ordinates () E 128,266.8 N 228,132.3		
Contractor IDL				Sheet 9 of 9	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
81.00	100 (88) 53	26			(9.70)	80.00 - 88.00 Closely spaced to 81.0m, then medium spaced, dipping 18 to 22deg's, undulating, smooth, with a little grey silt.	Strong slightly weathered grey thickly bedded fine to coarse grained LIMESTONE. (continued)			
82.50	100 (97) 91	3								
		3								
84.00	100 (99) 96	3								
85.50	100 (81) 50	7								
		8								
87.00	100 (99) 86	4								
88.00	100 (99) 82	5	-81.53		88.00		BH terminated at 88.0m bgl on RE's Instruction.			

IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns		
												25gls polydrill used to assist drilling Reduced to NQ drilling from 77m. Borehole backfilled with cement bentonite grout.	
All dimensions in metres Scale 1:62.5			Client Galway County Council					Method/ Plant Used		County Tractor		Bit Design	HQ/NQ Logged By EAT



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 936	
Job No	Date 29-09-06 05-10-06	Ground Level (m) 6.21	Co-Ordinates () E 128,268.8 N 228,117.1		
Contractor IDL				Sheet 1 of 7	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
29-09-00						0.00 - 3.60		Open hole drilling - no recovery.		
3.60	()	NA	2.61		(3.60)					
29-09	100 (-)					3.60 - 30.20		Very strong grey fresh limestone BOULDERS.		
5.10	-				(1.70)					
29-09	33 (-)		0.91					Grey slightly sandy gravelly SILT/CLAY with subangular limestone cobbles and boulders.		
6.00	-				5.30			6.00m: grey sandy very silty gravel.		
29-09	100 (-)									
7.60	-	(50/150)								
29-09	100 (-)									
9.00	-	(47/75)								
29-09	93 (-)									

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
29-09-06	09.00	0.00	0.00									Reduced to NQ drilling from 52m. 13gls polydrill used to assist drilling. 50mm standpipe installed to 28m depth.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ/NQ	Logged By EAT
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IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 936	
Job No	Date 29-09-06 05-10-06	Ground Level (m) 6.21	Co-Ordinates () E 128,268.8 N 228,117.1		
Contractor IDL				Sheet 2 of 7	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill				
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION							
				Discontinuities			Detail		Main				
10.60 29-09	- 100 (-)	-	-		(10.20)	Grey slightly sandy gravelly SILT/CLAY with subangular limestone cobbles and boulders. <i>(continued)</i> 12.00 - 12.00 rods filling with sand.							
11.10 29-09	- 74 (-)	-	-										
12.00 29-09	- 100 (-)	-	-										
13.50 29-09	- 60 (-)	-	-										
15.00 29-09	- 43 (-)	-	-9.29		15.50					Greyish white poorly sorted subangular coarse grained quartz SAND thickly interbedded with light pink brown slightly sandy SILT. grey silty gravelly sand.			
16.50 29-09	- 40 (-)	NA	-										
18.00 29-09	- 44 (-)	-	-										
19.50 29-09	-	-	-										

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth Dia		Core Dia mm	Water Strike Standing	From	To	Type	Returns	
29-09-06	17.00	15.00	3.00								Reduced to NQ drilling from 52m. 13gls polydrill used to assist drilling. 50mm standpipe installed to 28m depth.
02-10-06	09.00	15.00	3.00								

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ/NQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 936	
Job No	Date 29-09-06 05-10-06	Ground Level (m) 6.21	Co-Ordinates () E 128,268.8 N 228,117.1		
Contractor IDL				Sheet 3 of 7	

RUN DETAILS						STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION					
						Discontinuities	Detail	Main			
21.00 29-09	27 (-) -			x x x x x x x x x x	(14.20)			Greyish white poorly sorted subangular coarse grained quartz SAND thickly interbedded with light pink brown slightly sandy SILT. (continued)			
22.50 29-09	50 (-) -			x x x x x x x x x x							
24.00 29-09	62 (-) -			x x x x x x x x x x				24.00m: grey slightly silty gravelly sand.			
25.50 29-09	57 (-) -			x x x x x x x x x x							
27.00 29-09	47 (-) -			x x x x x x x x x x							
28.50 29-09	53 (-) -			x x x x x x x x x x							
30.00	40 (-) -		-23.49	x x x x x x x x	29.70			Orange brown SILT.			

IDL AGS3 UK DH N6GCCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type		Returns
												Reduced to NQ drilling from 52m. 13gls polydrill used to assist drilling. 50mm standpipe installed to 28m depth.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	GoTract	Bit Design	HQ/NQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 936	
Job No	Date 29-09-06 05-10-06	Ground Level (m) 6.21	Co-Ordinates () E 128,268.8 N 228,117.1		
Contractor IDL				Sheet 4 of 7	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
29-09	87 (77) 30	3	-23.99	x x	(0.50) 20	30.20 - 33.00 Medium to 32.0m, then closely spaced, irregular, rough, grey slightly sandy silt, dipping 3-12 deg's.	Possible very strong moderately weathered limestone (Possible boulder belt) - recovered as subangular limestone COBBLES and BOULDERS with some grey slightly sandy silt.			
31.50										
29-09		12			(2.80)					
33.00	100 (62) 22	28	-26.79		33.00					
29-09	100 (-) -					33.00 - 56.70	Grey slightly silty gravelly fine to coarse grained SAND (poorly sorted).			
34.50					(3.00)		34.00m: grey very gravelly very silty sand.			
29-09	80 (-) -									
36.00			-29.79		36.00		Orange brown thinly laminated SILT.			
29-09	100 (-) -		-30.29	x x x	(0.50) 36.50		Greyish white poorly sorted fine to coarse grained quartz SAND.			
37.50			-30.99		(0.70) 37.20		Angular limestone COBBLES and BOULDERS.			
29-09	100 (-) -				(1.50)					
39.00			-32.49		38.70		Dark brown organic SILT with some mica.			
29-09	100 (-) -			x x x						

IDL AGS3 UK/DH_N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns		
												Reduced to NQ drilling from 52m. 13gls polydrill used to assist drilling. 50mm standpipe installed to 28m depth.	
All dimensions in metres Scale 1:62.5				Client Galway County Council				Method/ Plant Used		GoTract		Bit Design	HQ/NQ Logged By EAT



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 936	
Job No	Date 29-09-06 05-10-06	Ground Level (m) 6.21	Co-Ordinates () E 128,268.8 N 228,117.1		
Contractor IDL				Sheet 6 of 7	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
50.50 29-09	(-) -				(7.80)	50.80 - 50.80 50.8-52m: with black organic silt.	Grey slightly sandy gravelly SILT/CLAY with subangular limestone cobbles and boulders. <i>(continued)</i>			
52.00 29-09	63 (-) -		51.00m: dark grey slightly gravelly very sandy silt.							
53.00 29-09	50 (-) -									
54.00 29-09	35 (-) -									
55.50 29-09	100 (-) -		54.00 - 54.00 54-56.7m: grey mottled orange and orange brown.							
56.70 29-09	100 (-) -		55.50m: grey silty very sandy gravel.							
58.10 29-09	100 (94) 75	8	56.70 - 69.00 Medium spaced, irregular, locally undulating, smooth, minor iron stain, some grey silt, dipping 32-36 deg's.				Very strong slightly weathered grey apparently massive fine to coarse grained LIMESTONE.			
59.00 29-09	50 (33) 21	NR/NI	58.30 - 59.0m: probable area of core loss as residual rock or infilled cavity with subsequent washout of fines during drilling.							
60.00 29-09	100 (99) 98	2	58.30 - 58.30 58.3-58.9m: recovered as subangular limestone gravel and cobble clasts with a little orange brown slightly gravelly silt.							

IDL AGS3 UK DH N6GCOB ROTARY2006.GPJ IDL TP TEMPLATE GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS			
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns				
03-10-06	17.00	51.00	3.00									Reduced to NQ drilling from 52m. 13gls polydrill used to assist drilling. 50mm standpipe installed to 28m depth.			
04-10-06	09.00	51.00	3.00												
04-10-06	17.00	58.10	52.00												
05-10-06	09.00	58.10	52.00												
All dimensions in metres Scale 1:62.5				Client Galway County Council				Method/ Plant Used		GoTract		Bit Design	HQ/NQ	Logged By	EAT



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 936	
Job No	Date 29-09-06 05-10-06	Ground Level (m) 6.21	Co-Ordinates () E 128,268.8 N 228,117.1		
Contractor IDL				Sheet 7 of 7	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
29-09	100 (99) 98	2			(12.30)	Very strong slightly weathered grey apparently massive fine to coarse grained LIMESTONE. (continued)				
61.50										
29-09		1								
	100 (95) 82									
63.00		3								
29-09										
	100 (99) 94	1								
64.50										
29-09		2								
	100 (99) 83									
66.00		2								
29-09										
	100 (99) 96	2								
67.50										
29-09		4								
	100 (81) 54									
69.00		7								
			-62.79		69.00	64.30 -64.39m: joint; undulating,stepped,rough,minor orange stain,open,dipping 59 deg's.				
						65.60 -65.65m: joint; irregular,smooth,some brown silt,minor orange iron stain,open.				
						67.20 - 67.20 67.2-67.35m: strong,moderately weathered,pebbly. 67.45 -67.55m: joint; subvertical,undulating,locally irregular,smooth,orange iron stain and smear,open. 68.20 -68.35m: joint; subvertical,irregular,rough,orange silt and some orange iron stain and smear,open. 68.20 - 68.20 68.2-68.6m: strong,moderately weathered,pebbly.				
						BH terminated at 69.0m bgl on RE's Instruction.				

IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Dia		Core Dia	Water		From	To	Type	Returns		
			Depth	Dia	mm	Strike	Standing						
05-10-06	17.00	69.00	52.00									Reduced to NQ drilling from 52m. 13gls polydrill used to assist drilling. 50mm standpipe installed to 28m depth.	
All dimensions in metres Scale 1:62.5				Client Galway County Council				Method/ Plant Used		GoTract		Bit Design	HQ/NQ Logged By EAT



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 937	
Job No	Date 11-10-06 19-10-06	Ground Level (m) 6.26	Co-Ordinates () E 128,331.6 N 228,100.7		
Contractor IDL				Sheet 1 of 9	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00						0.00 - 6.00		Open hole drilling - no recovery.		
6.00			0.26		(6.00)					
6.40	75 (-)	(5)				6.00 - 42.60		Grey subangular limestone COBBLES and BOULDERS.		
7.00	43 (-)				(2.50)					
8.60	44 (-)		-2.24		8.50			Pinkish grey well sorted slightly silty fine grained SAND.		
9.00	88 (-)	(50/77)			(1.80)			9.00m: grey slightly silty gravelly sand.		
	58 (-)									

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Sand blocking up drill rods. 80lbs polydrill used to assist drilling and recover overburden. 19mm piezometer installed to 36m depth. Reduced to NQ drilling from 67.50m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 937	
Job No	Date 11-10-06 19-10-06	Ground Level (m) 6.26	Co-Ordinates () E 128,331.6 N 228,100.7		
Contractor IDL				Sheet 2 of 9	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION			
						Discontinuities	Detail	Main	
10.50			-4.04	x	10.30				
	73 (-) -	(98)		x			Dark brown organic SILT thinly interbedded with brown thinly laminated slightly silty fine grained micaceous sand. 11.00m: dark grey very sandy silt.		
12.00				x	(3.10)				
	100 (-) -	(21)		x			Dark brown organic slightly sandy SILT thickly interbedded with brown slightly silty slightly sandy coarse quartz gravel.		
13.50			-7.14	x	13.40				
	40 (-) -	(41)		x	(1.50)		Dark brown thinly interlaminated organic SILT and fine grained sand thickly interbedded with thin beds of silty sandy quartz gravel.		
15.00			-8.64	x	14.90				
	73 (-) -	(71)		x	(3.10)		16.00m: dark grey slightly gravelly very sandy silt.		
16.60				x					
	64 (-) -	(49/75)		x			Dark brown organic SILT.		
18.00			-11.74	x	18.00				
	100 (-) -	(66)		x	(0.80)		Black dry amorphous PEAT (appears coalified and with strong organic odour). 19.00m: dark grey slightly gravelly very sandy silt.		
19.50			-12.54	x	18.80				
				x	(1.80)				

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Sand blocking up drill rods. 80lts polydrill used to assist drilling and recover overburden. 19mm piezometer installed to 36m depth. Reduced to NQ drilling from 67.50m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 937	
Job No	Date 11-10-06 19-10-06	Ground Level (m) 6.26	Co-Ordinates () E 128,331.6 N 228,100.7		
Contractor IDL				Sheet 3 of 9	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION			
				Discontinuities		Detail	Main		
21.00	83 (-) -	(73)	-14.34		20.60		Dark brown organic SILT thinly interlaminated with fine grained sand thickly interbedded with light and brownish grey fine grained SAND (apparent dip of laminations;30-32 deg's).		
22.50	100 (-) -	(77)					26.00m: dark grey slightly sandy silt.		
24.00	100 (-) -	(84)			(7.50)				
25.50	100 (-) -	NA							
27.00	100 (-) -								
28.50	100 (-) -		-21.84		28.10		Dark brown organic SILT thinly interbedded with fine to medium grained SAND (apparent dip of laminations:40-42 deg's).		
30.00	100 (-) -				(2.60)	28.90 - 28.90 slightly gravelly.			

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Sand blocking up drill rods. 80lbs polydrill used to assist drilling and recover overburden. 19mm piezometer installed to 36m depth. Reduced to NQ drilling from 67.50m.
All dimensions in metres Scale 1:62.5				Client Galway County Council				Method/ Plant Used GoTract		Bit Design HQ		Logged By EAT

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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 937	
Job No	Date 11-10-06 19-10-06	Ground Level (m) 6.26	Co-Ordinates () E 128,331.6 N 228,100.7		Sheet 4 of 9
Contractor IDL					

RUN DETAILS				STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION		
				Discontinuities	Detail	Main		
31.50	100 (-)		-24.44	x x x x	30.70	Dark brown organic SILT thinly interlaminated with black organic fragments thickly interbedded with dark brown slightly silty fine grained sand. 32.00m: dark grey slightly sandy silt. Greyish white moderately sorted slightly silty quartz GRAVEL. Gravel is subrounded, fine to coarse. Black organic PEAT with some wood fragments thinly interbedded with dark brown silty fine grained sand, dipping 52-56 deg's. 36.00m: dark grey slightly gravelly slightly sandy organicsilt. Dark brown thinly laminated organic SILT widely interbedded with moderately sorted subrounded medium to coarse gravel.		
33.00	100 (-)			x x x x	(3.40)			
34.50	93 (-)		-27.84	x x x x	34.10			
36.00	87 (-)		-28.84	o o o o	(1.00) 35.10			
37.50	100 (-)		-31.24	o o o o	(2.40) 37.50			
39.00	67 (-)			x x x x	(2.70)			
	93 (-)			x x x x				

IDL AGS3 UK.DH.N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Sand blocking up drill rods. 80lbs polydrill used to assist drilling and recover overburden. 19mm piezometer installed to 36m depth. Reduced to NQ drilling from 67.50m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ	Logged By EAT
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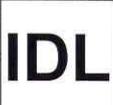
DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 937	
Job No	Date 11-10-06 19-10-06	Ground Level (m) 6.26	Co-Ordinates () E 128,331.6 N 228,100.7		
Contractor IDL				Sheet 5 of 9	

RUN DETAILS				STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION		
						Discontinuities	Detail	Main
40.50			-33.94	x o x	40.20			
42.00	93 (-)		-35.74	o	(1.80)			Greyish white poorly sorted subrounded quartz GRAVEL thinly interlaminated with blackwood fragments.
43.50	100 (24) 18		-36.34	x x x	(0.60)	42.60 - 48.30 Possible weathered rock or boulders/till. Core loss possibly due to washout of fines during drilling process.		Dark brown organic SILT.
45.00	47 (16) 0			x x x	(5.70)			Possible limestone. Recovered as limestone boulders with some grey sandy gravelly silt/clay. Limestone is very strong, slightly weathered, grey.
46.50	100 (60) 47	NR/NI		x x x				
47.70	100 (61) 42			x x x				
49.30	93 (34) 30		-42.04	x x x	48.30	mottled orange.		Dark brown organic SILT with some mica.
				x x x	(2.30)	48.30 - 77.50 orange brown.		49.00m: dark grey slightly sandy silt.

IDL AGS3 UK.DH.N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Sand blocking up drill rods. 80lts polydrill used to assist drilling and recover overburden. 19mm piezometer installed to 36m depth. Reduced to NQ drilling from 67.50m.
All dimensions in metres Scale 1:62.5		Client Galway County Council				Method/ Plant Used		GoTract		Bit HQ Design		Logged By EAT



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 937	
Job No	Date 11-10-06 19-10-06	Ground Level (m) 6.26	Co-Ordinates () E 128,331.6 N 228,100.7		
Contractor IDL				Sheet 6 of 9	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
				Discontinuities			Detail			Main
52.00	56 (-)	-	-44.34	x x x x	50.60			Dark brown organic SILT with some mica. <i>(continued)</i>		
				x x x x	(2.50)			Orange brown slightly gravelly SILT.		
53.50	87 (-)	-	-46.84	x x x x	53.10	dark grey.				
			-47.24	x x x x	53.50			Black amorphous PEAT.		
55.00	80 (-)	-	-49.84	x x x x	56.10			Grey subangular limestone COBBLES and BOULDERS with some brown slightly sandy gravelly silt/clay.		
56.50	80 (-)	-	-51.94	x x x x	58.20			Black slightly gravelly slightly silty amorphous PEAT with some black wood fragments.		
58.00	87 (-)	-	-52.64	x x x x	58.90			Orange brown SILT with some subrounded mudstone gravel (from 58.7m).		
59.50	100 (-)	-	-53.74	x x x x	60.00			Grey subangular limestone COBBLES.		

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type		Returns

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ	Logged By EAT
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IDL AGS3 UK.DH.N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 937	
Job No	Date 11-10-06 19-10-06	Ground Level (m) 6.26	Co-Ordinates () E 128,331.6 N 228,100.7		
Contractor IDL				Sheet 7 of 9	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
60.50	(-) -		-54.24	x o x x x x x o x	(0.50) 60.50			Orange brown SILT with some subrounded mudstone gravel.		
62.00	100 (-) -	NA	-54.84	o o o x o x x x x x o x x x x x o x	(0.60) 61.10			Grey subangular limestone BOULDER.		
					(1.10) 62.20			Dark grey SILT with some subangular cream cherty gravel.		
63.50	80 (-) -		-55.94	o o o x o x x x x x o x x x x x o x	(5.30) 67.50			Grey brown rounded to subrounded and occasionally subangular mudstone and chert limestone GRAVEL. Moderately sorted with some brown silt and rare cobbles.		
65.00	43 (-) -		-61.24	o o o x o x x x x x o x x x x x o x						
66.00	55 (-) -			o o o x o x x x x x o x x x x x o x						
67.50	10 (-) -			o o o x o x x x x x o x x x x x o x						
69.00	93 (-) -			o o o x o x x x x x o x x x x x o x		reduced to NQ drilling.		Brown SILT thinly interlaminated with pale brownish grey fine sand and rare limestone cobbles.		
	73 (-) -			o o o x o x x x x x o x x x x x o x						

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 937	
Job No	Date 11-10-06 19-10-06	Ground Level (m) 6.26	Co-Ordinates () E 128,331.6 N 228,100.7		
Contractor IDL				Sheet 8 of 9	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill			
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION						
						Discontinuities	Detail			Main		
70.50					(8.50)			Brown SILT thinly interlaminated with pale brownish grey fine sand and rare limestone cobbles. <i>(continued)</i>				
	60 (-)											
72.00												
	11 (-)											
73.50												
	63 (-)											
75.00												
	37 (-)		-69.74									
76.50								Orange brown thinly laminated SILT.				
	63 (35) 31		-71.24		(1.50)							
78.00		1				77.50 - 87.00 Medium (wide from 82.5m), undulating, locally irregular, rough, light brown silty sand, dipping 10-12 deg's.		Very strong fresh grey thinly bedded fine to medium grained slightly sandy bioclastic micaceous LIMESTONE.				
	100 (95) 83	2				78.40 -78.52m: joint: irregular, rough, open, some brown silt and mica.						
79.50		3										

IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Sand blocking up drill rods. 80lbs polydrill used to assist drilling and recover overburden. 19mm piezometer installed to 36m depth. Reduced to NQ drilling from 67.50m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 937	
Job No	Date 11-10-06 19-10-06	Ground Level (m) 6.26	Co-Ordinates () E 128,331.6 N 228,100.7		
Contractor IDL				Sheet 9 of 9	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
81.00	100 (99) 95	2			(9.50)			Very strong fresh grey thinly bedded fine to medium grained slightly sandy bioclastic micaceous LIMESTONE. <i>(continued)</i>		
82.50	100 (99) 95	3							81.45 -81.57m: joint: irregular, rough, open, some brown silt and mica.	
		3								
84.00	100 (99) 96	1								
85.50	100 (99) 98	1								
		1								
87.00	100 (99) 95	0	-80.74	87.00						
								Borehole terminated on R.E. instruction.		

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Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS		
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns			
													Sand blocking up drill rods. 80lbs polydrill used to assist drilling and recover overburden. 19mm piezometer installed to 36m depth. Reduced to NQ drilling from 67.50m.	
All dimensions in metres Scale 1:62.5				Client Galway County Council				Method/ Plant Used		GoTract		Bit Design	HQ	Logged By EAT



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 940	
Job No	Date 27-09-06 28-09-06	Ground Level (m) 6.20	Co-Ordinates () E 128,345.1 N 228,116.1		
Contractor IDL				Sheet 2 of 3	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
10.50		(39)		x x	(3.70)			Dark brown organic SILT. <i>(continued)</i> dark grey brown slightly sandy silt.		
12.00	93 (-) -		-5.80	x x	12.00			Dark brown slightly sandy organic SILT. Sand is fine.		
13.50	76 (-) -	(43)		x x						
15.00	100 (-) -	(49) NA		x x						
16.50	100 (-) -	(55)		x x	(6.00)					
18.00	77 (-) -	(57)		x x	18.00			Dark brown organic SILT thinly interbedded with thin laminations of grey fine grained sand.		
19.50	81 (-) -	(67)	-11.80	x x				dark grey very silty sand.		
		(56)		x x	(2.20)					

IDL AGS3 UK/DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	

2gls polydrill used to assist
drilling. 19mm standpipe
piezometer installed to
25.50m.

All dimensions in metres Scale 1:62.5		Client Galway County Council		Method/ Plant Used GoTract		Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 940	
Job No	Date 27-09-06 28-09-06	Ground Level (m) 6.20	Co-Ordinates () E 128,345.1 N 228,116.1		
Contractor IDL				Sheet 3 of 3	

RUN DETAILS				STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION			
						Discontinuities	Detail	Main	
21.00	100 (-)	(72/79)	-14.00	x x x	20.20				
	-		-14.40	x x x	20.60				
22.50	100 (55) 49	1	-15.50	x x x	21.70	100mm of orange brown silt recovered.			
					(1.10)	21.70 - 25.50 Medium spaced, undulating, locally irregular, rough, dipping 20-22 deg's.		Dark brown organic SILT.	
24.00	100 (99) 97	1			(3.80)	22.05 - 22.12m: joint: irregular, rough, some brown silt, open, dipping 58 deg's.		Grey limestone GRAVEL and COBBLES with some grey sandy silt.	
							24.50 - 24.57m: joint: undulating, smooth, grey silt smear, open, dipping 52 deg's.		Very strong slightly weathered grey thickly bedded fine to coarse grained bioclastic LIMESTONE.
25.50	100 (99) 95	2	-19.30						
		1							
							Borehole terminated on R.E. instruction.		

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												2gls polydrill used to assist drilling. 19mm standpipe piezometer installed to 25.50m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 942	
Job No	Date 26-09-06 27-09-06	Ground Level (m) 6.25	Co-Ordinates () E 128,366.2 N 228,119.0		
Contractor IDL				Sheet 1 of 3	

RUN DETAILS				STRATA				Geology	Instrument/Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick-ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	()	NA			(3.50)	0.00 - 3.50		Open hole drilling - no recovery.		
3.50			2.75		3.50	3.50 - 4.70		Grey subangular limestone GRAVEL and COBBLES.		
4.40	50 (-)	NA	1.55		(1.20)	4.70 - 9.60		Very strong slightly weathered grey thinly bedded fine to coarse grained bioclastic LIMESTONE.		
	81 (75) 69	2			4.70	Medium, undulating, locally irregular, rough, some grey silt, dipping 30 deg's.				
6.00		3								
7.50	100 (93) 70	4			(4.90)	6.60 - 6.75m: joint: undulating, smooth, grey silt smear, open, dipping 70 deg's.				
		3				7.25 - 7.40m: joint: subvertical, undulating, rough, orange brown sandy silt smear, wide.				
9.00	100 (77) 62	6				7.40 - 7.40 strong, slightly weathered, pebbly.				
		2				7.79 - 7.79 strong.				
	86 (37) 32		-3.35		9.60	7.90 - 8.15m: joint: subvertical, planar, smooth, greenish orange brown sandy silt infill, open.				
						9.60 - 11.40 cavity.				

IDL AGS3 UK.DH.N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Standing	From	To	Type		Returns
												50mm standpipe installed to 20m depth. 1gls polydrill used to assist drilling.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/Plant Used GoTract	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 942	
Job No	Date 26-09-06 27-09-06	Ground Level (m) 6.25	Co-Ordinates () E 128,366.2 N 228,119.0		
Contractor IDL				Sheet 2 of 3	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
10.50		NI/NR			(1.80)			CAVITY 9.60-10.60m: orange brown sandy silt/clay (150mm recovered). 10.60-11.30m: light brown moderately sorted silty quartz sand. 11.30-11.40m; orange brown silt. <i>(continued)</i>		
12.00	83 (40) 37	1	-5.15		11.40	11.40 - 20.00 Medium, undulating, locally irregular, rough, some grey silt, dipping 30 deg's.		Very strong slightly weathered grey thinly bedded fine to coarse grained bioclastic LIMESTONE.		
13.50	100 (99) 95	3								
15.00	100 (97) 93	3				13.77 - 13.77 strong.				
16.50	100 (99) 95	2			(8.60)	15.50 - 15.65m: joint: planar, stepped, smooth, orange silt smear, open, dipping 70 deg's.				
18.00	100 (97) 81	3				16.80 - 16.85m: joint: irregular, stepped, smooth, brown silt smear, open, dipping 52 deg's. 16.90 - 17.1m: joint: subvertical, irregular, stepped, smooth, brown silt smear. 17.13 - 17.2m: joint: subvertical, irregular, stepped, smooth, brown silt smear.				
19.50	100 (96) 77	3				18.80 - 19.25m: joint: vertical, undulating, locally irregular, rough, brown silt infill, open.				
20.00	100 (99) 99	3	-13.75		20.00					

IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Standing	From	To	Type		Returns
												50mm standpipe installed to 20m depth. 1gls polydrill used to assist drilling.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 942	
Job No	Date 26-09-06 27-09-06	Ground Level (m) 6.25	Co-Ordinates () E 128,366.2 N 228,119.0		
Contractor IDL				Sheet 3 of 3	

RUN DETAILS					STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
								Borehole terminated on R.E. instruction.		

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing		Core Dia	Water		From	To	Type	Returns	
			Depth	Dia	mm	Strike	Standing					
												50mm standpipe installed to 20m depth. Igl's polydrill used to assist drilling.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	GoTract	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 950	
Job No	Date 29-09-06 29-09-06	Ground Level (m) 17.25	Co-Ordinates () E 128,648.9 N 228,008.1		
Contractor IDL				Sheet 1 of 2	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION			
						Discontinuities	Detail	Main	
0.00	0					0.00 - 0.50		Open hole drilling - no recovery.	
0.50	(-)	NA	16.75		(0.50)				
1.00	(-)				(0.90)	0.50 - 1.40		Angular to subrounded limestone and rare granite gravel and cobbles.	
1.40	(-)	NA	15.85		1.40				
		3				1.40 - 13.00 Medium spaced, dipping 24 to 26deg's, undulating, locally irregular, smooth, with a little brown silt.		Very strong fresh grey thickly bedded fine to coarse grained LIMESTONE.	
2.90	100 (94) 77	3							
		4				3.60 to 3.7m: Joint: dipping 60deg's, planar, rough, with a grey silt smear.			
4.50	100 (95) 84	4				4.12 - 4.12 strong.			
		8							
5.80	100 (79) 70	8							
		3				5.60 to 6.15m: Joint: subvertical, undulating, locally irregular, rough, with grey gravelly silt, wide.			
7.50	100 (98) 75	5			(11.60)	6.20 to 6.3m: Joint: dipping 60deg's, irregular, stepped, smooth, with a light brown silt smear, open.			
		2							
9.20	100 (98) 95	2							
		2							
	100	2							

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Water flush returns lost at 3.50m. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 950	
Job No	Date 29-09-06 29-09-06	Ground Level (m) 17.25	Co-Ordinates () E 128,648.9 N 228,008.1		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
10.80	(96) 95	1						Very strong fresh grey thickly bedded fine to coarse grained LIMESTONE. <i>(continued)</i>		
	100 (97) 93	1								
13.00		1	4.25		13.00			BH terminated at 13.0m bgl on RE's Instruction.		

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Water flush returns lost at 3.50m Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used County Tractor	Bit Design HQ	Logged By EAT
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IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 952	
Job No	Date 02-10-06 02-10-06	Ground Level (m) 15.19	Co-Ordinates () E 128,698.2 N 228,007.2		
Contractor IDL				Sheet 1 of 2	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION			
					Discontinuities		Detail	Main	
0.00	0 (-)	NA			(0.70)	0.00 - 0.70		Open hole drilling - no recovery.	
0.70	-		14.49		0.70	0.70 - 1.40		Angular to subangular limestone and granite gravel and cobbles.	
1.20	50 (-)	NA			(0.70)	1.40 - 11.00 Medium spaced to 7.3m, then widely spaced, dipping 24 to 26deg's, undulating, locally irregular, smooth, with a brown silt smear.		Strong fresh grey thickly bedded fine to coarse grained LIMESTONE.	
	90 (84) 68	4							
3.20		4							
	100 (99) 91	3							
4.80		3				4.63 - 4.63 very strong.			
	100 (93) 90	2							
6.20		2			(9.60)				
	100 (96) 91	2							
7.70		2							
	100 (99) 98	1							
9.20		3							
	100								

IDL AGS3 UK DH N6CCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Water flush returns lost at 4.00m. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 952	
Job No	Date 02-10-06 02-10-06	Ground Level (m) 15.19	Co-Ordinates () E 128,698.2 N 228,007.2		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
11.00	(98) 87	0	4.19		11.00	10.30 to 10.45m: Joint: subvertical, undulating, locally irregular, smooth, with a little light brown silt and minor iron stain, open.		Strong fresh grey thickly bedded fine to coarse grained LIMESTONE. <i>(continued)</i>		
								BH terminated at 11.0m bgl on RE's Instruction.		

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Water flush returns lost at 4.00m. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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IDL AGS3 UK DH N6GCCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 954	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 14.19	Co-Ordinates () E 128,796.4 N 228,022.7		
Contractor IDL				Sheet 1 of 2	

RUN DETAILS						STRATA			Geology	Instrument/Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	0 (-)	NA			(1.60)	0.00 - 1.60		Open hole drilling - no recovery. Drillers comment: gravel.		
1.60			12.59		1.60					
2.30	100 (14) 0	NA	11.99		(0.60) 2.20	1.60 - 2.20		Subangular limestone gravel.		
3.30	100 (90) 82	3				2.20 - 10.00 Widely spaced, dipping 22 to 26deg's, irregular, locally undulating, rough, with a grey silt smear.		Strong fresh grey thickly bedded fine to coarse grained LIMESTONE.		
4.00	100 (99) 94	2				2.89 - 2.89 very strong.				
5.60	100 (84) 75	4								
7.20	100 (96) 92	1			(7.80)					
8.80	100 (95) 93	1								
		2								
10.00	100 (98) 28	NI	4.19		10.00	8.80 to 9.15m: Joint: vertical, undulating, locally planar, smooth, with a brown silt smear, open. Non-intact (possible drilling induced). 9.20 to 10.0m: Joint: subvertical,				

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												19mm standpipe piezometer installed to 8.80m depth.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 954	
Job No	Date 03-10-06 03-10-06	Ground Level (m) 14.19	Co-Ordinates () E 128,796.4 N 228,022.7		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION			
						Discontinuities	Detail	Main	
						planar, locally undulating, smooth, with a light brown silt smear, open. Non-intact.		BH terminated at 10.0m bgl on RE's Instruction.	

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												19mm standpipe piezometer installed to 8.80m depth.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 959	
Job No	Date 27-10-06 27-10-06	Ground Level (m) 18.51	Co-Ordinates () E 129,166.6 N 228,074.2		
Contractor IDL				Sheet	1 of 2

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	62 (11) 0	NR/NI			(1.10)	0.00 - 1.00		Open hole drilling - no recovery. Drillers comment: broken rock.		
1.10			17.41		1.10	1.00 - 15.00 Medium spaced, dipping 32 to 36deg's, undulating, locally irregular, rough, with a brown silt smear.		Very strong slightly weathered grey very thickly bedded fine to coarse grained slightly sandy LIMESTONE with some shelly debris.		
1.60	100 (96) 56	6				1.01 to 1.3m: Joint: subvertical, undulating, smooth, with a brown silt smear, wide.				
3.20	100 (99) 85	5				1.32 to 2.9m: Joint: vertical, planar, locally irregular, stepped, rough, with orange brown silt smear and minor iron stain, open.				
4.60	100 (88) 67	4				3.06 - 3.06 moderately strong.				
		1				3.20 to 3.65m: Joint: subvertical, planar, locally irregular, rough, with a little brown silt and minor iron stain, open.				
5.90	100 (47) 15	NI				4.16 - 4.16 strong.				
		6				4.80 to 5.2m: Non-intact as subangular limestone gravel.				
7.40	100 (98) 84	3				5.25 to 5.5m: Joint: subvertical, undulating, locally irregular, rough, with a little light greyish brown silt and minor iron stain, open.				
		2				5.70 - 5.70 strong.				
9.00	100 (99) 96	2			(13.90)	5.80 to 6.1m: Joint: subvertical, undulating, smooth, with a little brown silt, open.				
		1				6.50 to 6.6m: Joint: dipping 60deg's, undulating, smooth, with a light orange brown silt smear, open.				
	100 (99)	1				9.00 - 9.00 thickly bedded.				

IDL AGS3 UK.DH.N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type		Returns
												Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 959	
Job No	Date 27-10-06 27-10-06	Ground Level (m) 18.51	Co-Ordinates () E 129,166.6 N 228,074.2		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
10.60	96	2		[Brick pattern legend]		10.95 to 11.15m: Joint: subvertical, planar, tight - drilling induced open?		Very strong slightly weathered grey very thickly bedded fine to coarse grained slightly sandy LIMESTONE with some shelly debris. <i>(continued)</i>		
12.20	100 (99) 96	1								
13.60	100 (99) 92	1								
15.00	100 (99) 98	1	3.51		15.00					
								BH terminated at 15.0m bgl on RE's Instruction.		

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Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 959 A	
Job No	Date 21-11-06 21-11-06	Ground Level (m) 6.67	Co-Ordinates () E 129,030.8 N 228,002.9		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	43 (-) -	NA			(1.50)	0.00 - 5.30		Subrounded limestone GRAVEL & COBBLES.		
			5.17			1.50				
2.00			4.97			1.70			Dark grey angular to subangular limestone coarse grained GRAVEL. Subrounded limestone GRAVEL & COBBLES.	
3.50	25 (-) -				(3.60)					
5.00	93 (-) -									
6.50	100 (39) 0	NI	1.37		5.30	5.30 - 8.00 Possible weathered rock or boulders.		Weathered LIMESTONE. Recovered as very strong slightly weathered grey limestone gravel cobbles and boulders.		
8.00	100 (66) 44		-1.33			8.00				
								BH terminated at 8.0m bgl on RE's Instruction.		

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Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 961	
Job No	Date 26-10-06 26-10-06	Ground Level (m) 16.61	Co-Ordinates () E 129,198.1 N 228,090.2		
Contractor IDL				Sheet 1 of 2	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill		
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION						
						Discontinuities	Detail	Main				
0.00	60 (42) 24	NA	16.01		(0.60) 0.60	0.00 - 0.60		No recovery.				
1.20		4				0.60 - 8.70 Medium spaced, dipping 26 to 30deg's, undulating, locally irregular, rough, with a brown silt smear.		Very strong slightly weathered grey thickly bedded fine and medium grained slightly sandy LIMESTONE.				
2.50	100 (99) 92	5				1.03 - 1.03 moderately strong.						
3.70	100 (93) 43	4				3.00 to 3.5m: Joint: subvertical, undulating, locally planar, smooth, with a greenish grey silt, open.						
4.70	100 (99) 71	13										
6.30	100 (96) 89	6										
7.70	100 (97) 87	5										
9.30	100 (79) 53	3	7.91			8.70						
		3				(0.60) 9.30	8.70 - 9.30 Closely spaced, dipping 18deg's, undulating, smooth.			Strong slightly weathered black thinly laminated pyritic LIMESTONE.		
10.00	100 (7) 0	NI	6.61			(0.70) 10.00	9.30 - 10.00 Non-intact, completely weathered rock.			Very weak completely weathered dark grey SILTSTONE with much finely disseminated pyrite.		

IDL AGS3 UK.DH.N6GCOB.ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 961	
Job No	Date 26-10-06 26-10-06	Ground Level (m) 16.61	Co-Ordinates () E 129,198.1 N 228,090.2		
Contractor IDL				Sheet 2 of 2	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION			
						Discontinuities	Detail	Main	
								BH terminated at 10.0m bgl on RE's Instruction.	

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 968	
Job No	Date 25-10-06 25-10-06	Ground Level (m) 16.30	Co-Ordinates () E 129,297.7 N 228,210.1		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
0.00	100 (95) 65	7			(5.00)	0.00 - 5.00 Closely spaced to 1.5m, then medium spaced, dipping 24 to 26deg's, undulating, locally irregular, rough, with a brown silt smear.	Strong fresh grey thinly bedded fine grained LIMESTONE.			
1.50	100 (74) 54	5				1.50 - 1.50 moderately strong.				
2.00		NI				1.80 to 2.0m: Joint: subvertical, undulating, smooth, with a light greyish brown silt, wide. Non-intact-fractured rock.				
3.00	100 (99) 71	6				2.80 to 3.4m: Joint: subvertical, planar, locally irregular, smooth, with a light greenish grey silt, open.				
5.00	100 (93) 52	6	11.30				BH terminated at 5.0m bgl on RE's Instruction.			

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 970	
Job No	Date 24-11-06 24-11-06	Ground Level (m) 16.62	Co-Ordinates () E 129,413.2 N 228,286.6		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	45 (14) 0	NA	15.22		(1.40) 1.40	0.00 - 1.40		Subangular limestone and granite COBBLES.		
2.00		9				1.40 - 9.00 Closely spaced to 5.0m, then medium spaced, dipping 20 to 24deg's, undulating, locally irregular, smooth, with a little brown silt.		Very strong slightly weathered grey thinly bedded fine and medium grained slightly sandy LIMESTONE.		
3.50	100 (47) 19	12				3.00 - 3.00 moderately weathered 'bleached' white.				
		7				3.50 - 3.50 moderately strong.				
5.00	93 (73) 43	8								
		4			(7.60)					
6.50	100 (84) 64					6.10 to 6.4m: Joint: subvertical, planar, smooth, with a little grey silt, open.				
		5								
8.00	100 (67) 56	7								
		2								
9.00	100 (99) 97		7.62		9.00					
								BH terminated at 9.0m bgl on RE's Instruction.		

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Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type		Returns
												Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 972	
Job No	Date 20-10-06 20-10-06	Ground Level (m) 12.33	Co-Ordinates () E 129,496.4 N 228,263.0		
Contractor IDL				Sheet	1 of 1

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00					(0.50)	0.00 - 0.50		Open hole drilling - no recovery.		
0.50	0	NA	11.83		0.50	0.50 - 1.90 possible washout of fines during drilling process.		Grey subangular limestone GRAVEL and COBBLES (possible rock or overburden).		
1.20	100 (44)	NI/NR			(1.40)					
	70 (40)					1.90				
2.20	11		10.43			1.90 - 7.40 Close(medium from 5.0m),undulating,locally irregular,rough,light greyish brown silty sand,dipping 22-24 deg's.		Very strong slightly weathered grey thickly bedded fine grained LIMESTONE.		
2.80	100 (62)	12								
	80 (74)	6				3.50 -3.56m; joint: irregular,rough,light brown sandy smear,open. 3.60 -4.20m: probable area of core loss-possible residual rock. 4.40 -5.00m: joint: subvertical,undulating,locally irregular,rough,light grey silt smear,open.				
3.80	59									
	80 (24)	NI/NR								
5.00	10						(5.50)			
	100 (80)	7								
5.80	76									
	100 (95)	1								
7.40	94			4.93			7.40			
								Borehole terminated on R.E. instruction.		

IDL AGS3 UK.DH.N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												50mm standpipe installed to 7.40m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used GoTract	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 973	
Job No	Date 20-10-06 20-10-06	Ground Level (m) 12.60	Co-Ordinates () E 129,513.5 N 228,248.1		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS						STRATA			Geology	Instrument/Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00 0.50	0	NA	12.10		(0.50) 0.50	0.00 - 0.50		Open hole drilling - no recovery.		
1.30 1.80 2.70 3.30	44 (-) 60 (-) 67 (-) 72 (31) 0	NA			(2.60) 3.10	0.50 - 3.10		Recovered as grey subangular limestone GRAVEL and COBBLES interbedded with clay bands.		
4.50 5.50 7.10	100 (99) 83 100 (95) 77 100 (97) 90	4 4 2 2	9.50 5.50		(4.00) 7.10	3.10 - 7.10 Medium,irregular,smooth,light greyish brown silt,dipping 30-34 deg's. 3.10 -3.3m: joint: subvertical,planar,stepped,smooth,light brown silt smear,open. 4.73 -4.76m: joint: irregular,smooth,light brown silty sand,open. 4.80 -4.88m: joint: planar,rough,brown sand,open,dipping 62 deg's.		Very strong slightly weathered grey thickly bedded fine grained LIMESTONE.		
								Borehole terminated on R.E. instruction.		

IDL AGS3 UK.DH.N6GCOB.ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												19mm standpipe piezometer installed to 7.00m depth.
All dimensions in metres Scale 1:62.5				Client Galway County Council				Method/Plant Used GoTract		Bit Design HQ		Logged By EAT



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 977	
Job No	Date 19-10-06 19-10-06	Ground Level (m) 16.34	Co-Ordinates () E 129,640.9 N 228,382.6		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS				STRATA			Geology	Instrument/	Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION				
							Discontinuities	Detail	Main	
0.00	26 (-)	NA	13.74		(2.60)	0.00 - 2.60 Subangular limestone gravel and cobbles with a little light brown silt and iron stain and smear.				
1.00	-									
2.00	44 (-)									
2.60	83 (-)				2.60	2.60 - 6.70 Closely spaced, dipping 24 to 26deg's, undulating, locally irregular, smooth, with a light orange brown silt smear. 3.40 to 3.5m: Joint: vertical, undulating, rough, with orange brown silt smear and iron stain, wide. 4.00 to 4.75m: Joint: subvertical, undulating, rough, with some orange brown silt and iron stain, open. 4.30 to 4.50m: non-intact, recovered as subangular to angular limestone gravel with some orange brown silt. 4.75 - 4.75 moderately strong moderately weathered.	Strong slightly weathered grey thickly bedded fine to coarse grained slightly sandy LIMESTONE.			
4.20	100 (86) 54	7			(4.10)	6.40 to 6.55m: Joint: subvertical, planar, tight - drilling induced open?	BH terminated at 6.7m bgl on RE's Instruction.			
		6								
5.80	100 (84) 65	2								
6.70	100 (93) 83	2	9.64		6.70					

Drilling Progress and Water Observations							Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Standing	From	To	Type		Returns
												50mm standpipe installed to 6.70m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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IDL AGS3 UK DH N6GCOB ROTARY2006.GPJ IDL TP TEMPLATE.GDT 12/02/07



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 979	
Job No	Date 24-10-06 24-10-06	Ground Level (m) 24.80	Co-Ordinates () E 129,777.2 N 228,556.5		
Contractor IDL				Sheet 1 of 1	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
0.00	0					0.00 - 0.50		Open hole drilling - no recovery. Drillers comment: broken rock.		
0.50	(-)	NA	24.30		(0.50) 0.50					
1.40	77 (64) 23	NR/NI				0.50 - 4.20 Medium spaced, dipping 38 to 40deg's, undulating, smooth, with a brown silt smear.		Very strong slightly weathered grey thinly bedded fine and medium grained LIMESTONE.		
2.00	100 (66) 63	NI				1.40 to 1.55m: Non-intact, grey mottled orange very gravelly silt/clay. 1.55 - 1.55 grey mottled orange very gravelly silt/clay.				
2.70	85 (70) 61	2			(3.70)	2.50 to 2.7m: Probable area of core loss as washout of fines during drilling?				
3.20	100 (66) 52	3				2.80 - 2.80 moderately weathered.				
4.20	100 (93) 63	6	20.60		4.20			BH terminated at 4.2m bgl on RE's Instruction.		

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth Dia		Core Dia mm	Water Strike Standing		From	To	Type	Returns	
												Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 1104	
Job No	Date 29-11-06 30-11-06	Ground Level (m) 9.39	Co-Ordinates () E 131,197.5 N 228,895.3		
Contractor IDL				Sheet 1 of 3	

RUN DETAILS					STRATA			Geology	Instrument/Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION			
						Discontinuities	Detail	Main	
0.00	0 (-) -	NA			(2.00)	0.00 - 2.00		Open hole drilling - no recovery.	
2.00			7.39		2.00	2.00 - 17.00		Grey slightly sandy gravelly SILT/CLAY with some assorted limestone cobbles and boulders.	
3.00	30 (-) -	(50/150)							
4.00	20 (-) -								
4.50	67 (-) -								
6.00	25 (-) -	(NA)							
7.50	21 (-) -								
9.00	21 (-) -	(45)							
10.00	26 (-) -		(15.00)						

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												19mm standpipe piezometer installed to 19.70m. 2gls of polydrill used to assist drilling.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/Plant Used County Tractor	Bit Design HQ	Logged By EAT
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IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE GDT 09/02/07



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 1104	
Job No	Date 29-11-06 30-11-06	Ground Level (m) 9.39	Co-Ordinates () E 131,197.5 N 228,895.3		
Contractor IDL				Sheet 2 of 3	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
11.50	100 (-)	(50/150)					Grey slightly sandy gravelly SILT/CLAY with some assorted limestone cobbles and boulders. (continued)			
13.00	44 (-)									
14.50	100 (-)	NA				13.20 - 13.20 becoming orange brown slightly gravelly.				
15.50	100 (-)									
17.00	100 (-)		-7.61			17.00				
17.30	100 (86)	3						Strong slightly weathered grey thinly bedded fine and medium grained slightly sandy LIMESTONE.		
18.50	100 (77) 49	NI			(3.00)		17.00 - 20.00 Medium spaced, dipping 38 to 40deg's, planar, locally irregular, rough, with orange brown silt smear. 17.60 to 18.2m: Joint: subvertical, undulating, locally irregular, rough, with greyish brown silt, open. 17.80 to 18.0m: non-intact, fractured rock. 18.75 to 18.95m: Joint: subvertical, undulating, locally irregular, rough, with greyish brown mottled orange silt, wide.			
20.00	100 (71) 60	5	-10.61		20.00					

IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 09/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												19mm standpipe piezometer installed to 19.70m. 2gls of polydrill used to assist drilling.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used County Tractor	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 1104	
Job No	Date 29-11-06 30-11-06	Ground Level (m) 9.39	Co-Ordinates () E 131,197.5 N 228,895.3		
Contractor IDL				Sheet 3 of 3	

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
								BH terminated at 20.0m bgl on RE's Instruction.		

IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 09/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS	
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns		
												19mm standpipe piezometer installed to 19.70m. 2gls of polydrill used to assist drilling.	
All dimensions in metres Scale 1:62.5				Client Galway County Council				Method/ Plant Used		County Tractor		Bit Design	HQ Logged By EAT



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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 1118	
Job No	Date 28-11-06 29-11-06	Ground Level (m) 9.72	Co-Ordinates () E 131,185.2 N 228,809.2		
Contractor IDL				Sheet 1 of 3	

RUN DETAILS					STRATA			Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
0.00	0 (-) -	NA			(3.00)	0.00 - 3.00		Open hole drilling - no recovery.		
3.00			6.72		3.00	3.00 - 18.20		Grey slightly sandy gravelly SILT/CLAY with assorted limestone cobbles and boulders.		
5.00	8 (-) -	(2)								
6.50	0 (-) -	(3)								
8.00	39 (-) -	NA								
9.00	75 (-) -	(31)								
	44 (-) -									

IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL TP TEMPLATE.GDT 09/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												2gls of polydrill used to assist drilling. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used County Tractor	Bit Design HQ	Logged By EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 1118	
Job No	Date 28-11-06 29-11-06	Ground Level (m) 9.72	Co-Ordinates () E 131,185.2 N 228,809.2		
Contractor IDL				Sheet	2 of 3

RUN DETAILS				STRATA				Geology	Instrument/ Backfill	
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'ed Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
10.50					(15.20)				Grey slightly sandy gravelly SILT/CLAY with assorted limestone cobbles and boulders. <i>(continued)</i>	
11.30	100 (-)									
12.00	64 (-)									
13.50	100 (-)									
15.00	100 (-)	NA								
16.00	56 (-)									
17.00	100 (-)									
18.00	90 (-)									
			-8.48		18.20					
19.20	100 (63) 54	2				18.30 - 22.30 Medium spaced, dipping 38 to 40deg's, planar, locally irregular, rough, with orange brown silt smear.			Strong fresh grey thinly bedded fine and medium grained slightly sandy LIMESTONE.	
		NI				19.00 to 19.2m: Non-intact: as orange brown mottled orange slightly sandy silt.				
	100 (81)	10				19.20 - 19.20 orange brown mottled orange slightly sandy gravelly silt.				

IDL AGS3 UK DH N6GCOB_ROTARY2006.GPJ IDL_TP_TEMPLATE.GDT 09/02/07

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												2gls of polydrill used to assist drilling. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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DRILLHOLE LOG

Project N6 Galway City Outer Bypass				DRILLHOLE No RC 1118	
Job No	Date 28-11-06 29-11-06	Ground Level (m) 9.72	Co-Ordinates () E 131,185.2 N 228,809.2		
Contractor IDL				Sheet	3 of 3

RUN DETAILS						STRATA			Geology	Instrument/ Backfill
Depth Date	TCR (SCR) RQD	(SPT) Fracture Spacing	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
20.50	61	1			(4.10)	19.30 to 19.7m: Joint: subvertical, undulating, locally irregular, rough, with a little orange brown silt, open. 19.70 - 19.70 slightly weathered.	Strong fresh grey thinly bedded fine and medium grained slightly sandy LIMESTONE. (continued) BH terminated at 22.3m bgl on RE's Instruction.			
	100 (73) 46	NI			(2.30)	21.00 to 21.3m: Joint-upper: dipping 54deg's, irregular, rough, wide, with orange brown silt infill. 21.30 - 21.30 orange brown silt. 21.10 to 21.3m: Joint-lower: dipping 72deg's, irregular, rough, wide, with orange brown silt infill, wide.				
22.30		7	-12.58		22.30	21.55 to 21.75m: Joint: subvertical, undulating, rough, with orange brown silt, wide. 21.95 to 22.05m: Joint: dipping 60deg's, irregular, rough, with orange brown silt, wide. 22.10 to 22.16m: Non-intact: as subrounded limestone gravel with orange brown silt.				

Drilling Progress and Water Observations								Rotary Flush				GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia	Core Dia mm	Water Strike	Water Standing	From	To	Type	Returns	
												2gls of polydrill used to assist drilling. Borehole backfilled with cement bentonite grout.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	County Tractor	Bit Design	HQ	Logged By	EAT
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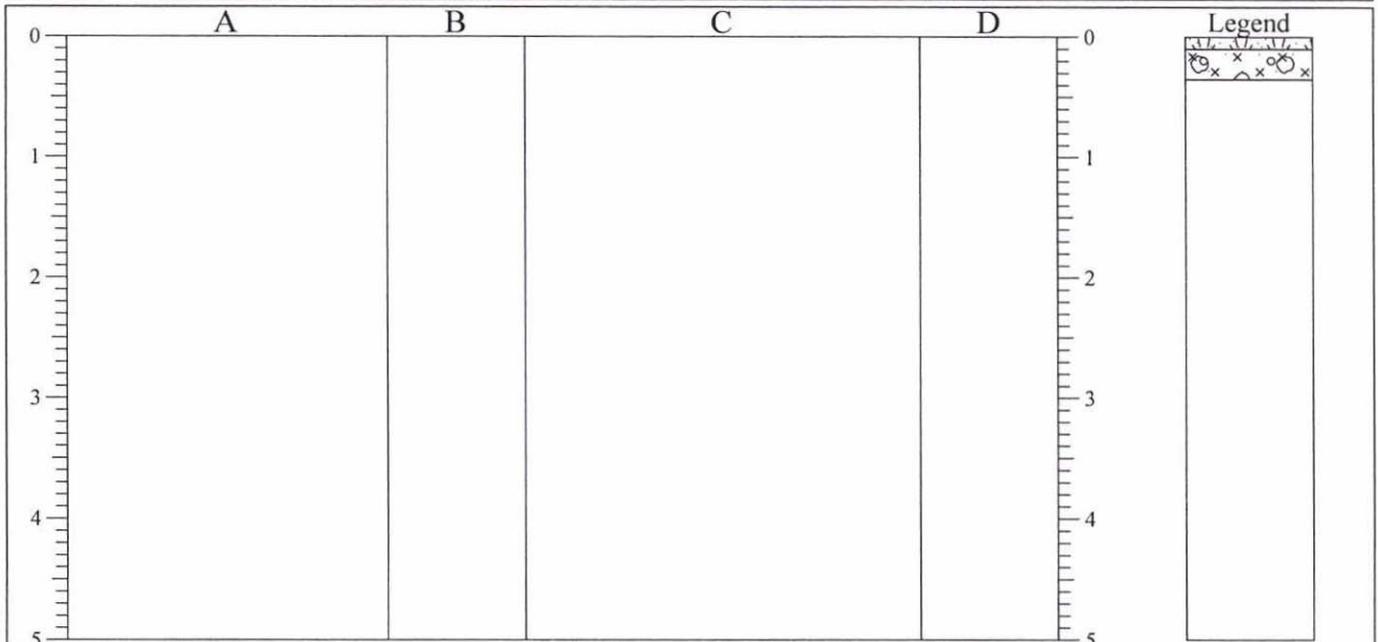
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 502	
Job No	Date 29-09-06 29-09-06	Ground Level (m) 6.89	Co-Ordinates () E 121,047.4 N 222,494.5		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		Topsoil with many roots and fibres.			0.00-0.35	J	
0.10-0.35		Soft dark brown slightly sandy gravelly SILT with many sub-angular to angular cobbles and some boulders. Boulders up to 500mm long.					
0.35		TP abandoned at 0.35m bgl on RE's instruction. Refusal - presumed rock. Dark and light grey mottled white GRANITE.					

IDL AGS3 UK TP GALWAYBYPASSNETPSLAB1.GPJ AGS3_1.GDT 30/01/07

Shoring/Support: Stability:		GENERAL REMARKS
		Pit dry, stable during excavation.

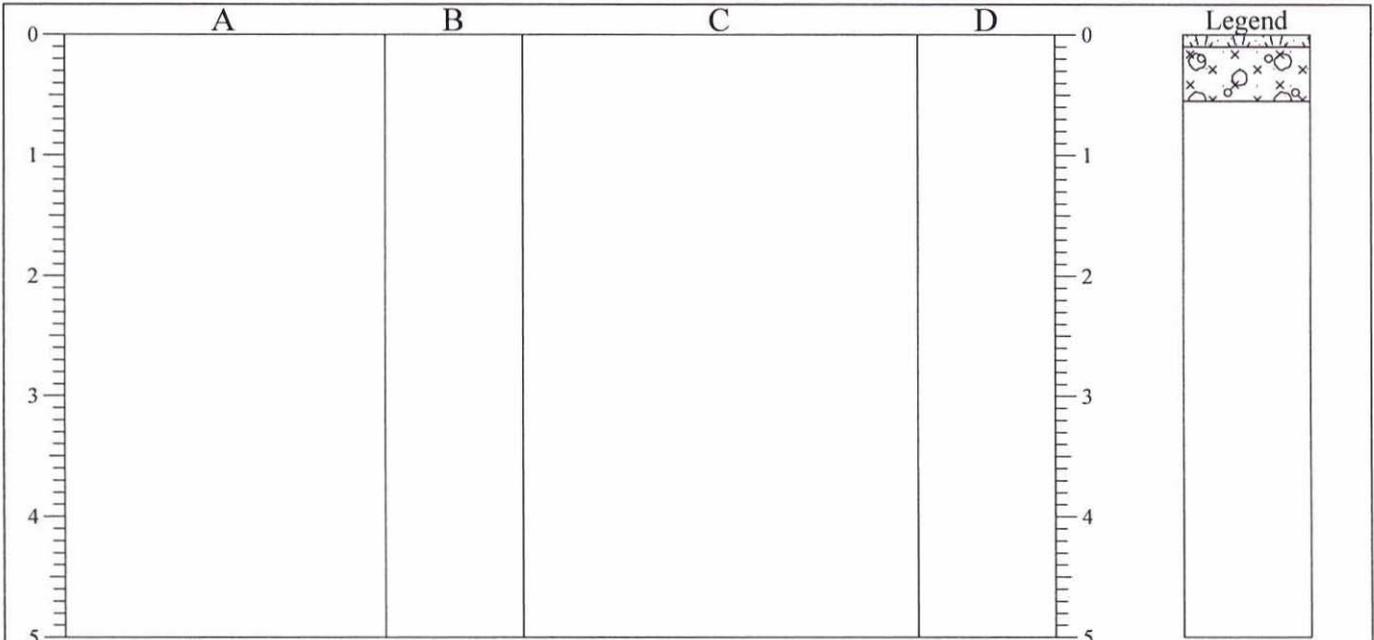
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex60	Bit Design	Logged By TS
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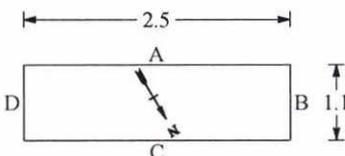
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 503	
Job No	Date 29-09-06 29-09-06	Ground Level (m) 8.21	Co-Ordinates () E 121,155.2 N 222,492.4		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		Topsoil with many roots and fibres.			0.00-0.55	J	
0.10-0.55		Soft dark brown slightly sandy gravelly SILT with many sub-angular to angular cobbles and some boulders. Boulders up to 450mm long.					
0.55		Refusal - presumed rock. Dark and light grey mottled white GRANITE.					

Shoring/Support:
Stability:

**GENERAL REMARKS**

Pit dry, stable during excavation.

All dimensions in metres
Scale 1:62.5

Client Galway County Council

Method/
Plant Used Hitachi ex60

Bit
Design

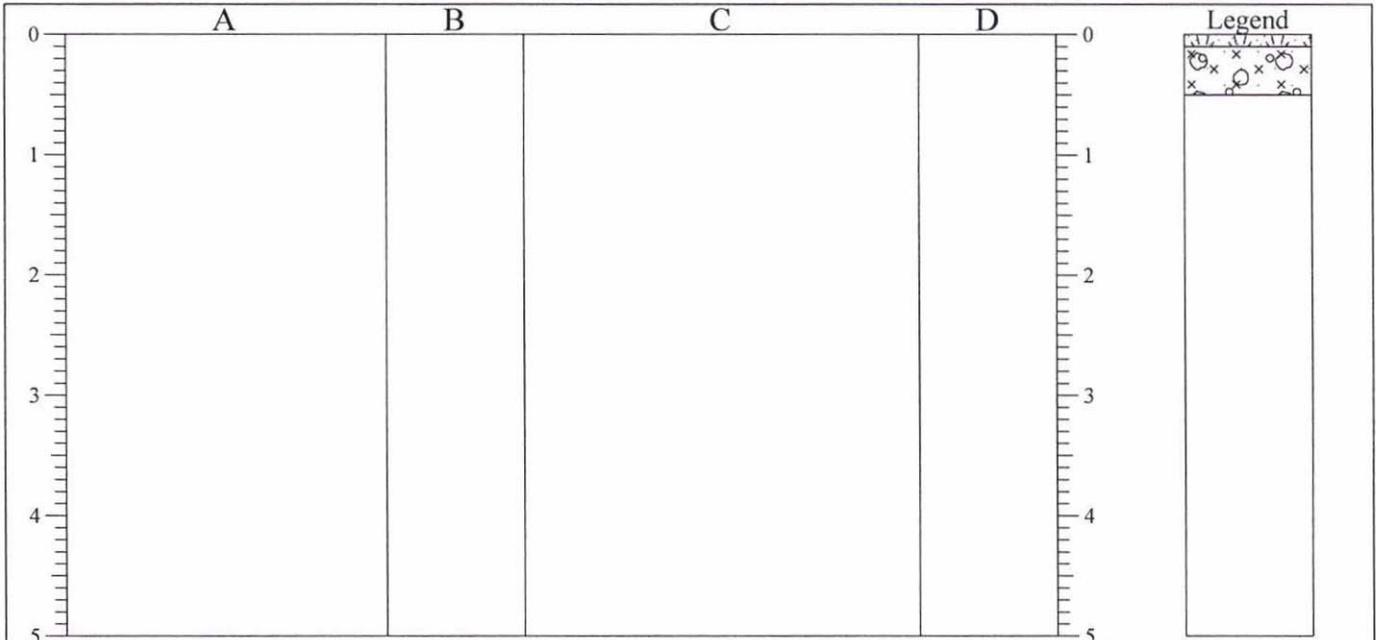
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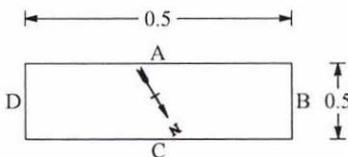
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 506	
Job No	Date 29-09-06 29-09-06	Ground Level (m) 12.82	Co-Ordinates () E 121,272.7 N 222,567.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		Topsoil with many roots and fibres.			0.00-0.50	J	
0.10-0.50		Soft dark brown slightly sandy gravelly SILT with many sub-angular to angular cobbles and some boulders. Boulders up to 400mm long.					
0.50		Refusal - presumed rock. Dark and light grey mottled white GRANITE.					

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation. No access for excavator-hand dug pit only.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

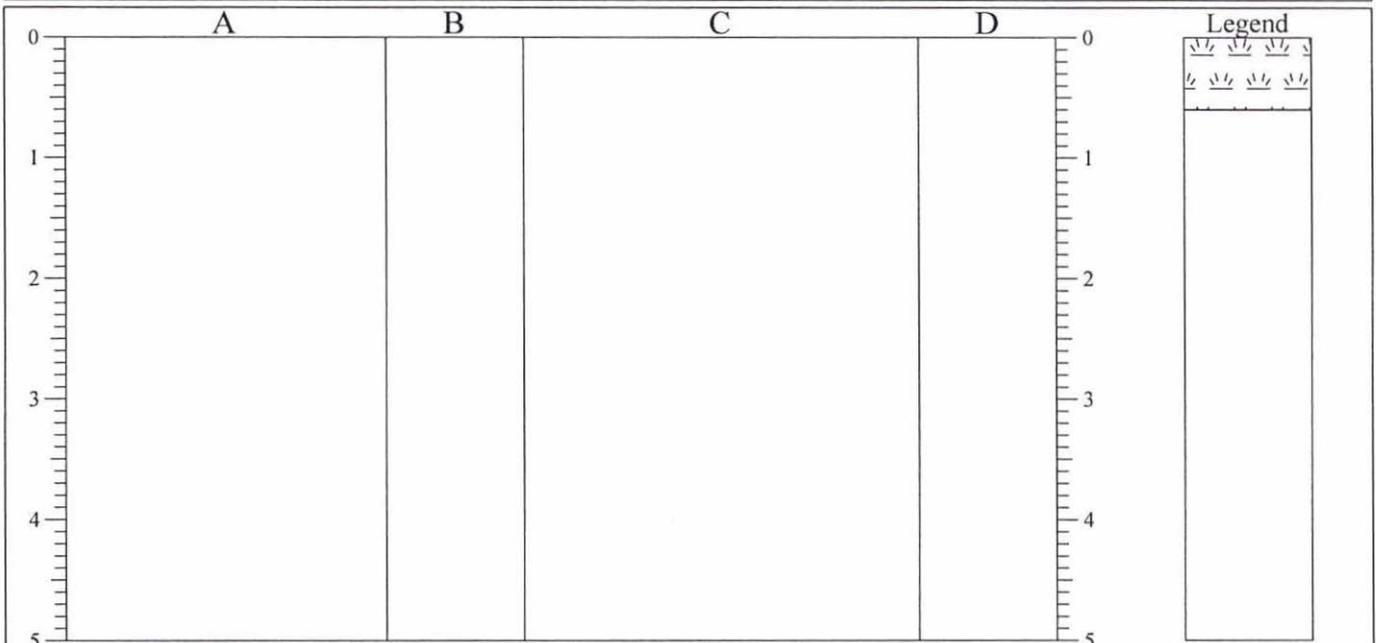
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	Bit Design	Logged By TS
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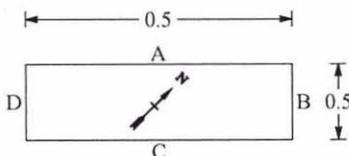
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 509	
Job No	Date 29-09-06 29-09-06	Ground Level (m) 21.70	Co-Ordinates () E 121,293.9 N 222,779.6		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.30m 2nd: 3rd:	Rose to (@ 20 min.): 0.14m	Sealed at: Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.60		Very soft dark brown fibrous PEAT (H5,B3,F3,R2,W0,N1,TV1,TH2,A0,P0). 0.30 - 0.30 with some subrounded to subangular cobbles and boulders. Boulders up to 300mm long. 0.40 - 0.40 becoming sandy. Refusal - presumed rock. Dark and light grey mottled white GRANITE.			0.00-0.50 0.30	J W	

Shoring/Support:
Stability:

**GENERAL REMARKS**

Pit stable during excavation. Water strike at 0.30m-rose to 0.14m in 20mins. No access for excavator-hand dug pit only.

All dimensions in metres
Scale 1:62.5

Client Galway County Council

Method/
Plant Used

Bit
Design

Logged By
TS

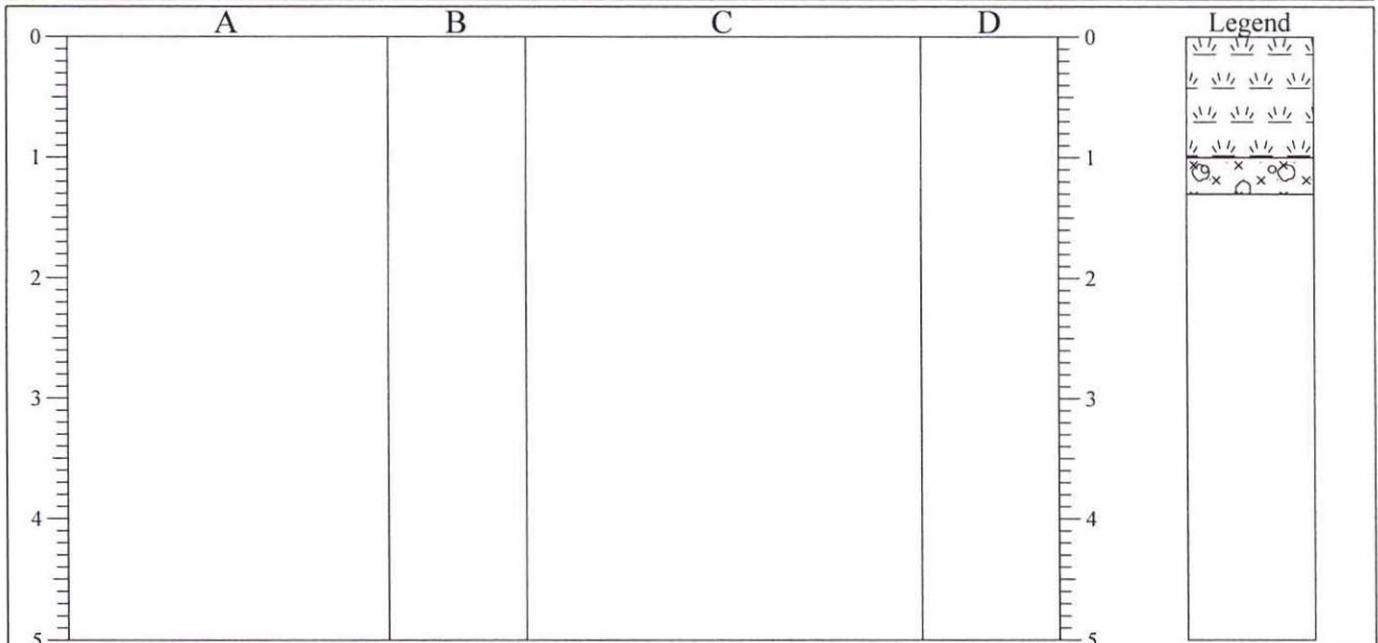
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 512	
Job No	Date 29-09-06 29-09-06	Ground Level (m) 29.30	Co-Ordinates () E 121,279.8 N 223,000.2		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-1.00		MADE GROUND - recovered as topsoil with many roots and dark brown slightly sandy gravelly silt with many angular to subangular cobbles and some boulders. Boulders up to 300mm long.			0.00-0.80	J	
1.00-1.30		MADE GROUND - recovered as brown gravelly clay with grey brown gravelly very silty sand with many rounded to angular boulders (boulders flat, up to 450mm long).			0.80-1.30	B	
1.30		Refusal - presumed rock. Grey mottled brown and white granite.			0.80-1.30	J	

IDL AGS3 UK TP GALWAYBYPASSN6TPS1AB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support: Stability:	GENERAL REMARKS Pit dry, stable during excavation.

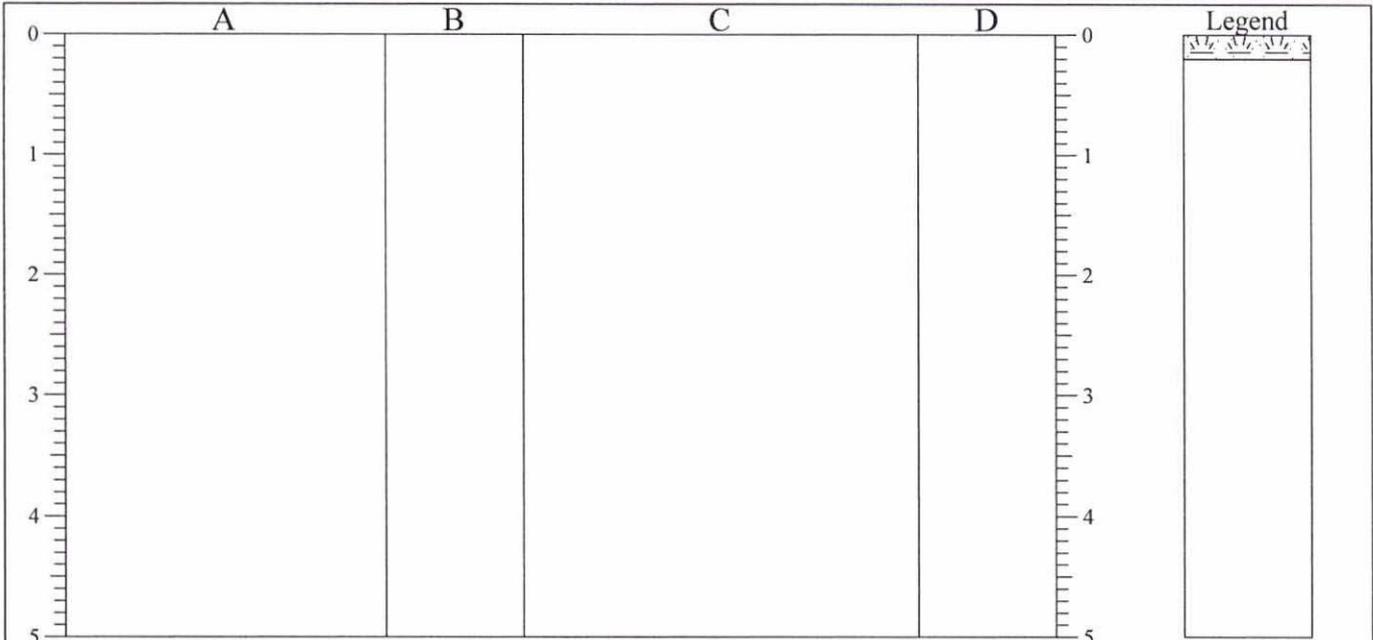
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex60	Bit Design	Logged By TS
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 514	
Job No	Date 29-09-06 29-09-06	Ground Level (m) 37.30	Co-Ordinates () E 121,209.1 N 223,170.6		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.20		Soft dark brown slightly sandy SILT with many roots (TOPSOIL).			0.00-0.20	J	
0.20		Refusal - presumed rock. Grey and brown mottled white granite.					

Shoring/Support:
Stability:

GENERAL REMARKS

Pit dry, stable during excavation. No access for excavator-hand dug pit only.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex60	Bit Design	Logged By TS
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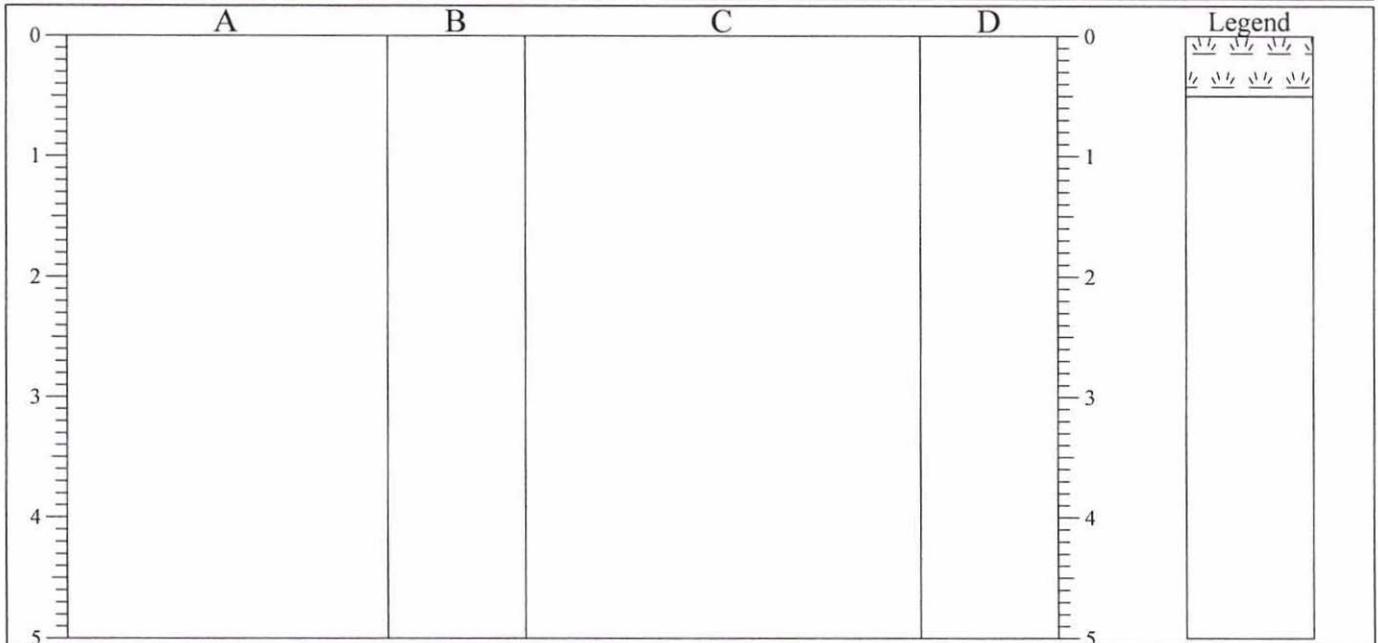
IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ_AGS 3_1.GDT_30/01/07



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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 516	
Job No	Date 28-09-06 28-09-06	Ground Level (m) 41.20	Co-Ordinates () E 121,156.7 N 223,443.2		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.50		Very soft dark brown fibrous PEAT (H2,B1,F2,R1,W0,N1,TV1,TH2,A0,P1).			0.00-0.50	J	
0.50		Refusal - presumed rock. Grey white brown GRANITE.					

Shoring/Support: Stability: 	GENERAL REMARKS Pit dry, stable during excavation.
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All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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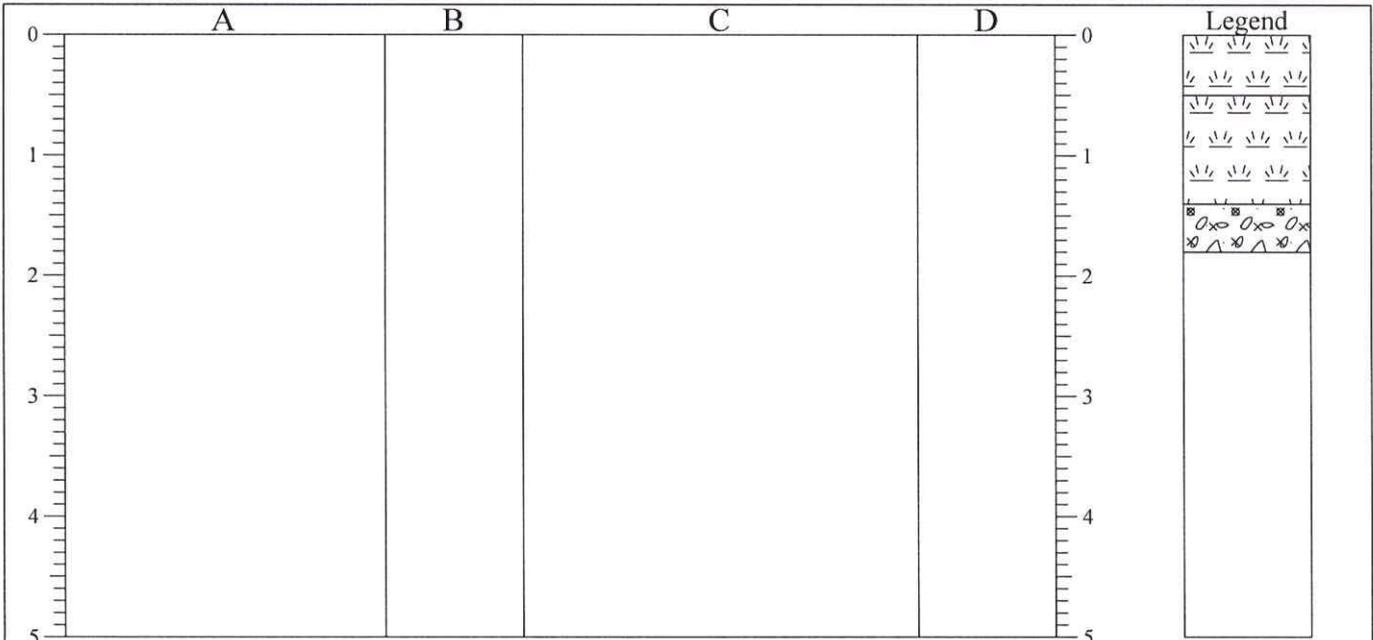
IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07



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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 525	
Job No	Date 28-09-06 28-09-06	Ground Level (m) 42.87	Co-Ordinates () E 121,137.2 N 223,556.8		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.18m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.50		Very soft dark brown PEAT (H3,B1,P3,W0,N0,TV1,TH2,A0,P0).		↓	0.00-0.50	J	
0.50-1.40		Very soft dark brown PEAT (H1,B3,F3,W0,N1,TV0,TH0,A0,P1,R2).			0.50-1.50	B	
1.40-1.80		Grey brown silty very sandy GRAVEL with many subrounded to angular cobbles and subangular to angular boulders and traces of peat. Boulders up to 400mm long.			1.50-1.80	B	
1.80		Refusal - presumed rock. Brown grey GRANITE.					

Shoring/Support: Stability:		GENERAL REMARKS Pit stable during excavation. Water strike at 0.18m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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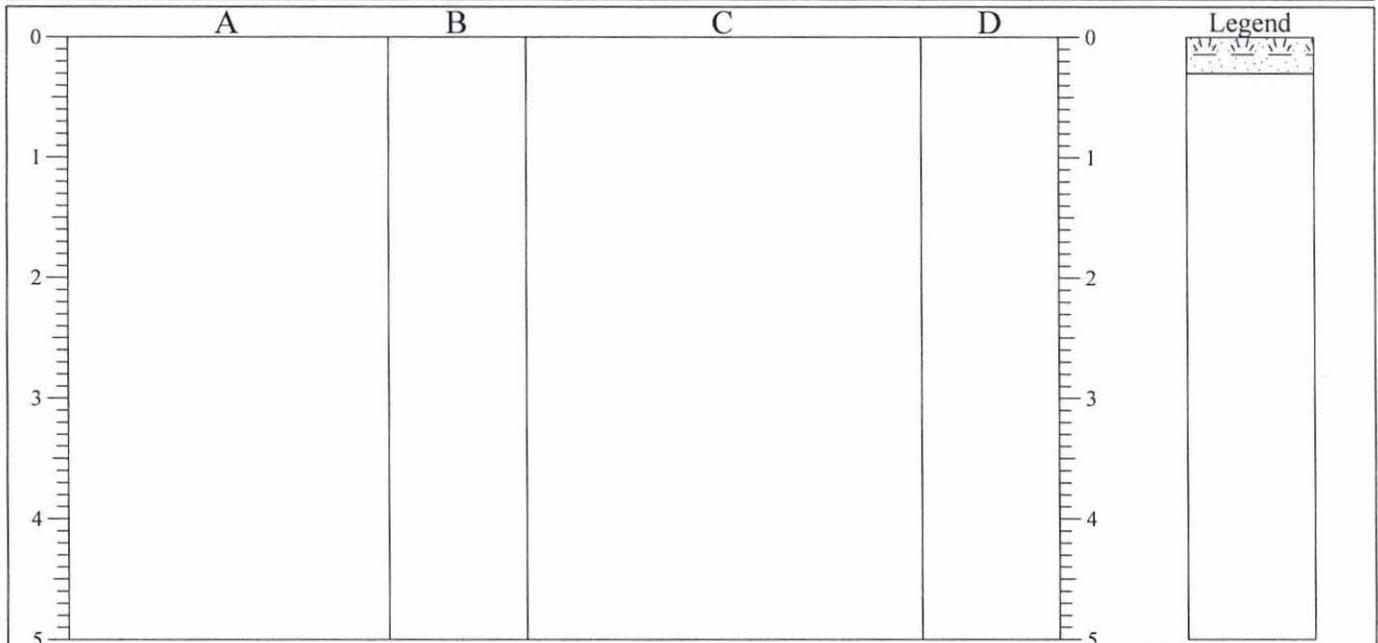
IDL-AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ_AGS 3_1.GDT_30/01/07



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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 713	
Job No	Date 06-10-06 06-10-06	Ground Level (m) 29.67	Co-Ordinates () E 124,068.9 N 225,085.4		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		Soft dark brown slightly sandy gravelly SILT/CLAY with roots and many angular cobbles (TOPSOIL).			0.15-0.30	J	
0.30		Refusal - possible intact rock. Pink orange brown mottled grey white GRANITE.					

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support: Stability:		GENERAL REMARKS
		Pit dry, stable during excavation.

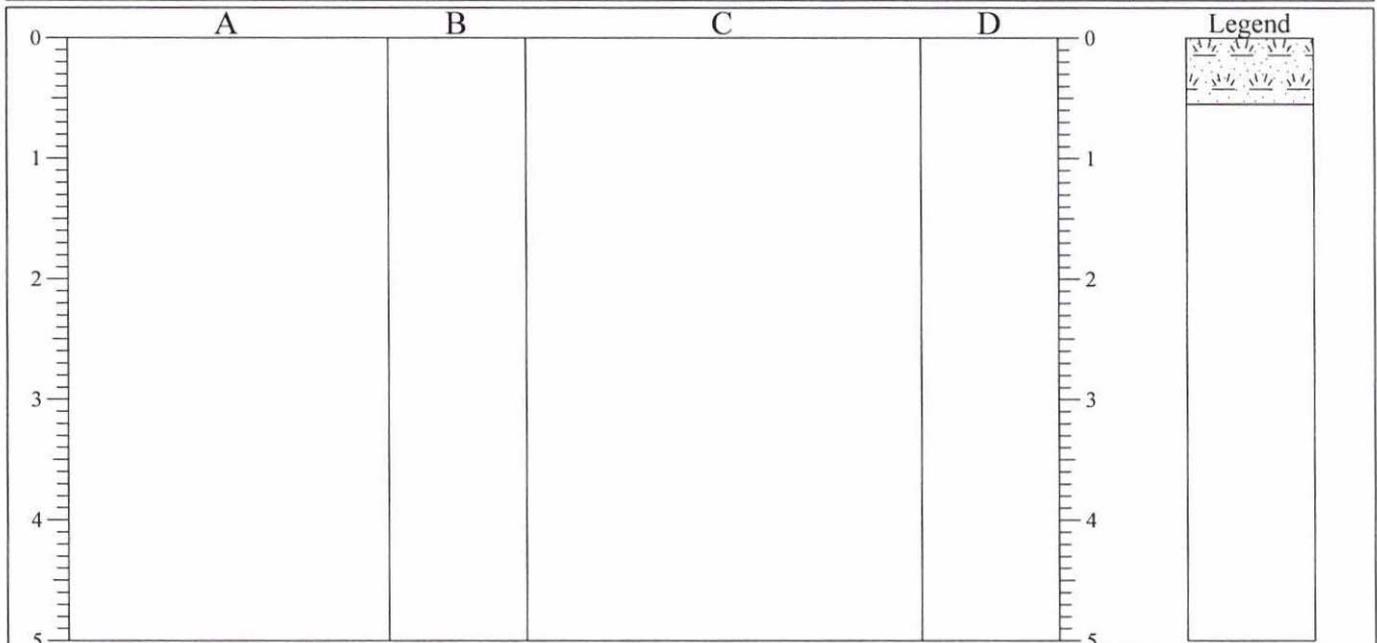
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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TRIAL PIT LOG

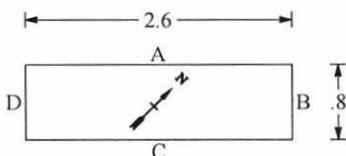
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 714	
Job No	Date 06-10-06 06-10-06	Ground Level (m) 30.04	Co-Ordinates () E 124,117.2 N 224,894.6		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.55		Soft dark brown slightly sandy gravelly SILT/CLAY with roots and many angular cobbles and some boulders(TOPSOIL).Boulders up to 400mm long.			0.20	J	
0.55		Refusal - possible fractured rock.Pink mottled grey white GRANITE.					

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ - AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

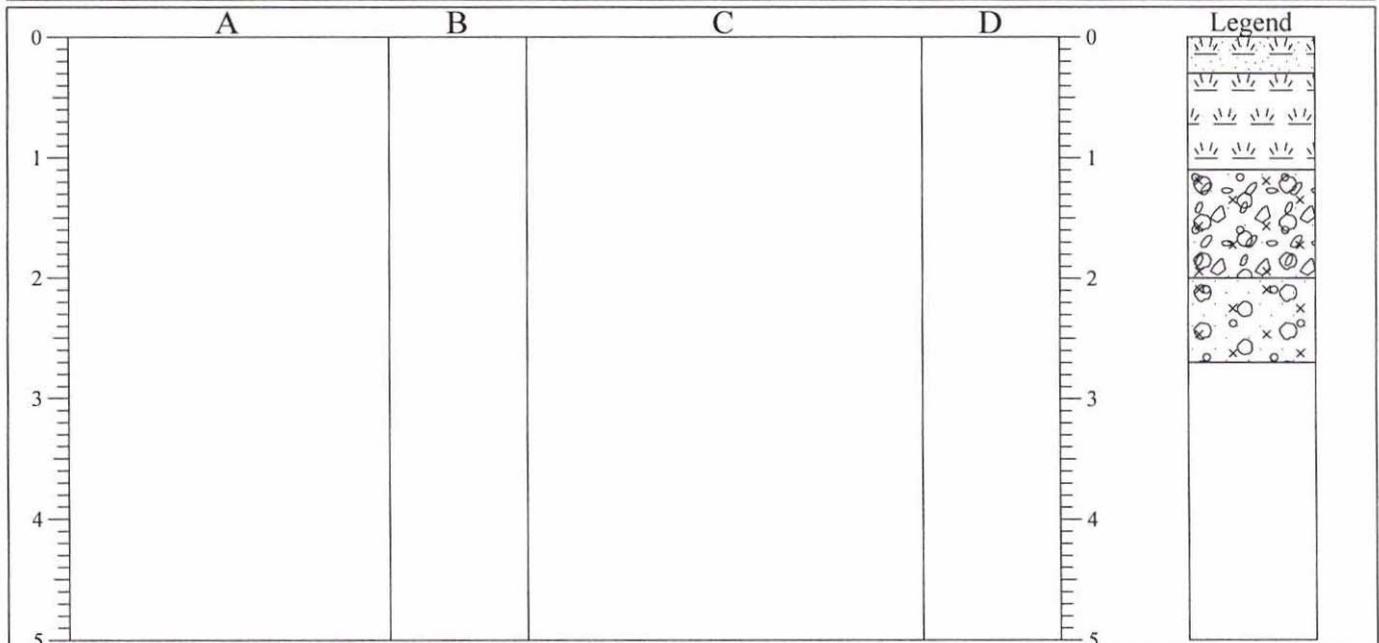
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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TRIAL PIT LOG

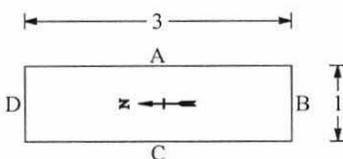
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 716	
Job No	Date 09-10-06 09-10-06	Ground Level (m) 19.52	Co-Ordinates () E 124,267.4 N 224,679.9		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.30m 2nd: 1.90m 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		Firm damp dark brown slightly sandy gravelly SILT/CLAY with roots(TOPSOIL).		↓	0.20	J	
0.30-1.10		Very soft dark brown sandy PEAT with some subangular to subrounded cobbles (H5,B2,P1,W0,N0,TV1,TH1,A0,F3,R2).			0.70 0.70	B J	
1.10-2.00		Grey brown mottled orange slightly silty very sandy GRAVEL with many subrounded to subangular cobbles and boulders. Boulders up to 350mm long.		↓	1.60 1.60	B J	
2.00-2.70		Grey mottled orange brown gravelly silty SAND with many angular to subangular cobbles and boulders. Boulders up to 350mm long.			2.50 2.50	B J	
2.70		Refusal - possible rock or boulders. Orange brown mottled grey GRANITE.					

IDL AGS3 UK TP GALWAYBPASSNETPSLAB1 GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable during excavation-spalling of sides from 0.60m. Water strike at 0.30m and 1.90m. Flooding present due to recent rains.

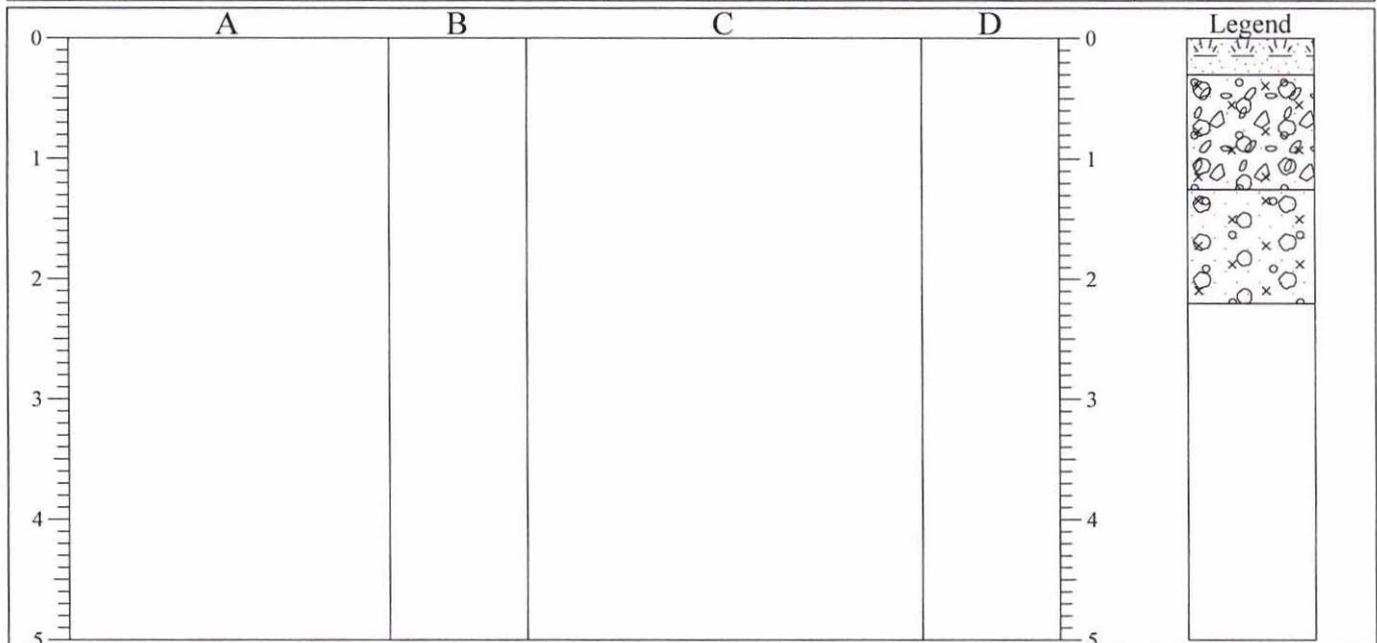
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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TRIAL PIT LOG

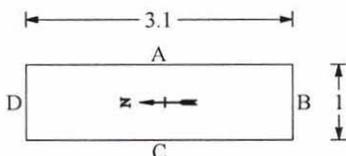
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 717	
Job No	Date 09-10-06 09-10-06	Ground Level (m) 19.20	Co-Ordinates () E 124,251.0 N 224,668.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.80m 2nd: 2.20m 3rd:	Rose to (@ 20 min.): 0.78m	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		Soft wet dark brown slightly sandy gravelly SILT/CLAY with roots (TOPSOIL).			0.20	J	
0.30-1.25		Grey brown silty very sandy GRAVEL with many subrounded to subangular cobbles and some boulders. Boulders up to 600mm long. Gravel is fine.		11	0.70 0.70	B J	
1.25-2.20		Grey mottled orange brown gravelly silty SAND with many angular to subangular cobbles and some boulders. Boulders up to 450mm long.					
2.20		Refusal - possible fractured rock. Pink mottled grey white GRANITE.		2	1.90 1.90 2.20	B J W	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable during excavation-spalling of sides. Water strikes at 0.80m and 2.20m.

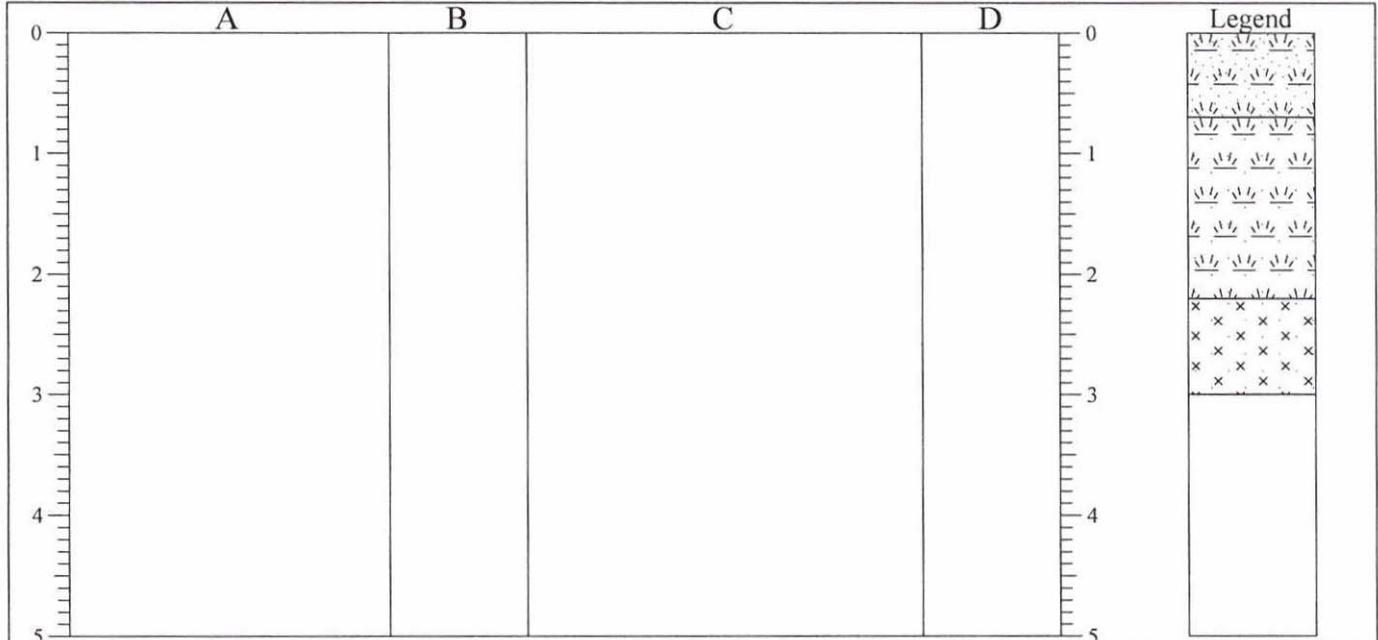
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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TRIAL PIT LOG

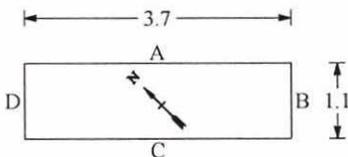
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 718	
Job No	Date 09-10-06 09-10-06	Ground Level (m) 18.48	Co-Ordinates () E 124,247.7 N 224,561.6		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 1.10m 2nd: 2.20m 3rd:	Rose to (@ 20 min.): 1.04m	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.70		Firm damp dark brown mottled orange slightly sandy slightly gravelly SILT/CLAY with roots(TOPSOIL).					
0.70-2.20		Very soft dark brown sandy PEAT (H6,B1,P1,W0,N1,TV2,TH3,A0,F2,R1,P0).		1	0.50	B	
				2	0.50	J	
2.20-3.00		Firm grey slightly sandy SILT with some roots.Sand is fine.			1.50	B	
				2	1.50	J	
3.00		Refusal - possible rock or boulders.Orange brown mottled grey GRANITE.			2.30	W	
					2.50	B	
					2.50	J	

IDL:AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit stable during excavation. Water strikes at 1.10 and 2.20m.

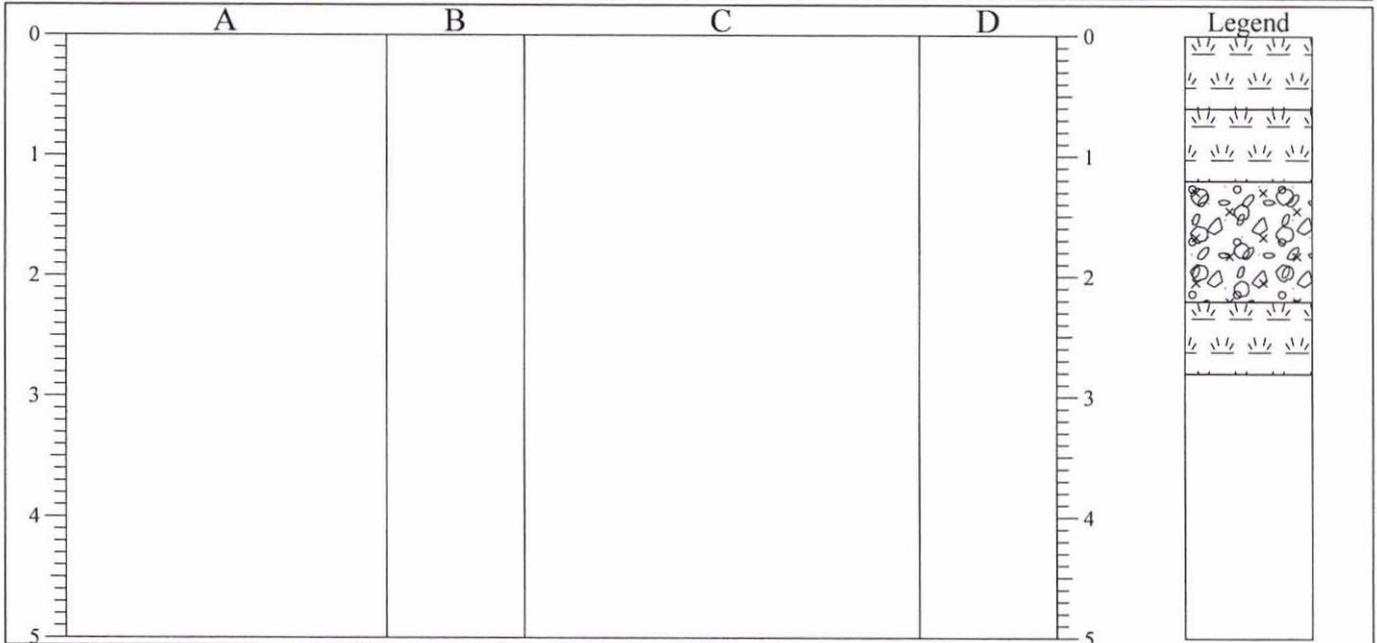
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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TRIAL PIT LOG

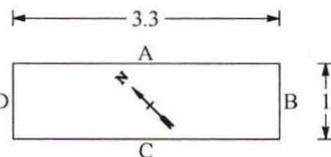
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 719	
Job No	Date 09-10-06 09-10-06	Ground Level (m) 18.91	Co-Ordinates () E 124,333.9 N 224,630.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 1.60m 2nd: 1.80m 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.60		Very soft dark brown PEAT (H4,B1,P0,W1,N1,TV1,TH1,A0,P0).			0.30	J	
0.60-1.20		Very soft dark brown PEAT (H7,B2,F3,W2,N3,TV1,TH1,A1,P1).			0.90	B	
1.20-2.20		Grey mottled pink orange silty very sandy GRAVEL with many subangular to angular cobbles and boulders. Boulders up to 300mm long. Sand is coarse.		↓	0.90	J	
				↓	1.60	B	
				↓	1.60	J	
				↓	1.60	W	
2.20-2.80		Grey brown mottled pink orange silty sandy GRAVEL with many subangular to angular AND FLAT cobbles and boulders. Boulders up to 500mm long.			2.50	B	
2.80		Refusal - possible fractured rock. Pinkish orange mottled grey black GRANITE.			2.50	J	

IDL ACS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ_AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable during excavation-spalling of sides from 1.30m. Water strikes at 1.60 and 1.80m.

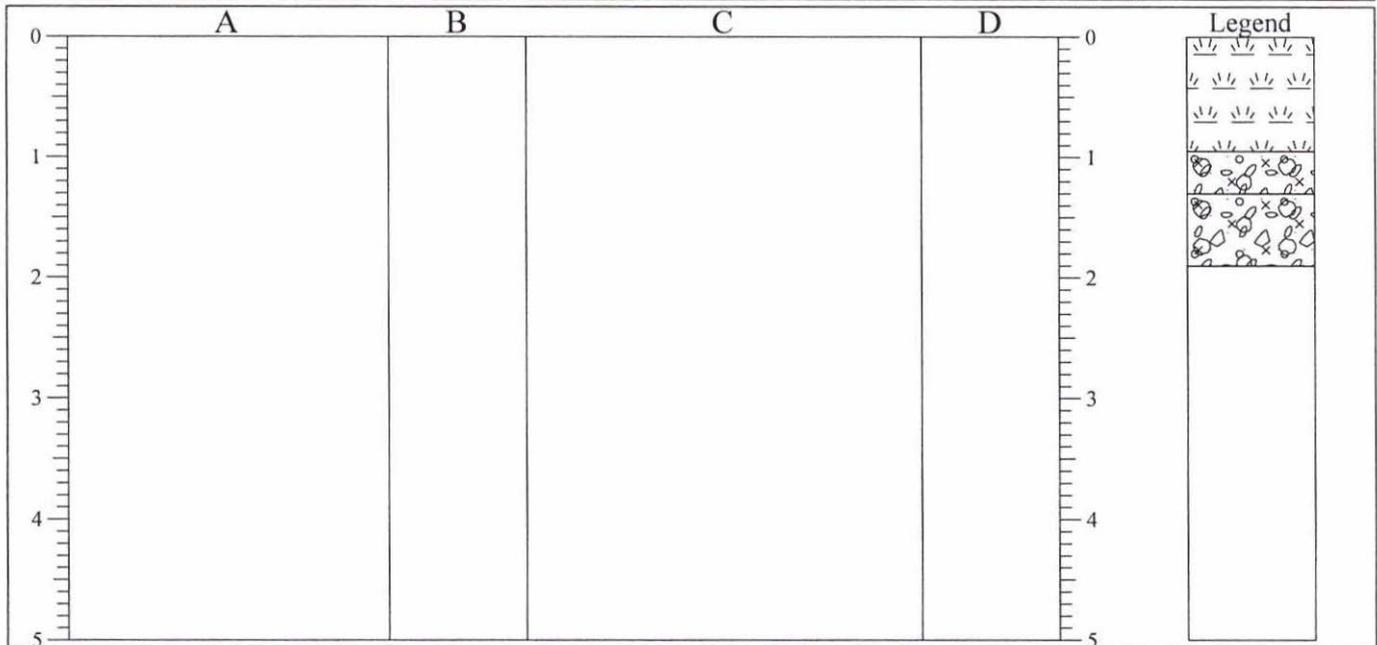
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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TRIAL PIT LOG

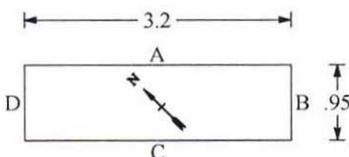
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 720	
Job No	Date 09-10-06 09-10-06	Ground Level (m) 21.77	Co-Ordinates () E 124,438.1 N 224,607.1		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.50m 2nd: 0.90m 3rd: 1.30m	Rose to (@ 20 min.): 0.47m	Sealed at: Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.95		Very soft dark brown PEAT (H3,B1,P0,W1,N2,TV1,TH2,A2,P0,R2).		1 ↓			
0.95-1.30		Grey mottled brown orange silty very sandy GRAVEL with many subangular to angular cobbles and boulders. Boulders up to 300mm long. Sand is coarse.		2 ↓	0.50	B	
1.30-1.90		Grey brown mottled white orange silty sandy GRAVEL with many subangular to angular cobbles and boulders. Boulders up to 450mm long.		3 ↓	0.50	J	
1.90		Refusal - possible fractured rock. Pinkish mottled grey white GRANITE.			1.20	B	
					1.20	J	
					1.70	B	
					1.70	J	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable during excavation-spalling of sides from 0.90m. Water strikes at 0.50, 0.90 and 1.30m.

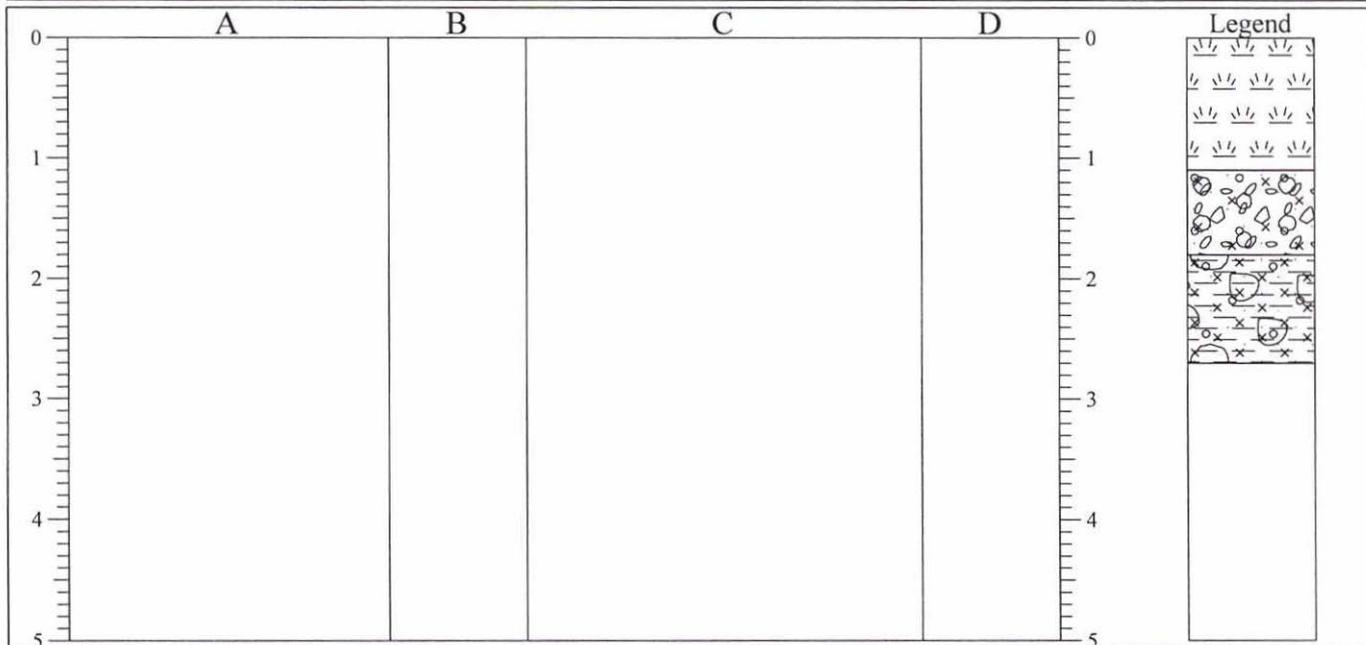
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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TRIAL PIT LOG

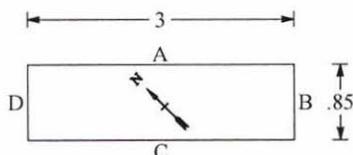
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 721	
Job No	Date 09-10-06 09-10-06	Ground Level (m) 21.81	Co-Ordinates () E 124,449.2 N 224,621.7		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.40m 2nd: 1.20m 3rd: 2.00m	Rose to (@ 20 min.): 0.36m	Sealed at: Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-1.10		Very soft dark brown PEAT (H4,B1,P0,W0,N1,TV1,TH1,A2,P0,R2).		1 ↓	0.50 0.50	B J	
1.10-1.80		Grey mottled brown orange slightly silty very sandy GRAVEL with some subangular to angular cobbles and boulders. Boulders up to 500mm long. Sand is coarse.		2 ↓	1.50	B	
1.80-2.70		Stiff grey gravelly very sandy SILT/CLAY with some subangular to angular cobbles and boulders. Boulders up to 400mm long.		3 ↓	1.50	J	
2.70		Refusal - possible fractured rock. Brown mottled grey white GRANITE.			2.20 2.20 2.40	B J W	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable during excavation-spalling of sides from 1.20m. Water strikes at 0.40, 1.20 and 2.00m.

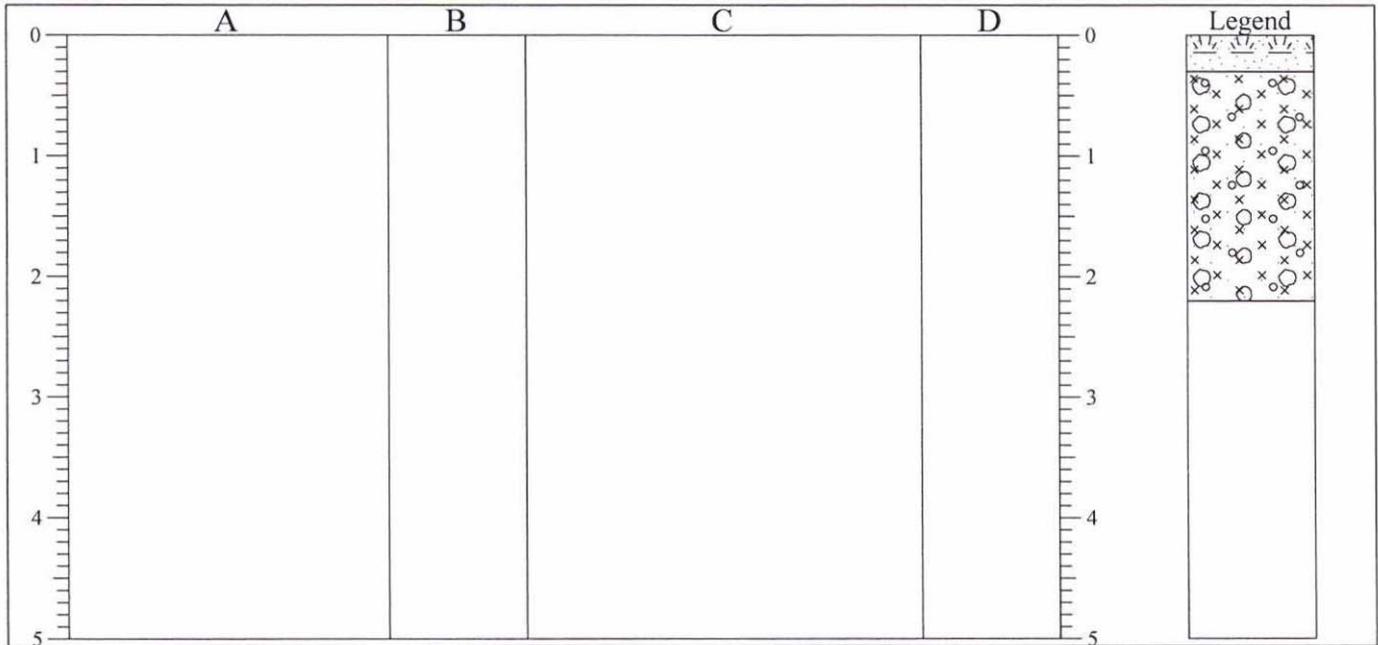
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 908	
Job No	Date 09-10-06 09-10-06	Ground Level (m) 7.51	Co-Ordinates () E 127,743.5 N 228,271.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		Grass over soft dark brown gravelly SILT/CLAY (TOPSOIL).					
0.30-2.20		Firm cream grey slightly gravelly sandy SILT with some rounded to subrounded cobbles and boulders of limestone. Boulders up to 1300mm long. 0.50 - 1.60 large boulder of limestone in pit on west side.			0.50	B	
		1.50 sandy.			0.50	J	
2.20		Refusal - possible intact rock or boulders.			1.50	B	
					1.50	J	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support: Stability: 	GENERAL REMARKS Pit dry, stable during excavation.
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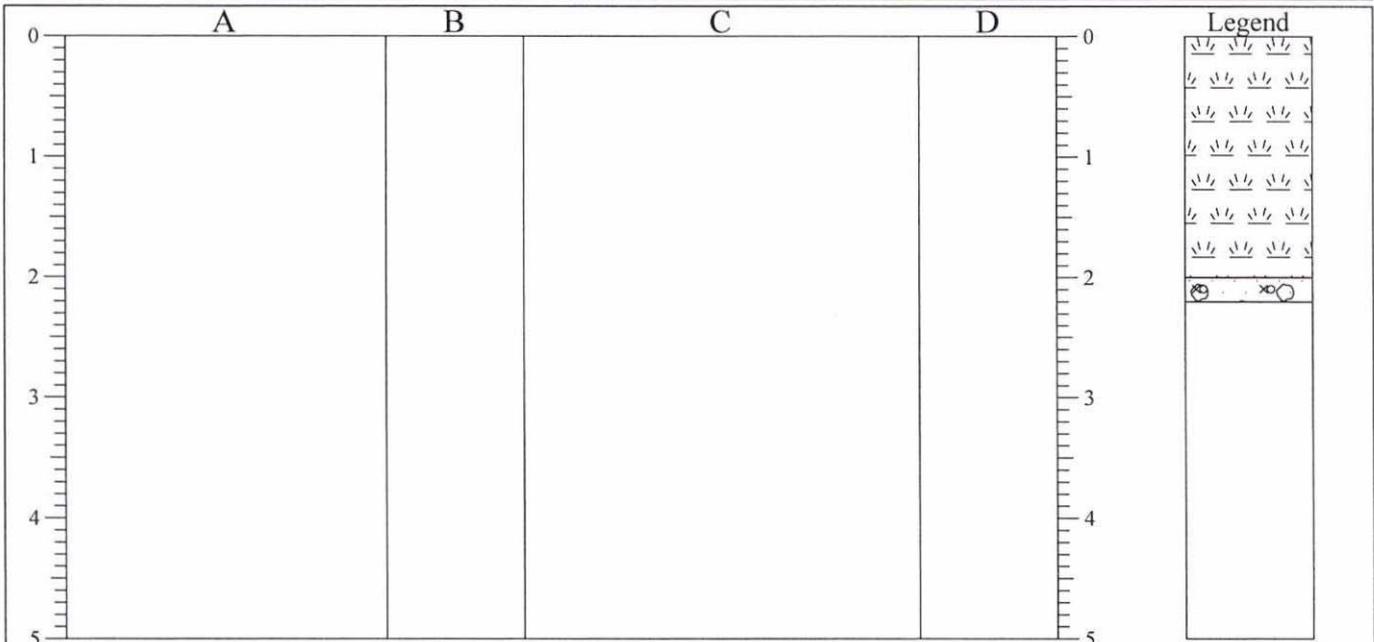
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By MM
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TRIAL PIT LOG

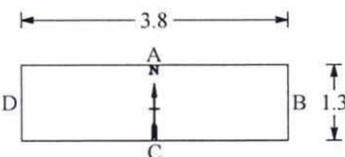
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 909	
Job No	Date 09-10-06 09-10-06	Ground Level (m) 6.25	Co-Ordinates () E 127,876.1 N 228,256.2		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 1.60m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
Sheet 1 of 1					



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-2.00		Grass over firm black PEAT (H4). 0.40 Hand Vane: 11kPa, 16kPa, 10kPa. 1.40 Hand Vane: 8kPa, 10kPa, 7kPa.			0.50	J	
				↓	1.50	J	
2.00-2.20		Cream blue grey very silty very gravelly SAND with many rounded to subrounded and angular cobbles and boulders of limestone. Boulders up to 400mm long. Sand is medium to coarse. Gravel is rounded to angular. Refusal - possible intact rock or boulders.			2.00	B	

IDL AGS3 UK TP GALWAYBYPASSNETPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit stable during excavation. Water seepage at 1.60m depth.

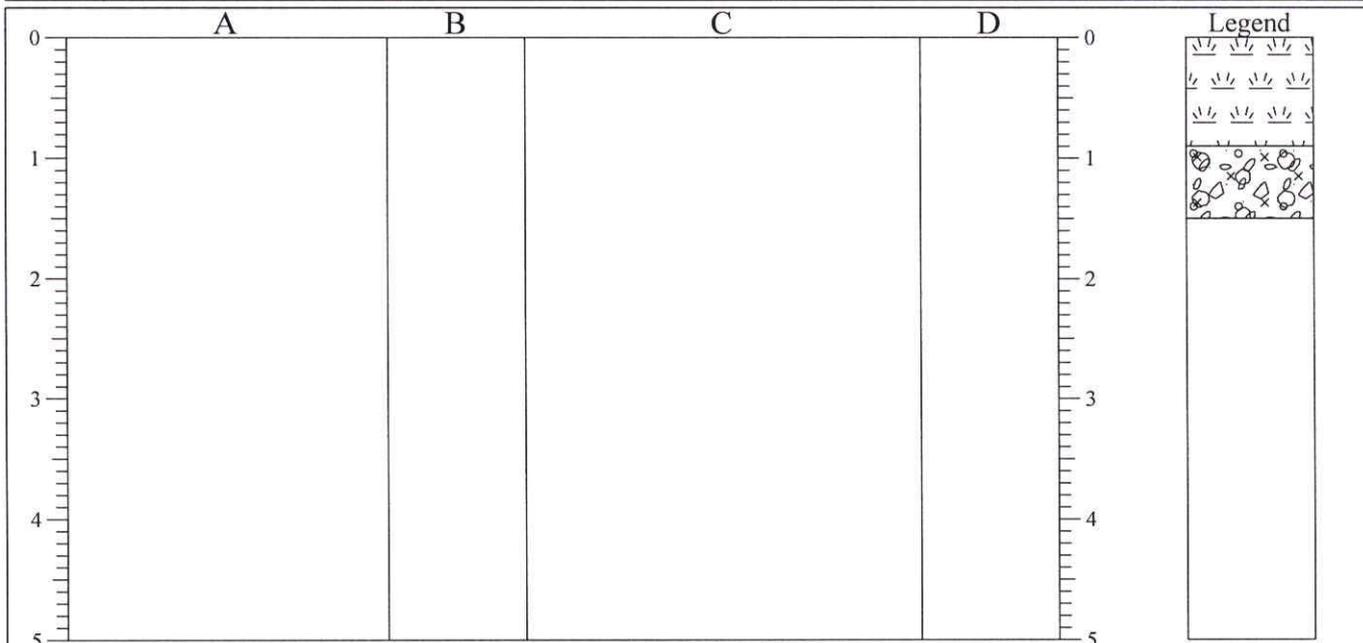
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design Design	Logged By MM
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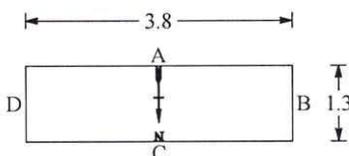
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 909A	
Job No	Date 09-10-06 09-10-06	Ground Level (m) 6.54	Co-Ordinates () E 127,873.0 N 228,224.5		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.90m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.90		Soft black pseudoamorphous PEAT (H4). 0.20 Hand Vane: 14kPa, 12kPa, 10kPa.					
0.90-1.50		Cream blue grey silty sandy GRAVEL with many rounded to subrounded cobbles and boulders of limestone. Boulders up to 400mm long. Gravel is rounded to subrounded, fine to medium.		↓	0.50	J	
1.50		1.00 Hand Vane: 7kPa, 6kPa, 10kPa. Refusal - possible intact rock or boulders.			1.00	B	

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable during excavation - spalling of sides. Surface water inflow and water ingress at 0.90m.

IDL AGS3 UK TP GALWAYBYPASSNETPSLAB1.GPJ AGS 3_1.GDT 30/01/07

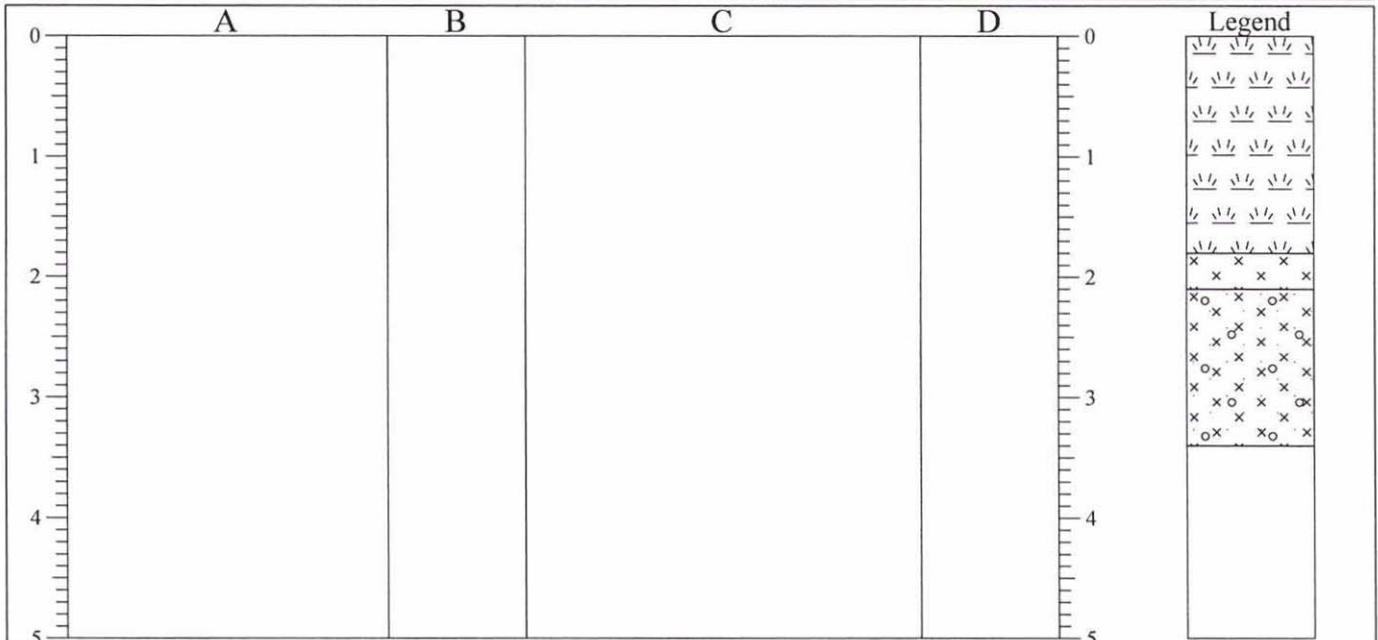
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By MM
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 932	
Job No	Date 26-09-06 26-09-06	Ground Level (m) 6.33	Co-Ordinates () E 128,266.1 N 228,126.2		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 2.10m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-1.80		Very soft dark brown fibrous PEAT with roots.			1.00	J	
1.80-2.10		Very soft cream white fibrous organic SILT with shells.		↓	1.50	B	
2.10-3.40		Soft grey slightly sandy slightly gravelly SILT with rootlets.			2.00	J	
		3.00 Hand Vane: 7kPa,8kPa,7kPa.			2.50	B	
3.40		Pit terminated.			3.00	J	
					3.40	B	

Shoring/Support: Stability:		GENERAL REMARKS
		Pit unstable from 3.20m during excavation. Water seepage at 2.10m depth.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Kobelco Mark IV	Bit Design Design	Logged By DK
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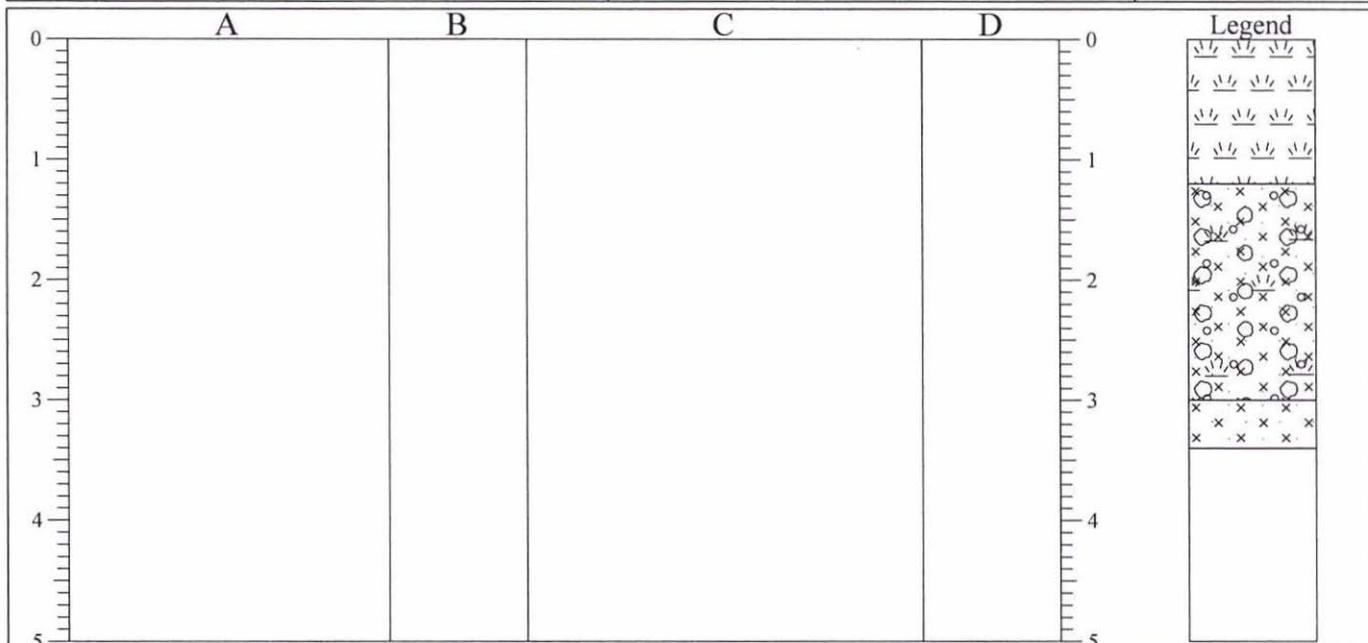
IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07



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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 935	
Job No	Date 25-09-06 25-09-06	Ground Level (m) 6.16	Co-Ordinates () E 128,272.5 N 228,106.4		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-1.20		Very soft dark brown fibrous PEAT with roots.			0.50	J	
1.20-3.00		Very soft cream white fibrous slightly gravelly sandy organic SILT/PEAT with shells.			1.50	B	
					2.50	J	
3.00-3.40		Soft dark grey slightly sandy SILT with rootlets.			3.00	B	
3.40		Pit terminated.			3.35-3.40	J	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support: Stability: 	GENERAL REMARKS Pit very unstable from 1.00m during excavation. Surface water ingress during excavation. Pit fenced.
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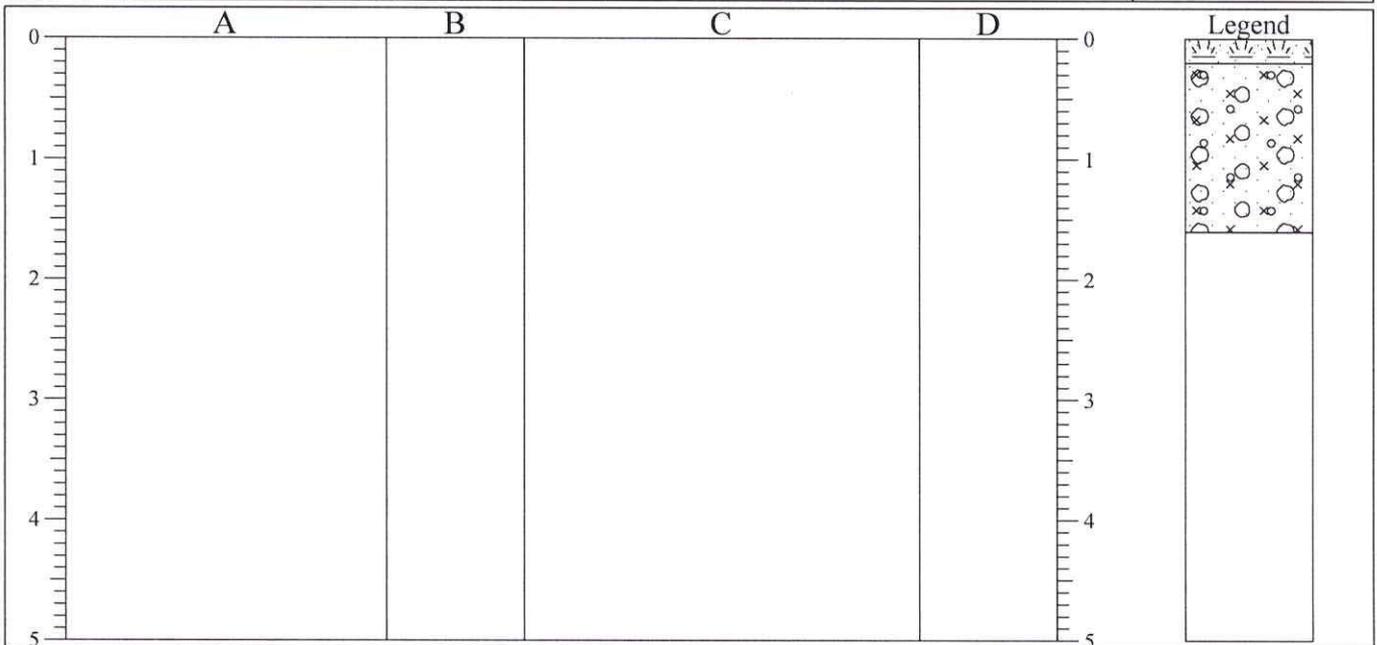
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Kobelco Mark IV	Bit Design	Logged By DK
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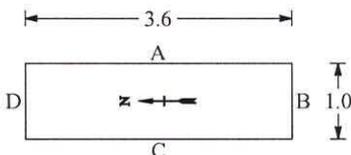
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 941	
Job No	Date 22-09-06 22-09-06	Ground Level (m) 6.92	Co-Ordinates () E 128,364.7 N 228,139.2		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 1.50m 2nd: 3rd:	Rose to (@ 20 min.): 1.34m	Sealed at: Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.20		Soft dark brown peaty CLAY with roots (TOPSOIL).			0.00-0.20	J	
0.20-1.60		Grey silty very gravelly medium SAND with some limestone cobbles and boulders. Cobbles and boulders are rounded to subangular. Boulders up to 500mm long.			0.30 0.50 1.00	B J J	
1.60		TP abandoned at 1.6m bgl. Obstruction - probable boulder.			1.50 1.50 1.60	B W J	

Shoring/Support:
Stability:



GENERAL REMARKS

Pit stable during excavation. Water ingress at 1.50m depth.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

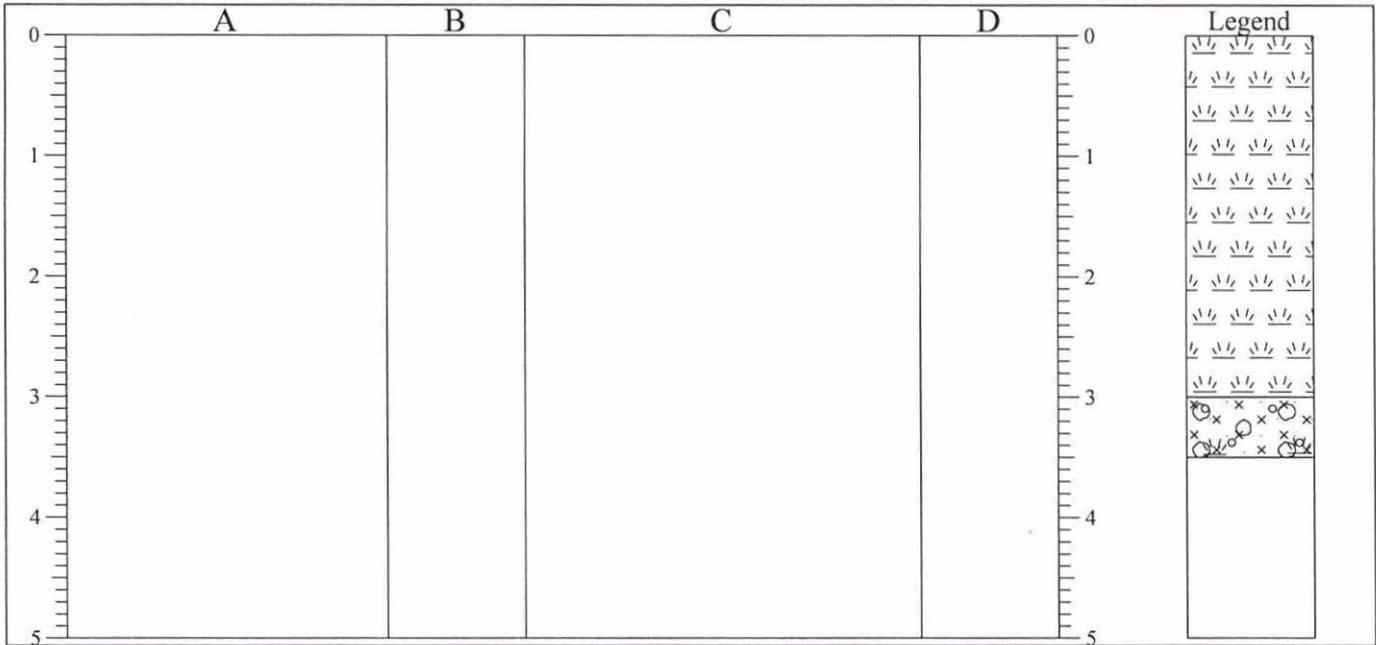
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Kobelco Mark IV	Bit Design Design	Logged By DK
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 941A	
Job No	Date 25-09-06 25-09-06	Ground Level (m) 6.50	Co-Ordinates () E 128,335.7 N 228,115.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
Sheet 1 of 1					



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-3.00		Very soft dark brown fibrous PEAT with roots (H7,B1,F3,R1,W1,N1).			0.50	J	
					1.50	B	
					2.00	J	
3.00-3.50		Soft cream white grey fibrous slightly gravelly sandy organic SILT/PEAT with roots.			3.00	B	
3.50		Pit terminated - constant collapse of pit and surface water ingress.			3.50	J	

Shoring/Support: Stability: 	GENERAL REMARKS Pit very unstable from 0.30m during excavation. Surface water ingress during excavation. Pit fenced.
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All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Kobelco Mark IV	Bit Design	Logged By DK
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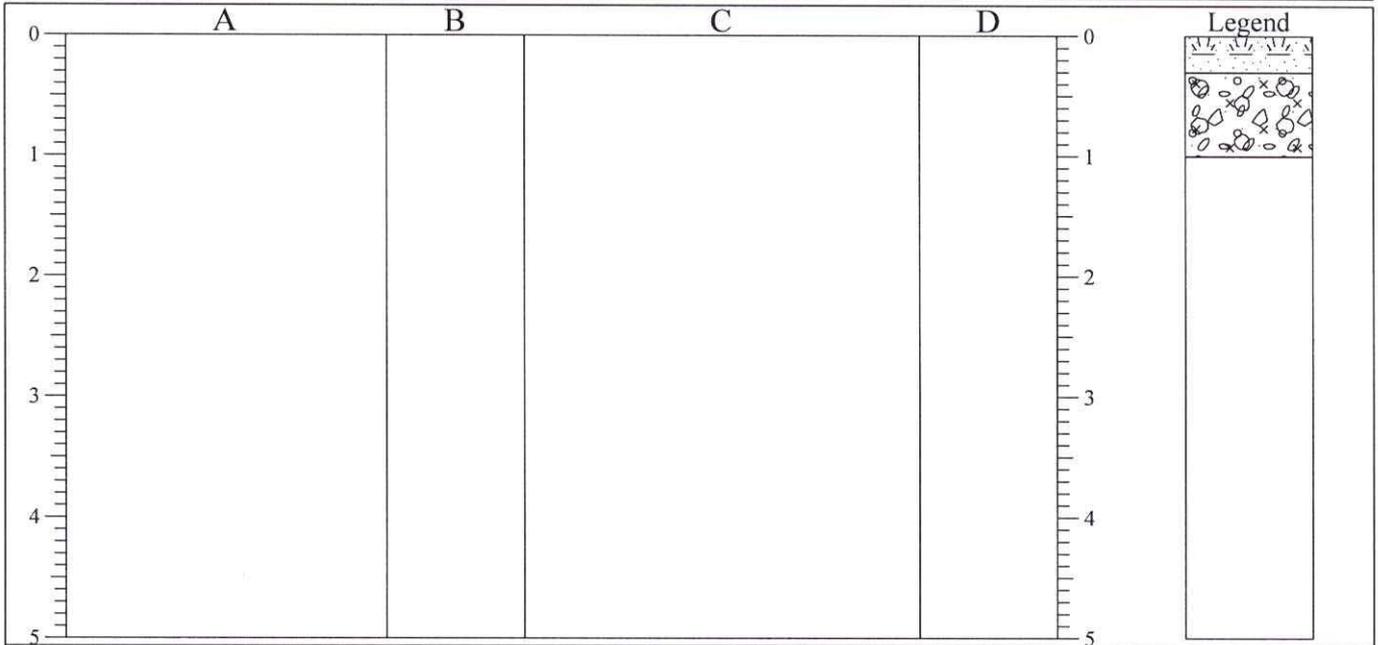
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 944	
Job No	Date 22-09-06 22-09-06	Ground Level (m) 10.83	Co-Ordinates () E 128,461.6 N 228,090.2		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		Soft brown sandy clayey TOPSOIL.					
0.30-1.00		Grey brown silty very sandy medium GRAVEL with some limestone cobbles and boulders. Cobbles and boulders are tabular to subangular. Gravel is subrounded to subangular, coarse grained. Boulders up to 400mm long.			0.30 0.50	J B	
1.00		TP abandoned at 1.0m bgl. Obstruction - probable limestone rock.			0.90	J	



GENERAL REMARKS

Pit dry, stable during excavation.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Kobelco Mark IV	Bit Design Design	Logged By DK
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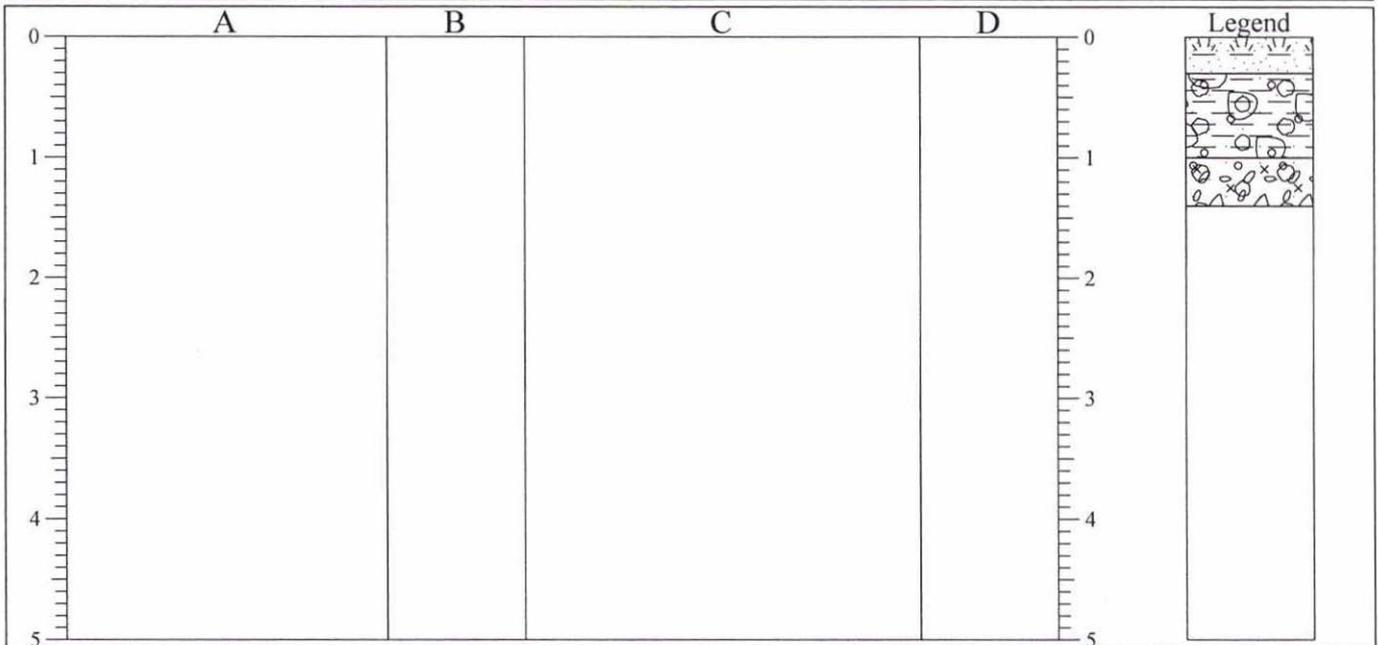
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 945	
Job No	Date 22-09-06 22-09-06	Ground Level (m) 13.22	Co-Ordinates () E 128,498.8 N 228,097.7		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		Soft brown sandy clayey TOPSOIL.			0.00-0.30	J	
0.30-1.00		Firm grey brown sandy gravelly CLAY with some limestone cobbles and boulders. Cobbles and boulders are tabular to subangular. Gravel is subrounded to subangular and tabular, coarse grained. Boulders up to 400mm long.			0.50	B	
1.00-1.40		Grey brown silty SAND and GRAVEL with many limestone cobbles and boulders. Cobbles and boulders are tabular to subangular. Boulders up to 300-600mm long.			1.00 1.00-1.40	B J	
1.40		TP abandoned at 1.4m bgl. Obstruction - possible limestone rock.			1.40	J	

Shoring/Support: Stability: 	GENERAL REMARKS Pit dry, stable during excavation.
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All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Kobelco Mark IV	Bit Design	Logged By DK
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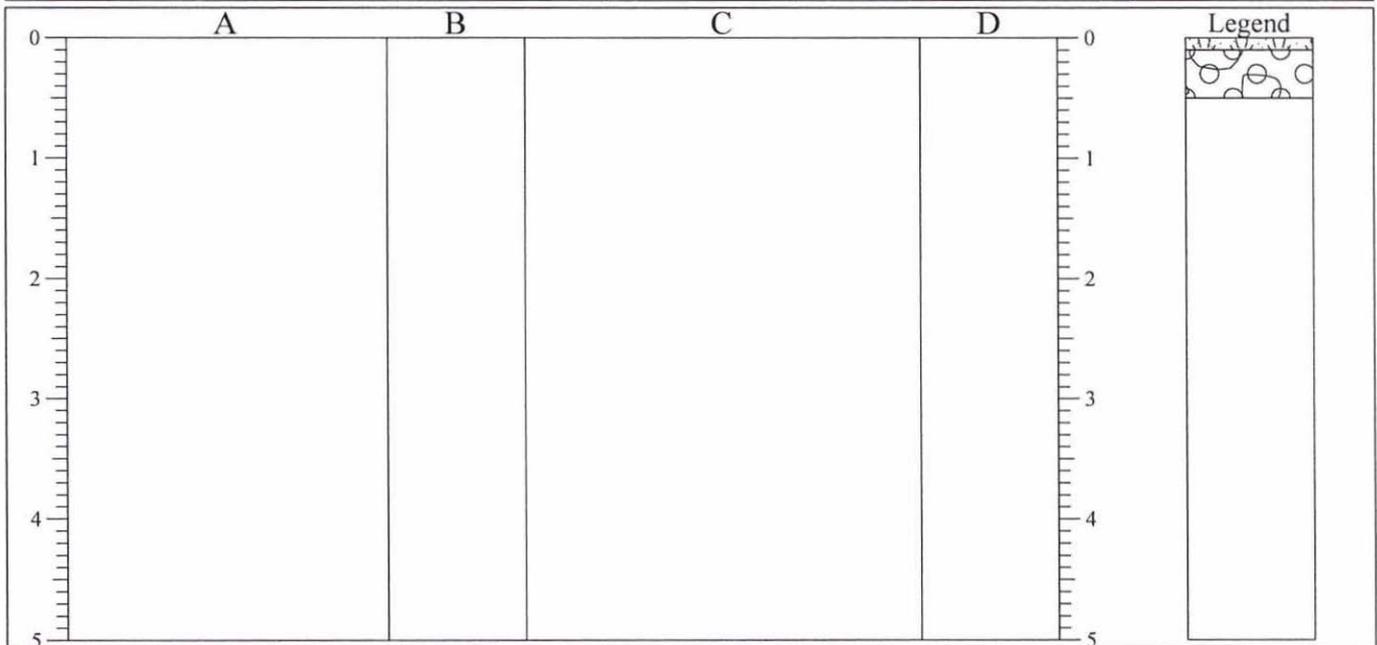
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TRIAL PIT LOG

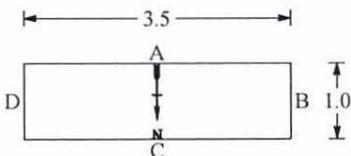
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 948	
Job No	Date 22-09-06 22-09-06	Ground Level (m) 15.73	Co-Ordinates () E 128,535.9 N 228,053.5		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		Brown sandy clayey TOPSOIL.					
0.10-0.50		Possible rock - recovered as tabular to subangular COBBLE and BOULDER fragments of limestone. Boulders up tp 400mm long.			0.40	J	
0.50		TP abandoned at 0.5m bgl. Obstruction - possible bedrock.					

IDL AGS3 UK TP GALWAYBYPASSN6TPSAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

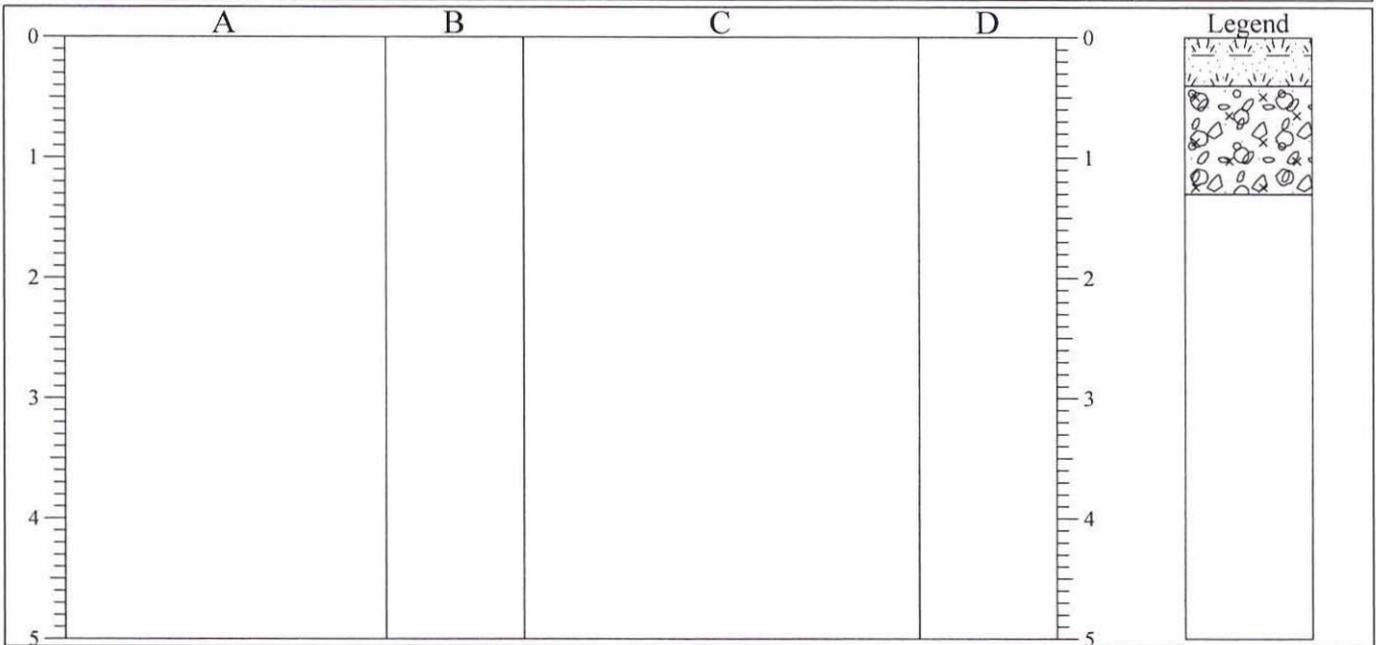
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Kobelco Mark IV	Bit Design	Logged By DK
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 951	
Job No	Date 26-09-06 26-09-06	Ground Level (m) 17.17	Co-Ordinates () E 128,646.9 N 228,010.4		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.40		Soft brown sandy clayey TOPSOIL.					
0.40-1.30		Grey silty very sandy GRAVEL with some limestone cobbles and boulders. Cobbles are rounded to subrounded. Gravel is subrounded to subangular, coarse grained. Boulders are tabular to subangular, 500-800mm long.			0.30	J	
					1.00	B	
1.30		Refusal - possible rock or boulders.			1.25	J	

Shoring/Support: Stability: 	GENERAL REMARKS Pit dry, stable during excavation.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Kobelco Mark IV	Bit Design	Logged By DK
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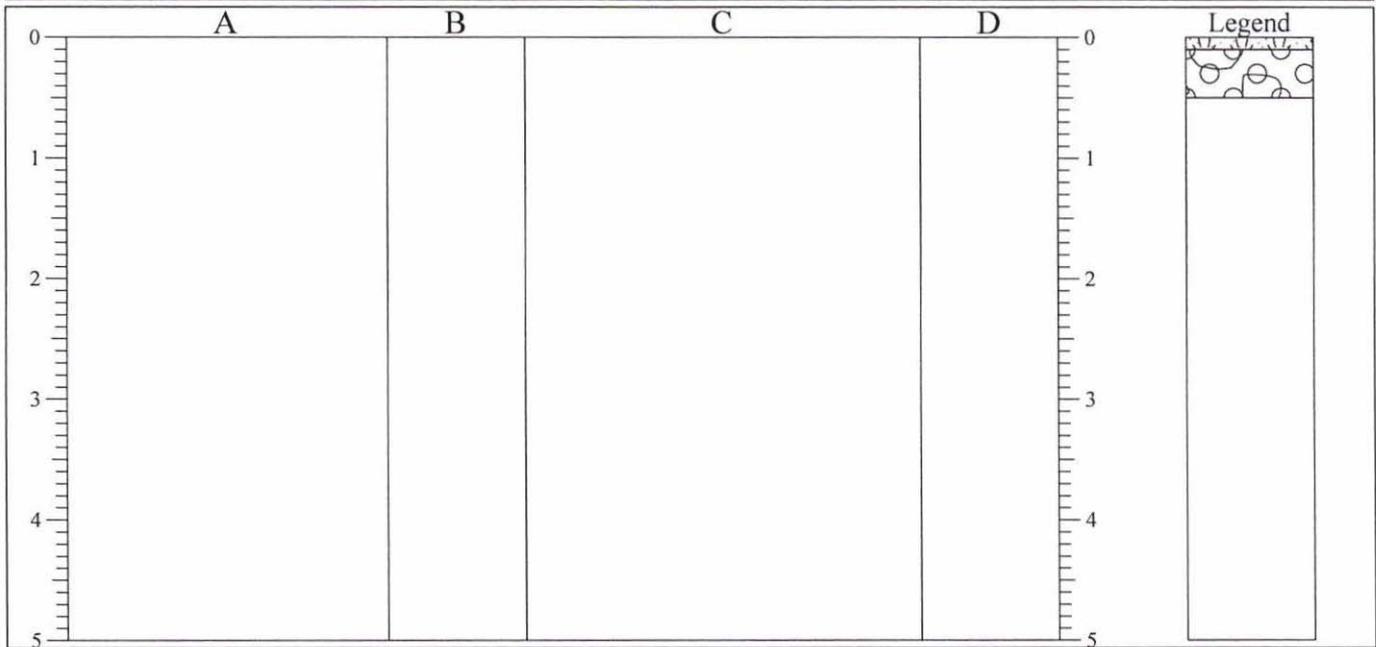
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TRIAL PIT LOG

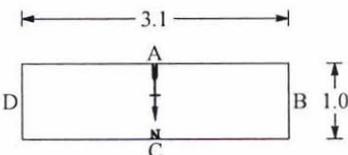
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 953	
Job No	Date 27-09-06 27-09-06	Ground Level (m) 14.98	Co-Ordinates () E 128,707.9 N 227,995.1		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		Soft brown sandy clayey TOPSOIL.			0.00-0.10	J	
0.10-0.50		Possible rock - recovered as COBBLES and BOULDERS of limestone.					
0.50		Cobbles and boulders are tabular to subangular. Boulders 600-1500mm long.					
		Refusal - possible rock or boulders.					

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

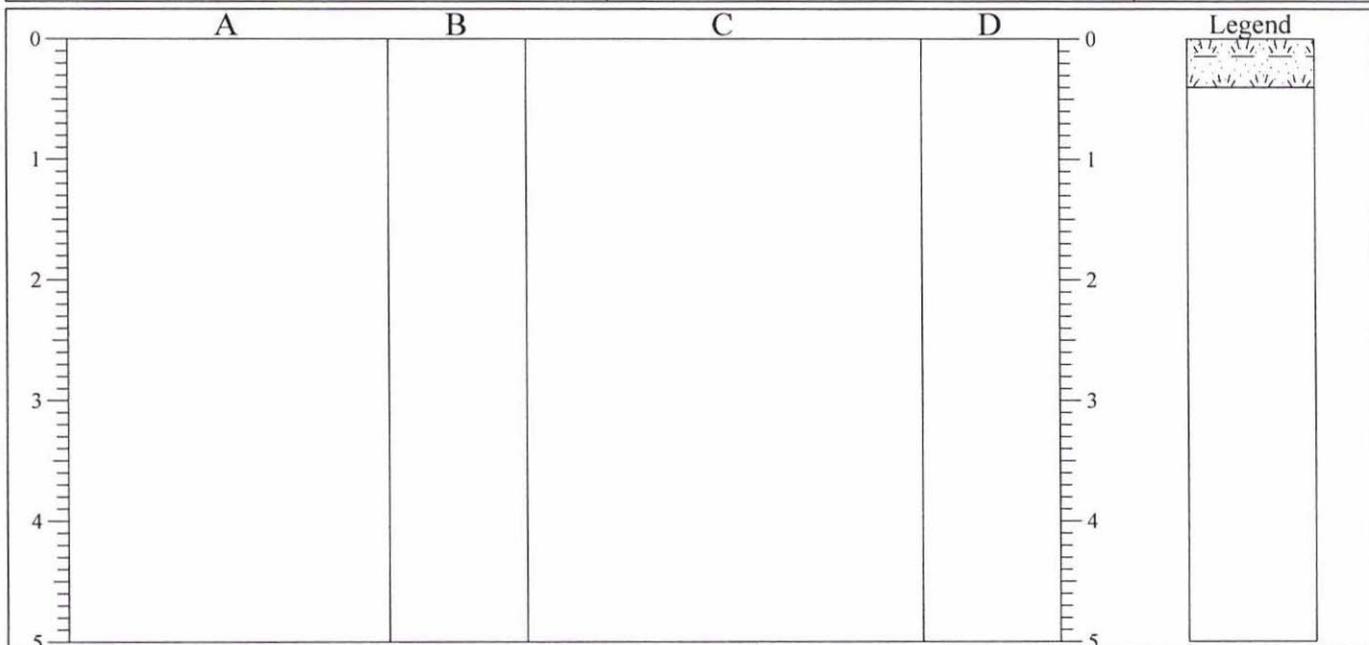
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Kobelco Mark IV	Bit Design Design	Logged By DK
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TRIAL PIT LOG

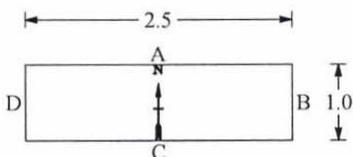
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 956	
Job No	Date 27-09-06 27-09-06	Ground Level (m) 10.57	Co-Ordinates () E 128,861.7 N 228,000.7		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.40		Soft brown sandy clayey TOPSOIL with roots.					
0.40		Refusal - possible rock.Observed as grey limestone (unable to excavate).					

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

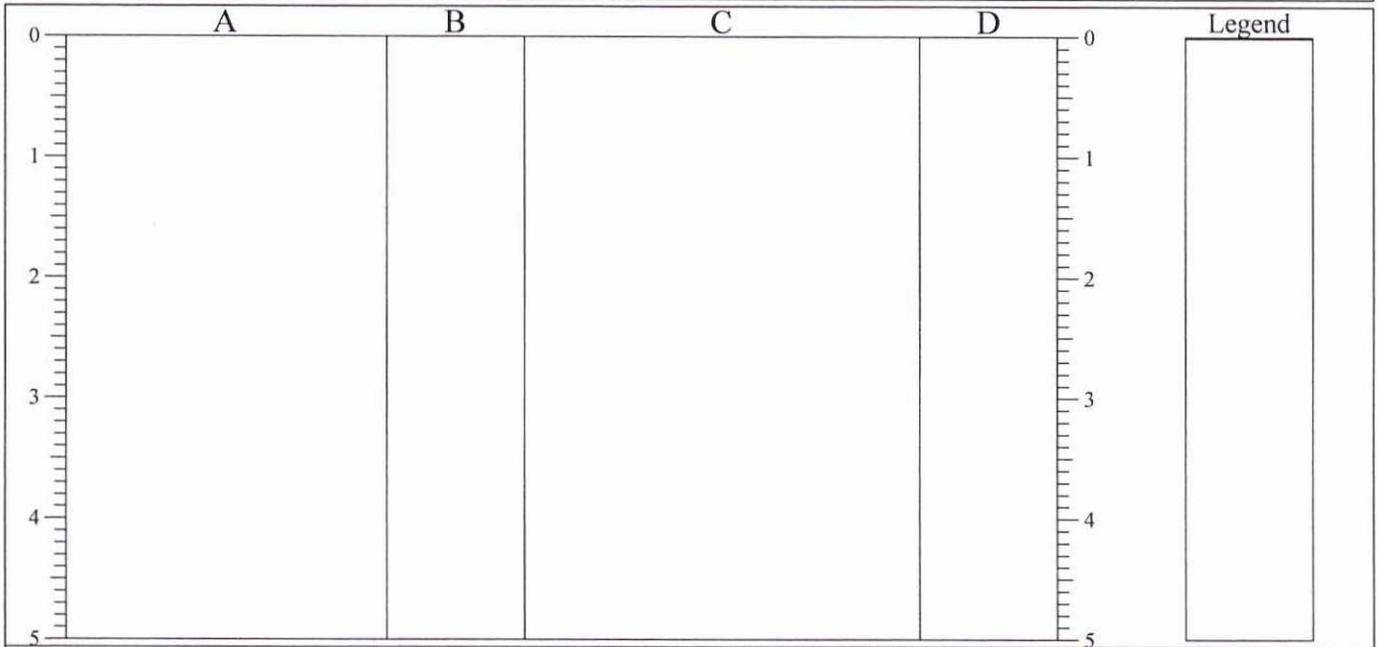
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Kobelco Mark IV	Bit Design	Logged By DK
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 957	
Job No	Date 14-11-06 14-11-06	Ground Level (m) 11.15	Co-Ordinates () E 128,933.3 N 228,009.2		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.01 0.01		TOPSOIL - soft damp brown slightly sandy slightly gravelly CLAY with rootlets. Refusal - intact rock.					

Shoring/Support:
Stability:

The diagram shows a square pit with a side length of 0.5 meters. The corners are labeled A, B, C, and D. A diagonal line is drawn from corner A to corner C.

GENERAL REMARKS

Pit dry, stable during excavation. Hand dug pit - no access for excavator.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used	Hitachi ex120	Bit Design	Logged By DK
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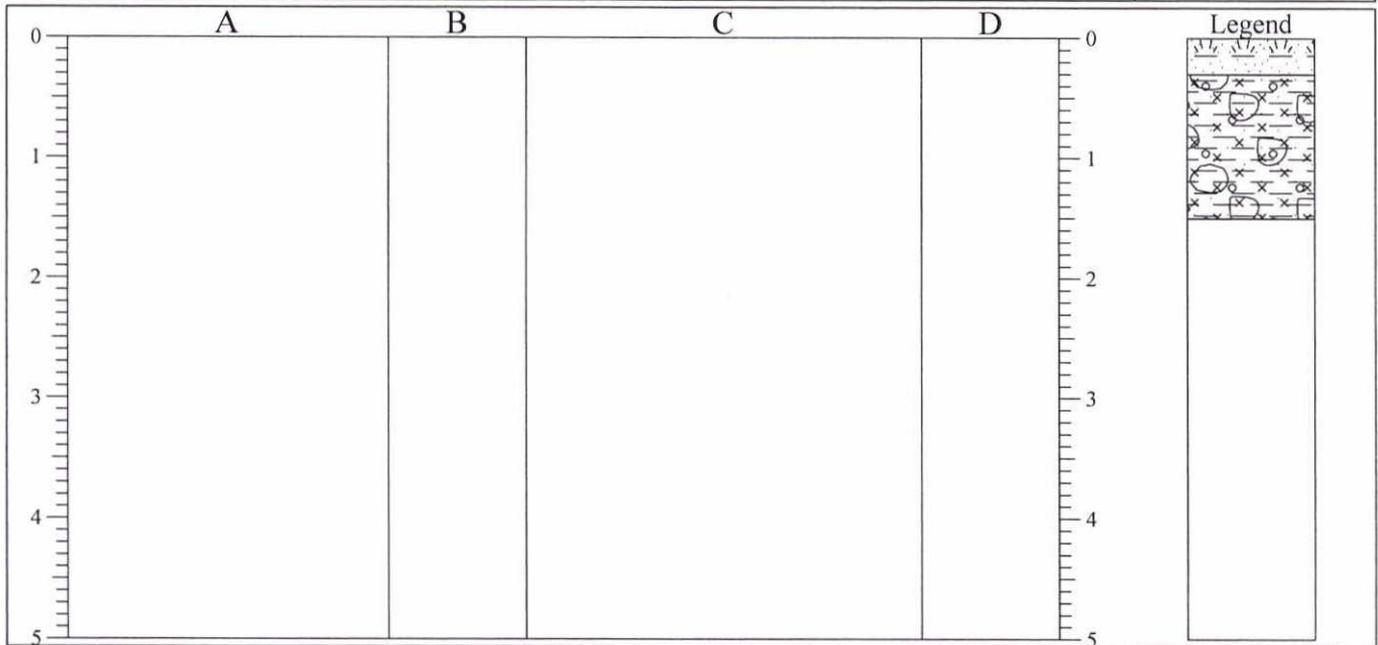
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 958	
Job No	Date 14-11-06 14-11-06	Ground Level (m) 6.53	Co-Ordinates () E 129,019.6 N 228,018.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 1.50m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		TOPSOIL - soft dark brown peaty clay.					
0.30-1.50		Firm to stiff grey brown slightly sandy gravelly SILT/CLAY with some subangular to subrounded cobbles and subangular to tabular boulders of limestone. Boulders up to 1000mm long. Gravel is coarse.			0.50	B	
1.50		Refusal - possible rock or boulders.		↓	1.50	J	



GENERAL REMARKS

Pit stable during excavation. Slight inflow at 1.50m depth.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By DK
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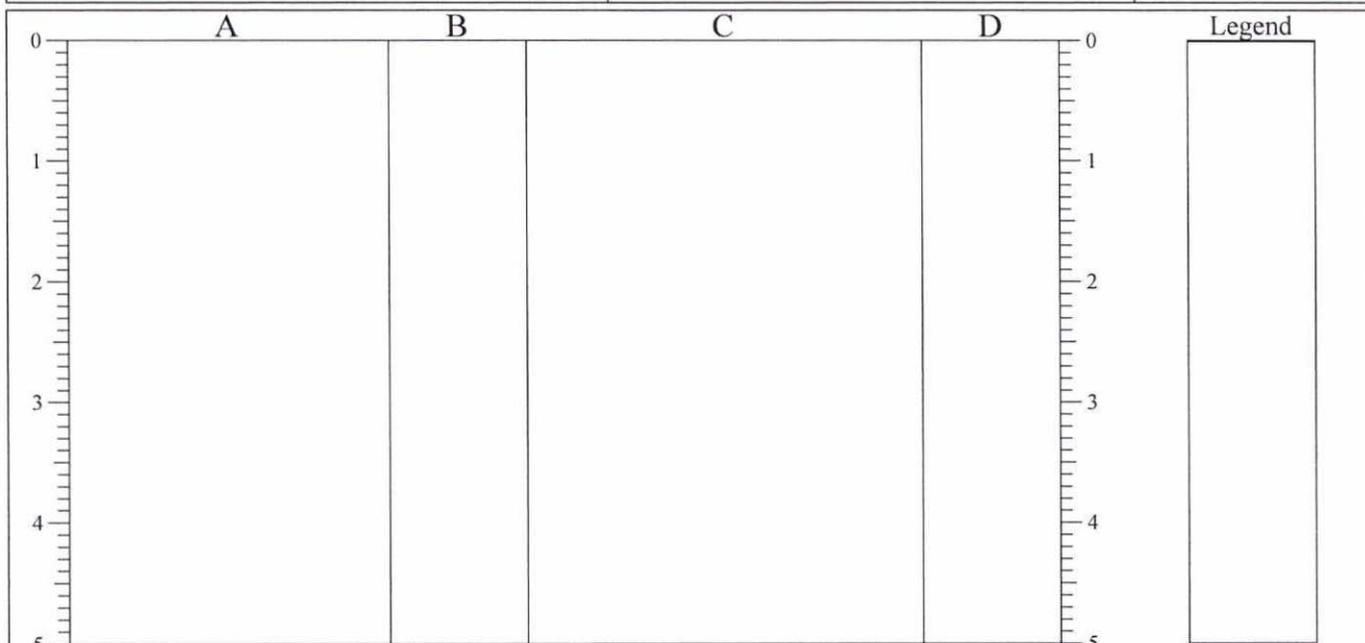
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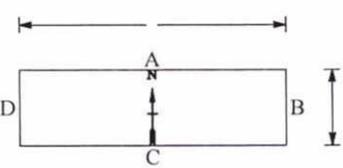
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 960	
Job No	Date 19-10-06 19-10-06	Ground Level (m) 22.50	Co-Ordinates () E 129,139.9 N 228,062.1		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.01 0.01		Rock Outcrop Refusal.					

Shoring/Support:
Stability:



GENERAL REMARKS

Limestone bedrock at surface.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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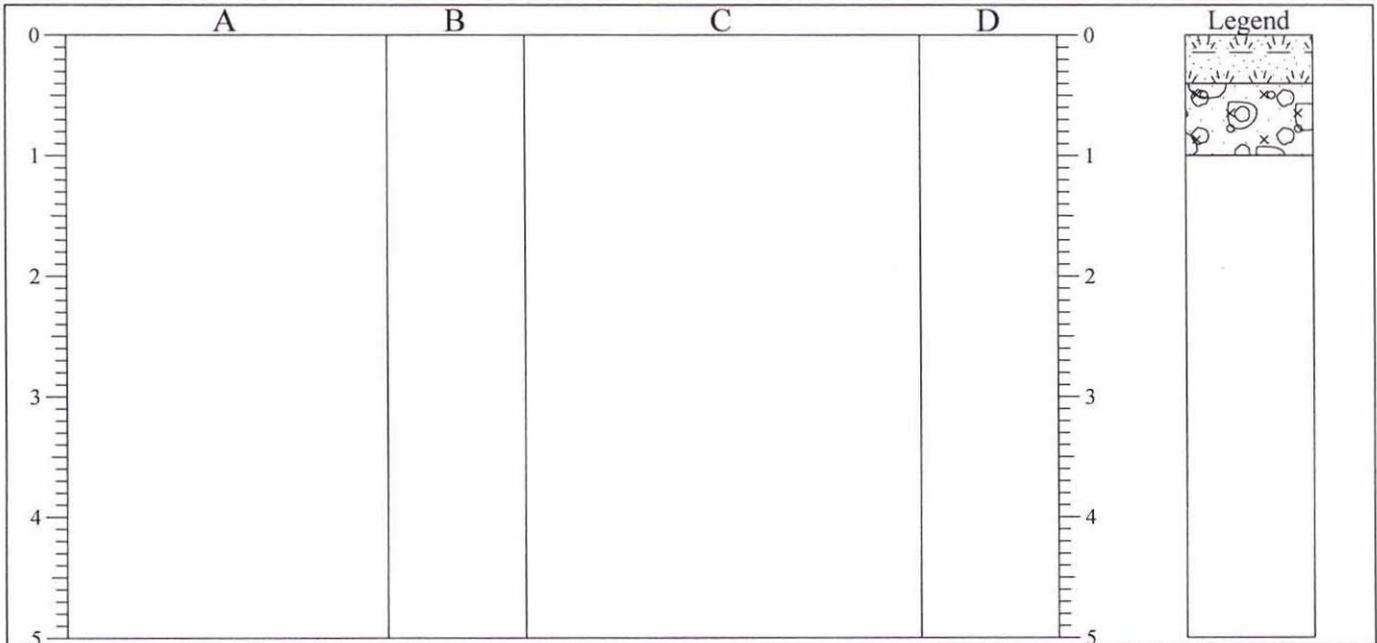
IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 19/02/07



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TRIAL PIT LOG

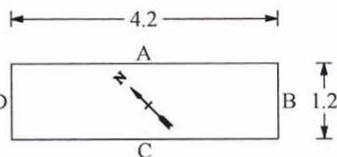
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 962	
Job No	Date 25-10-06 25-10-06	Ground Level (m) 15.20	Co-Ordinates () E 129,204.5 N 228,082.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.40		Topsoil with roots -recovered as firm damp brown slightly sandy gravelly CLAY with some rounded to angular cobbles and boulders.Boulders up to 400mm long.			0.20	J	
0.40-1.00		Light brown mottled orange grey very gravelly very silty medium to coarse SAND with some subangular to subrounded cobbles and boulders.Boulders up to 400mm long.			0.60	B	
1.00		Refusal - intact rock.Grey black limestone.			0.60	J	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

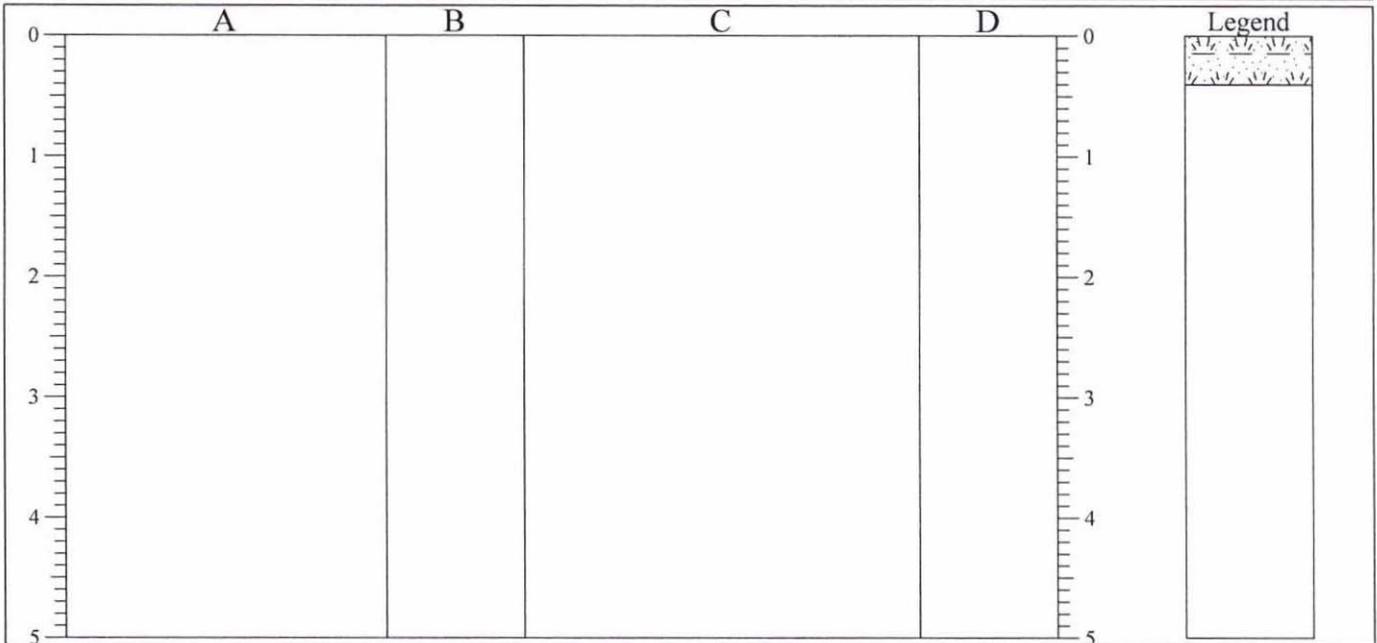
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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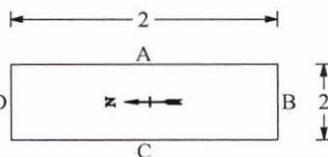
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 964	
Job No	Date 26-10-06 26-10-06	Ground Level (m) 10.16	Co-Ordinates () E 129,305.3 N 228,092.2		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.40		Soft damp brown slightly sandy gravelly SILT/CLAY with some subangular to angular cobbles and boulders (TOPSOIL). Boulders up to 1100mm long.			0.25	J	
0.40		Refusal - possible intact rock (fractured grey limestone).					

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

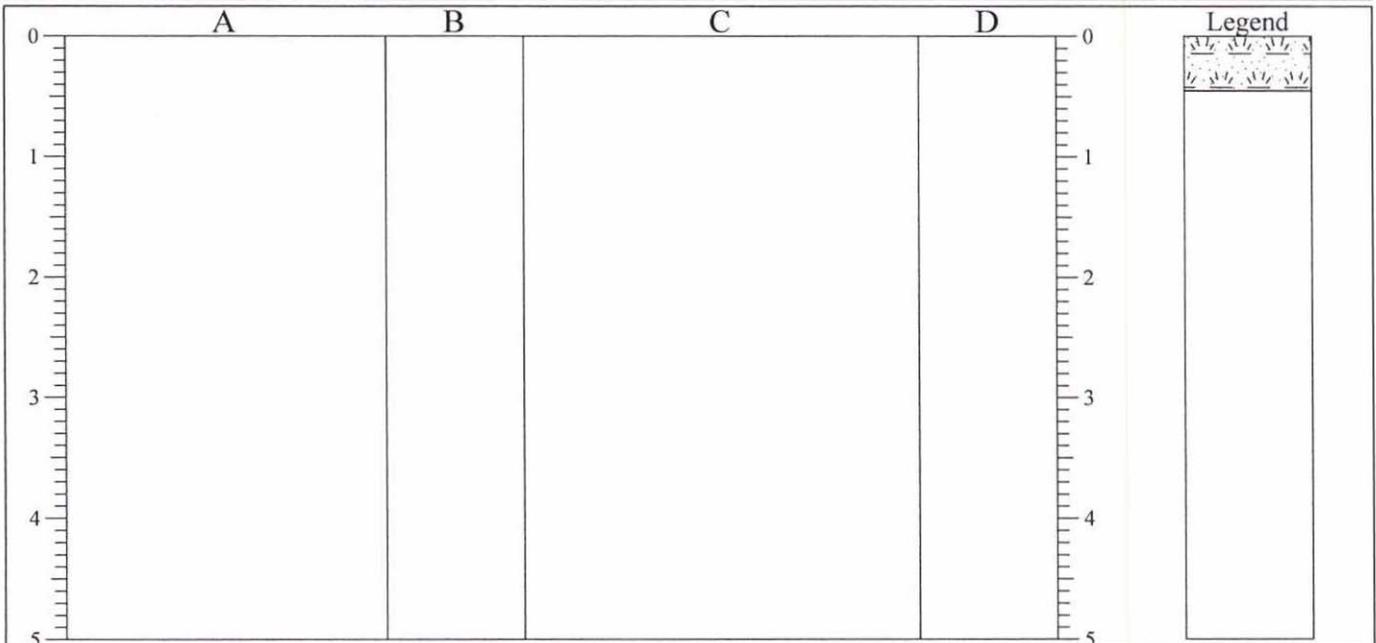
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 967	
Job No	Date 02-11-06 02-11-06	Ground Level (m) 16.32	Co-Ordinates () E 129,250.5 N 228,158.8		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.45		Soft damp brown slightly sandy gravelly SILT/CLAY with many subangular to rounded cobbles and some boulders of limestone (TOPSOIL). Boulders up to 400mm long.			0.10	J	
0.45		Refusal - possible intact rock or large boulders (grey subangular to angular boulder size limestone fragments up to 800mm long).					

Shoring/Support: Stability:		GENERAL REMARKS Pit dry, stable during excavation.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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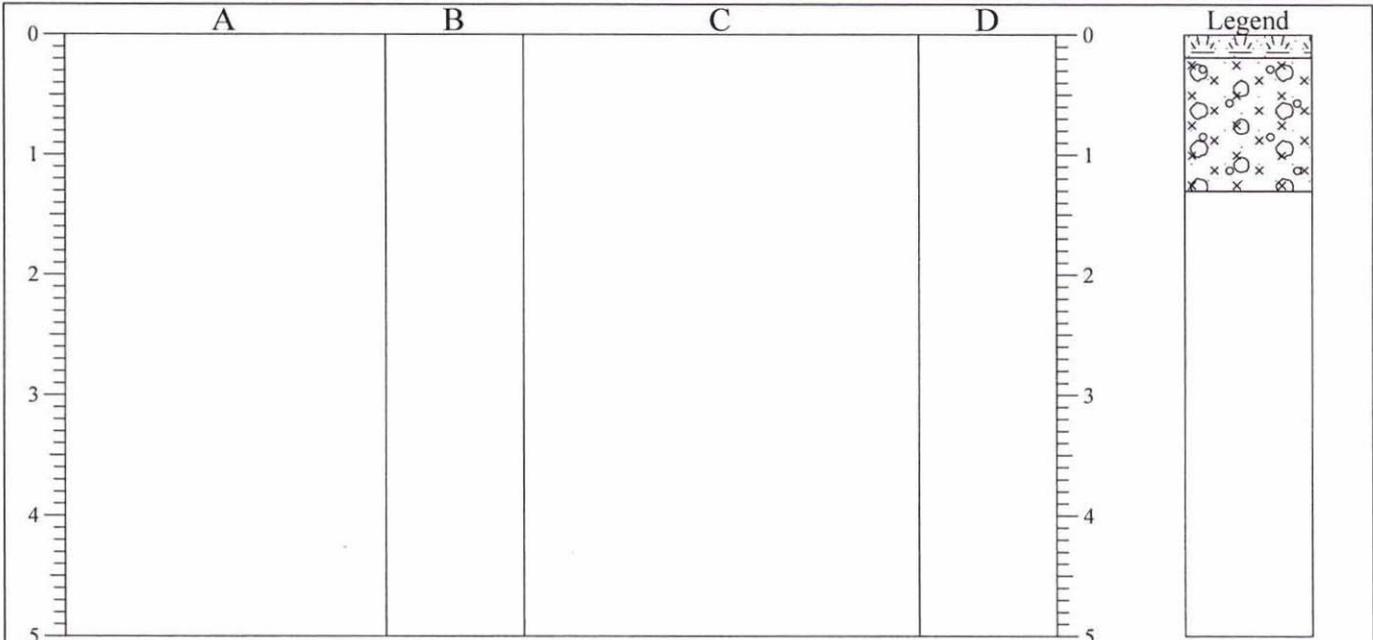
IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07



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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 969	
Job No	Date 24-10-06 24-10-06	Ground Level (m) 8.72	Co-Ordinates () E 129,337.4 N 228,252.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.45m 2nd: 3rd:	Rose to (@ 20 min.): 0.10m	Sealed at: Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.19		Soft damp brown slightly sandy gravelly SILT/CLAY with some subangular to subrounded cobbles (TOPSOIL).		↓	0.10	J	
0.19-1.30		Stiff damp grey brown mottled orange slightly sandy slightly gravelly SILT with some subangular to subrounded cobbles and boulders. Boulders up to 1000mm long.		↓	0.45	W	
		0.50 grey mottled brown, with many subangular to angular cobbles and boulders. Boulders up to 1000mm long.			0.70	B	
1.30		Refusal - possible intact rock (fractured dark grey limestone).			0.70	J	

<p>Shoring/Support: Stability:</p> <p>3.5 A D B C 1.2</p>	<p>GENERAL REMARKS</p> <p>Pit unstable during excavation-spalling of sides from 1.20m. Water strike at 0.45m.</p>
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All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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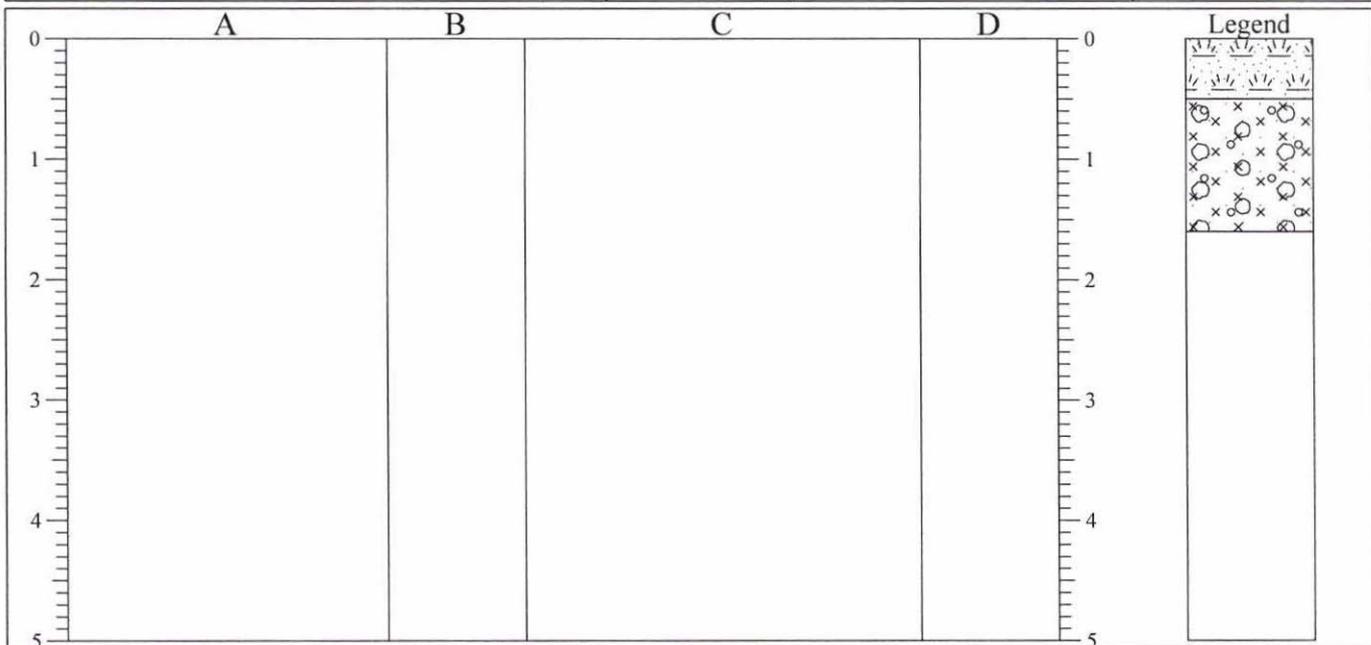
IDL_AGS3_UK_TP_GALWAYBYPASSN6TPS1AB1.GPJ_AGS 3_1.GDT_30/01/07



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TRIAL PIT LOG

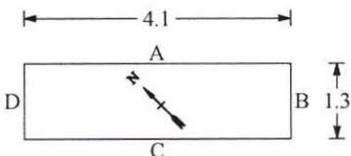
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 971	
Job No	Date 20-10-06 20-10-06	Ground Level (m) 16.41	Co-Ordinates () E 129,416.2 N 228,288.1		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.50		Soft damp brown grey mottled orange slightly sandy gravelly SILT/CLAY with some subangular to subrounded cobbles and boulders (TOPSOIL). Boulders up to 300mm long.			0.30	J	
0.50-1.60		Soft damp grey brown mottled slightly sandy gravelly SILT with many subangular to subrounded cobbles and subangular to angular boulders. Boulders up to 450mm long.			1.00 1.00	B J	
1.60		Refusal - possible intact rock (fractured dark grey limestone).					

IDL AGS3 UK TP GALWAYBYPASSN6TPSAB1.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, unstable during excavation-spalling of sides from 0.30m.

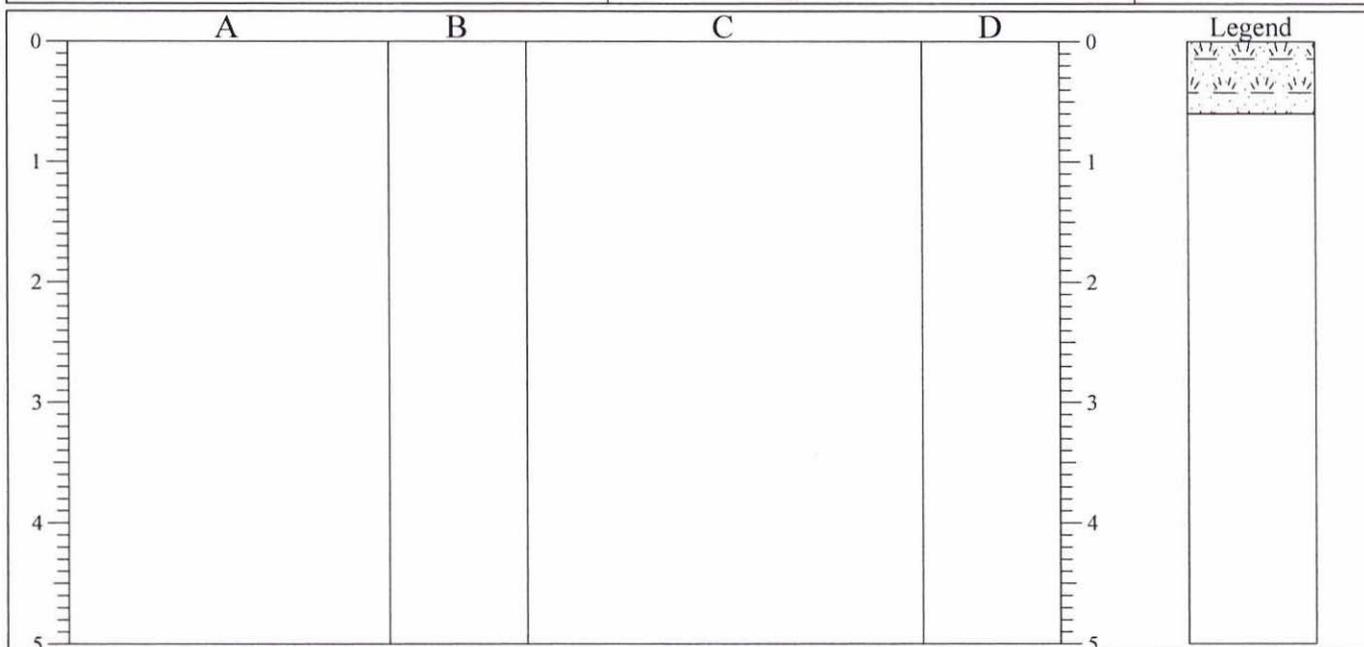
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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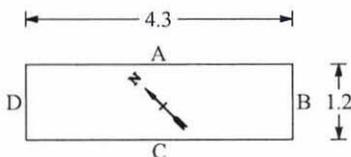
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 978	
Job No	Date 17-10-06 17-10-06	Ground Level (m) 14.44	Co-Ordinates () E 129,684.5 N 228,408.8		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.60		Soft damp brown slightly sandy gravelly SILT/CLAY with roots and many subangular to angular cobbles and boulders (TOPSOIL). Boulders up to 600mm long.			0.40	B	
0.60		Refusal - possible intact rock (fractured grey limestone).			0.40	J	

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

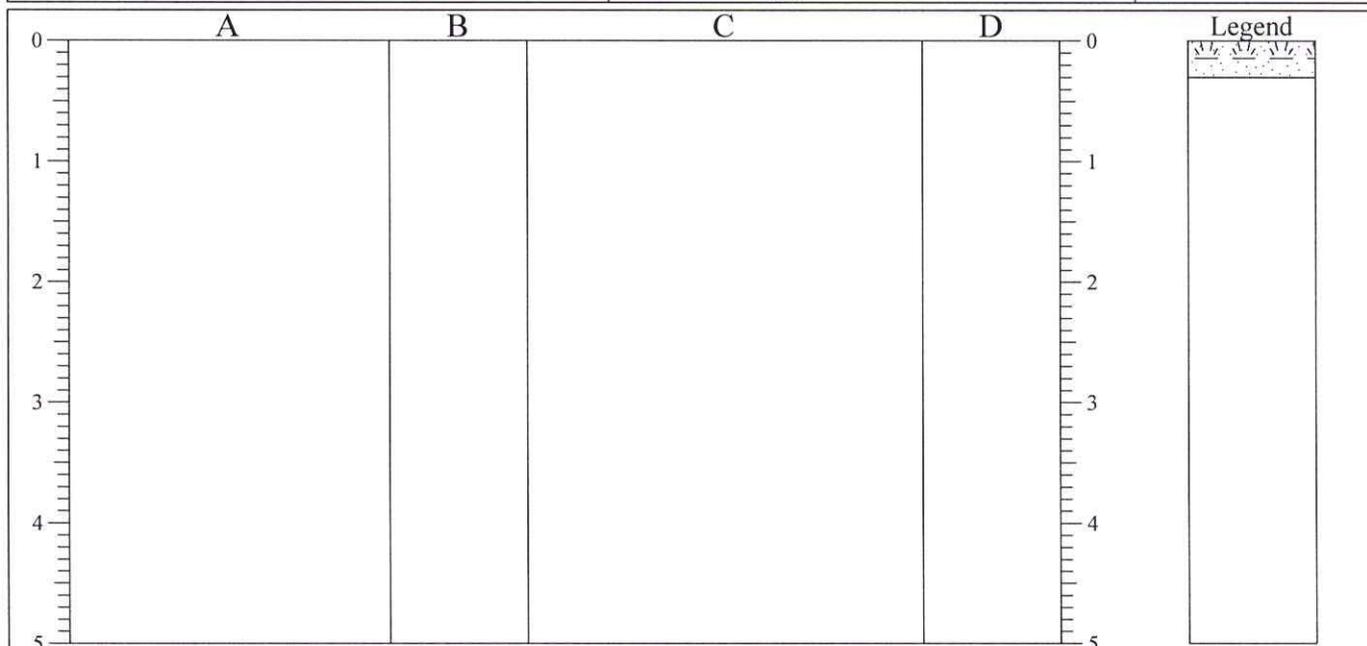
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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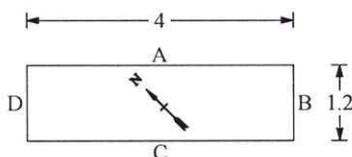
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 980	
Job No	Date 17-10-06 17-10-06	Ground Level (m) 33.29	Co-Ordinates () E 129,838.1 N 228,649.1		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		Soft damp brown slightly sandy very gravelly SILT/CLAY with roots and many subangular to angular and flat cobbles and boulders. Boulders up to 500mm long (TOPSOIL).			0.15	J	
0.30		Refusal - intact rock (grey limestone).					

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB1.GPJ AGS 3_1.GDT 30/01/07

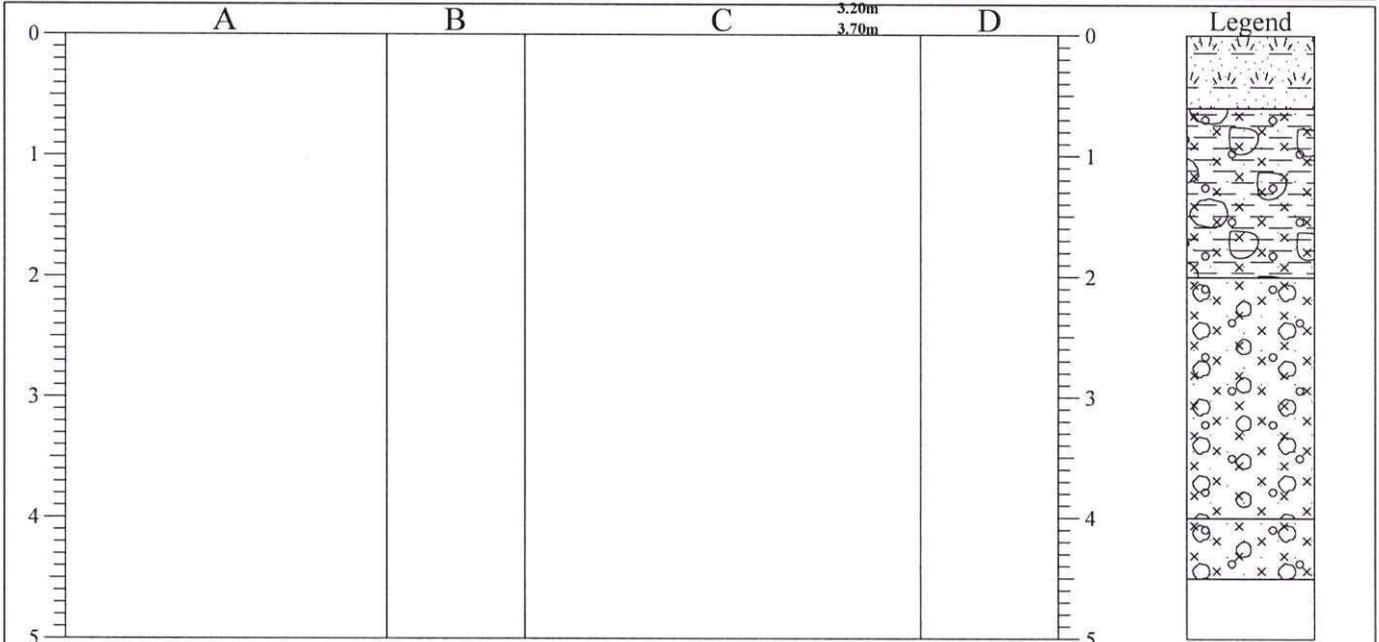
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1111	
Job No	Date 22-09-06 22-09-06	Ground Level (m) 9.55	Co-Ordinates () E 131,195.0 N 228,845.9		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.20m 2nd: 0.50m 3rd: 2.50m	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.60		Firm dark brown slightly sandy gravelly SILT with roots and some rounded to subrounded cobbles (TOPSOIL).		↓	0.15	J	
0.60-2.00		Soft grey and mottled yellow brown slightly sandy gravelly SILT/CLAY with many subangular to rounded cobbles.		↓	1.00 1.00	B J	
2.00-4.00		Soft grey slightly sandy gravelly SILT with many subangular to rounded cobbles and some boulders. Boulders up to 300mm long.		↓	2.00 2.00	B J	
4.00-4.50		Soft brownish grey sandy gravelly SILT with many subangular to rounded cobbles and some boulders. Boulders up to 400mm long.		↓	3.00 3.00	B J	
4.50		Pit terminated.		↓	4.00 4.00	B J	

Shoring/Support:
Stability:

GENERAL REMARKS

Pit unstable during excavation. Spalling of sides from 1.20m. Water ingress from 0.2 to 3.7m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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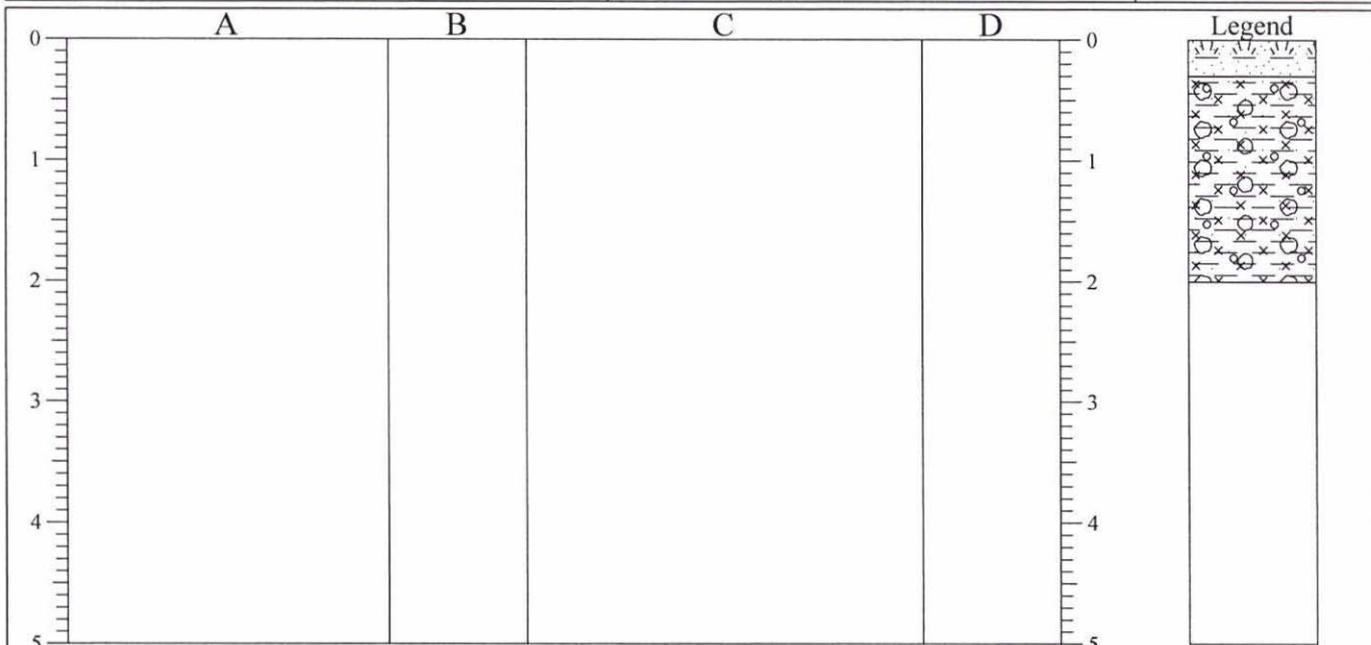
IDL:AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ_AGS_3_1.GDT_30/01/07



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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1132	
Job No	Date 02-11-06 02-11-06	Ground Level (m) 11.88	Co-Ordinates () E 131,169.7 N 228,723.6		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

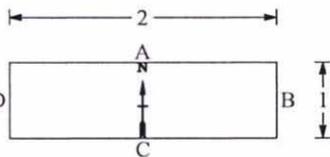


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		TOPSOIL - brown sandy clay.					
0.30-2.00		Firm grey brown slightly sandy slightly gravelly SILT/CLAY with many subrounded to rounded cobbles and some boulders of limestone. Boulders up to 400m long. Gravel is coarse, subrounded to subangular.			1.00	B	
2.00		Refusal - possible rock or boulders.			2.00	B	

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, unstable during excavation-spalling of sides.

IDL_AGS3_UK_TP_GALWAYBYPASSN6TPSLAB2.GPJ_AGS_3_1.GDT_30/01/07

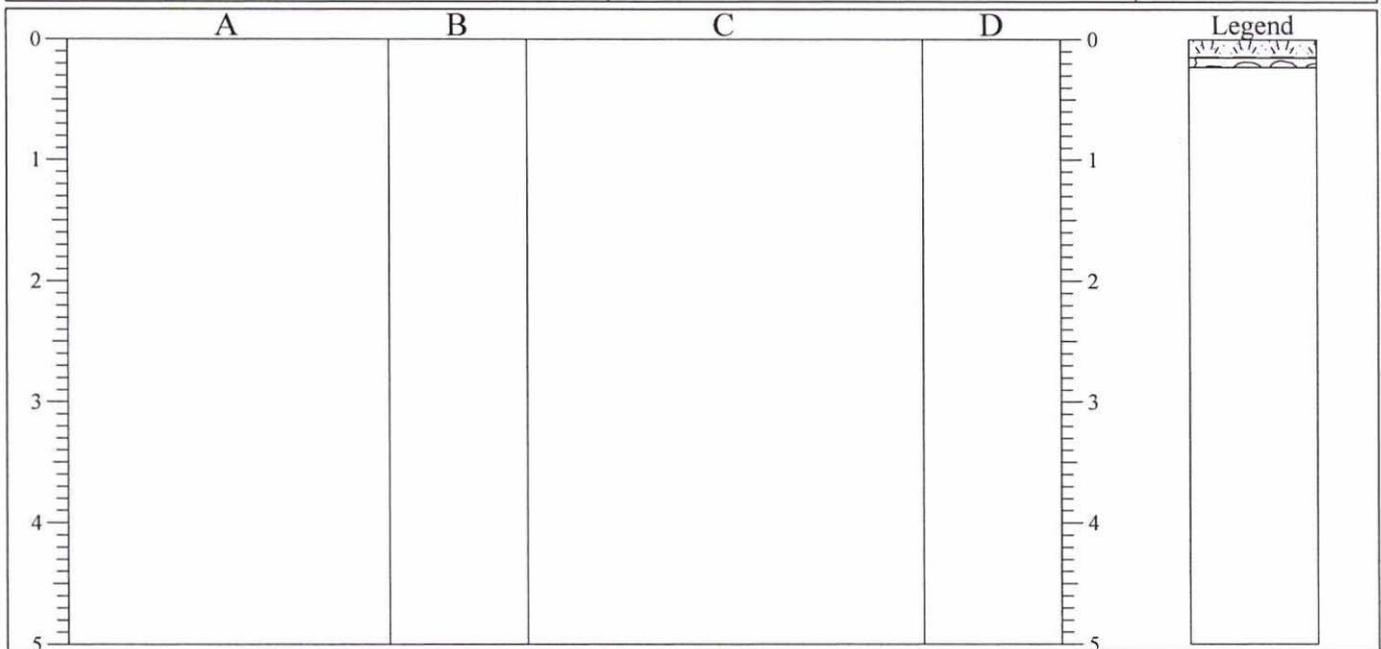
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By DK
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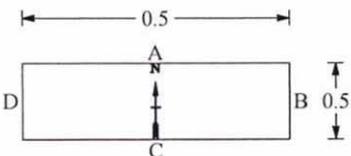
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1400	
Job No	Date 12-10-06 12-10-06	Ground Level (m) 9.31	Co-Ordinates () E 121,140.7 N 222,532.7		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.15 0.15-0.23 0.23		Soft wet dark brown slightly sandy silty/clayey TOPSOIL with many roots and rootlets. Large subangular and subrounded light brown speckled grey and white granite BOULDERS. TP abandoned at 0.23m bgl obstruction - probable rock.			0.00-0.23	J	

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation. Hand dug pit - no access for excavator.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2GPJ_AGS_3_1.GDT_30/01/07

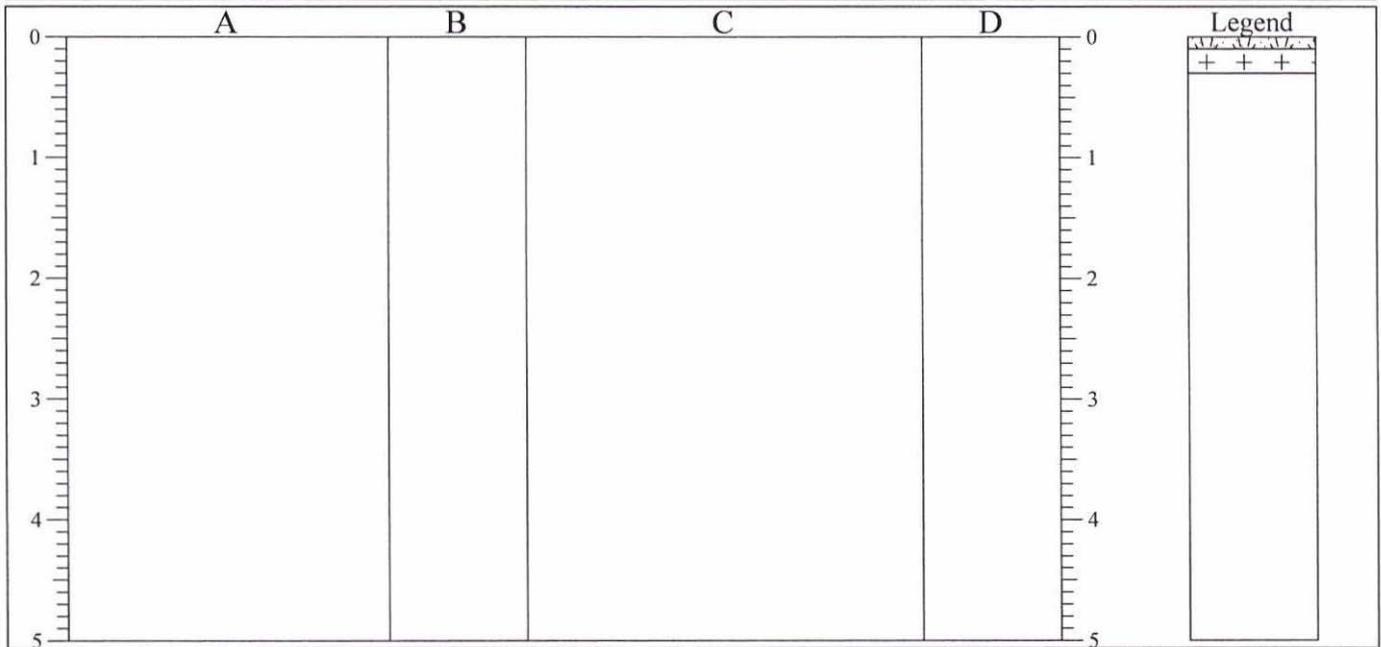
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 60	Bit Design	Logged By TS
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TRIAL PIT LOG

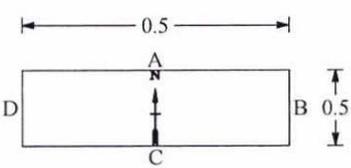
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1401	
Job No	Date 11-10-06 11-10-06	Ground Level (m) 12.31	Co-Ordinates () E 121,320.8 N 222,578.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		Soft damp brown slightly sandy gravelly silty/clayey TOPSOIL with some subangular and angular cobbles with many roots and rootlets. Broken rock at 0.1m bgl. Recovered as grey speckled white and pink GRANITE. TP abandoned at 0.3m bgl obstruction - probable rock.			0.00-0.15	J	
0.10-0.30							
0.30							

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ_AGS 3_1.GDT_30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation. Hand dug pit - no access for excavator.

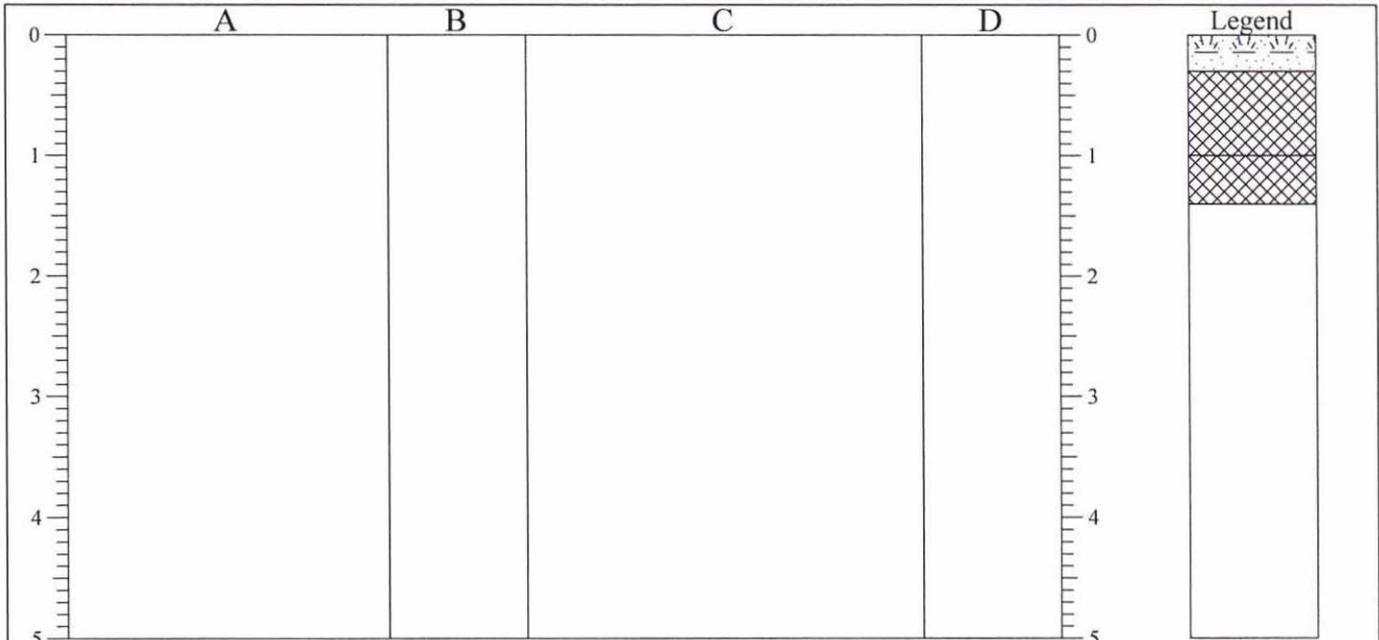
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 60	Bit Design	Logged By TS
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1402	
Job No	Date 16-10-06 16-10-06	Ground Level (m) 29.15	Co-Ordinates () E 121,295.5 N 223,019.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		Soft damp TOPSOIL with many roots and rootlets.			0.20-0.75	J	
0.30-1.00		MADE GROUND: Dark brown gravelly sandy SILT with many angular to rounded cobbles and some angular to subrounded with boulders. Boulders are up to 500mm in size.			0.75-1.40	B	
1.00-1.40		MADE GROUND: Damp light brown mottled orange and dark brown gravelly very silty SAND with many angular to subrounded cobbles and boulders. Boulders are up to 1500mm in size.			0.75-1.40	D	
1.40		TP abandoned at 1.4m bgl obstruction.			0.75-1.40	J	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ_AGS 3.1.GDT 30/01/07

Shoring/Support:
Stability:

The diagram shows a rectangular pit with a width of 2.3 meters and a depth of 1.0 meter. The corners are labeled A (top-left), B (top-right), C (bottom-right), and D (bottom-left).

GENERAL REMARKS

Pit dry, stable during excavation.

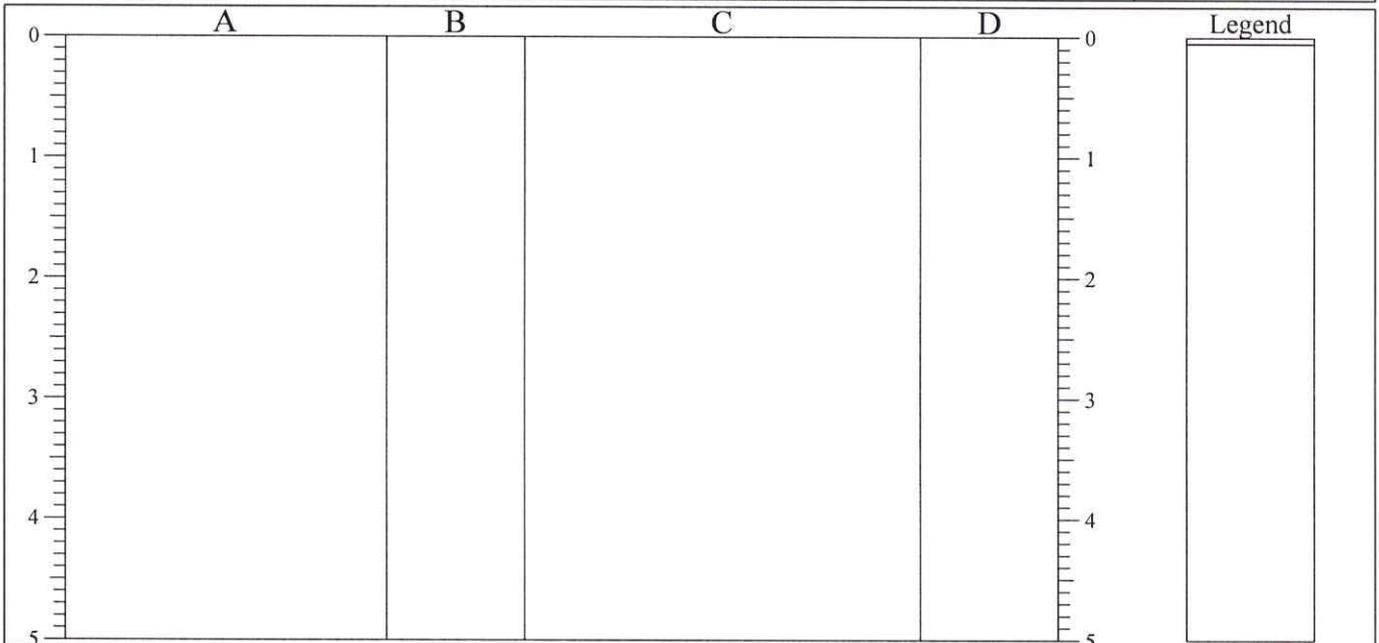
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 60	Bit Design	Logged By TS
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1403	
Job No	Date 12-10-06 12-10-06	Ground Level (m) 37.46	Co-Ordinates () E 121,237.8 N 223,265.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.05 0.05		Rock at surface as brown speckled grey and white GRANITE. TP abandoned at 0.05m bgl obstruction - probable rock.					

Shoring/Support:
Stability:

The diagram shows a rectangular pit with a width of 0.5 meters and a depth of 0.5 meters. The corners are labeled A (top), B (right), C (bottom), and D (left).

GENERAL REMARKS

Pit dry, stable during excavation. Hand dug pit - no access for excavator.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 60	Bit Design	Logged By TS
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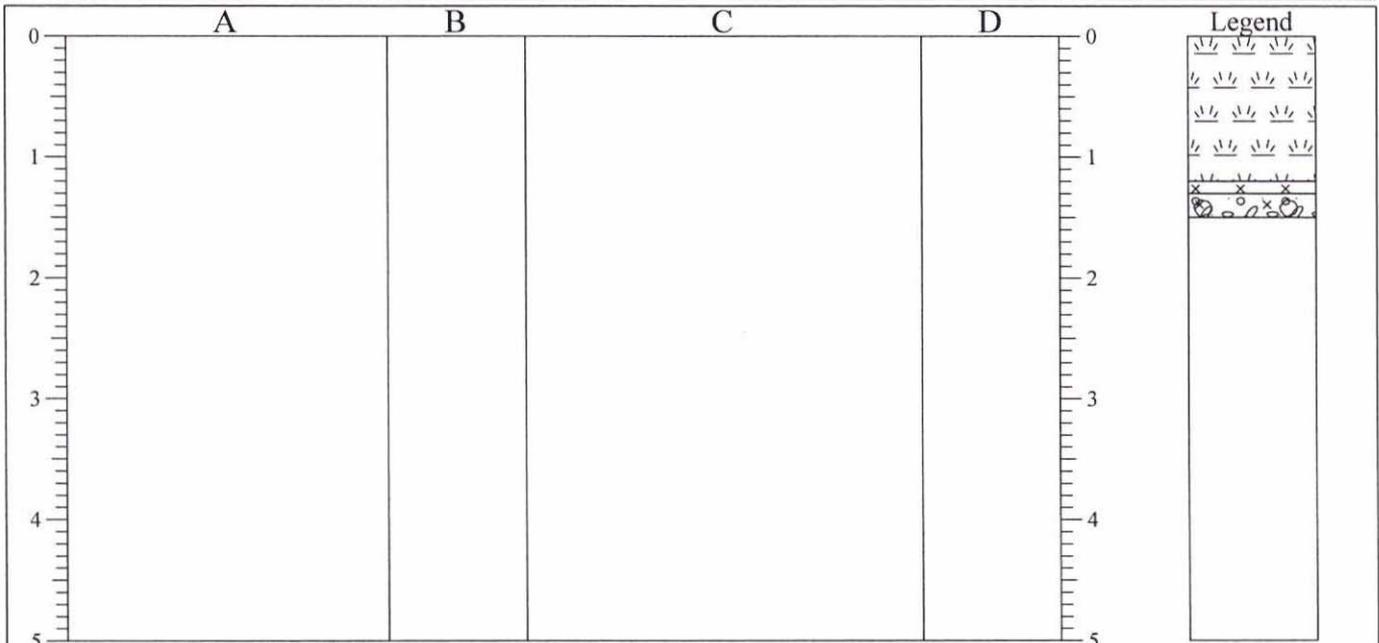
IDL.AGS3.UK.TP.GALWAYBYPASSN6TPSLAB2.GPJ.AGS.3.1.GDT.30/01/07

IDL

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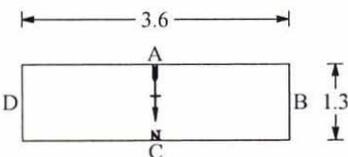
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1430	
Job No	Date 10-10-06 10-10-06	Ground Level (m) 6.25	Co-Ordinates () E 127,560.1 N 228,410.1		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.00m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
Sheet 1 of 1					

**STRATA****SAMPLES & TESTS**

Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-1.20		Black fibrous PEAT. H3/H4, W3.			0.50-1.00	J	
1.20-1.30		Very soft creamy grey calcareous SILT.			1.30-1.50	B	
1.30-1.50		Blue grey silty sandy GRAVEL with some angular to subangular cobbles and boulders. Gravel is angular to subangular and fine to medium grained.					
1.50		TP abandoned at 1.5m bgl. Obstruction - probable rock or boulders.					

Shoring/Support:
Stability:

**GENERAL REMARKS**

Pit stable during excavation. Inflow to TP from surface.

IDL_AGS3_UK_TP_GALWAYBYPASSN6TPSLAB2.GPJ_AGS_3_1.GDT_30/01/07

All dimensions in metres
Scale 1:62.5

Client Galway County Council

Method/ Plant Used Hitachi ex 135

Bit Design

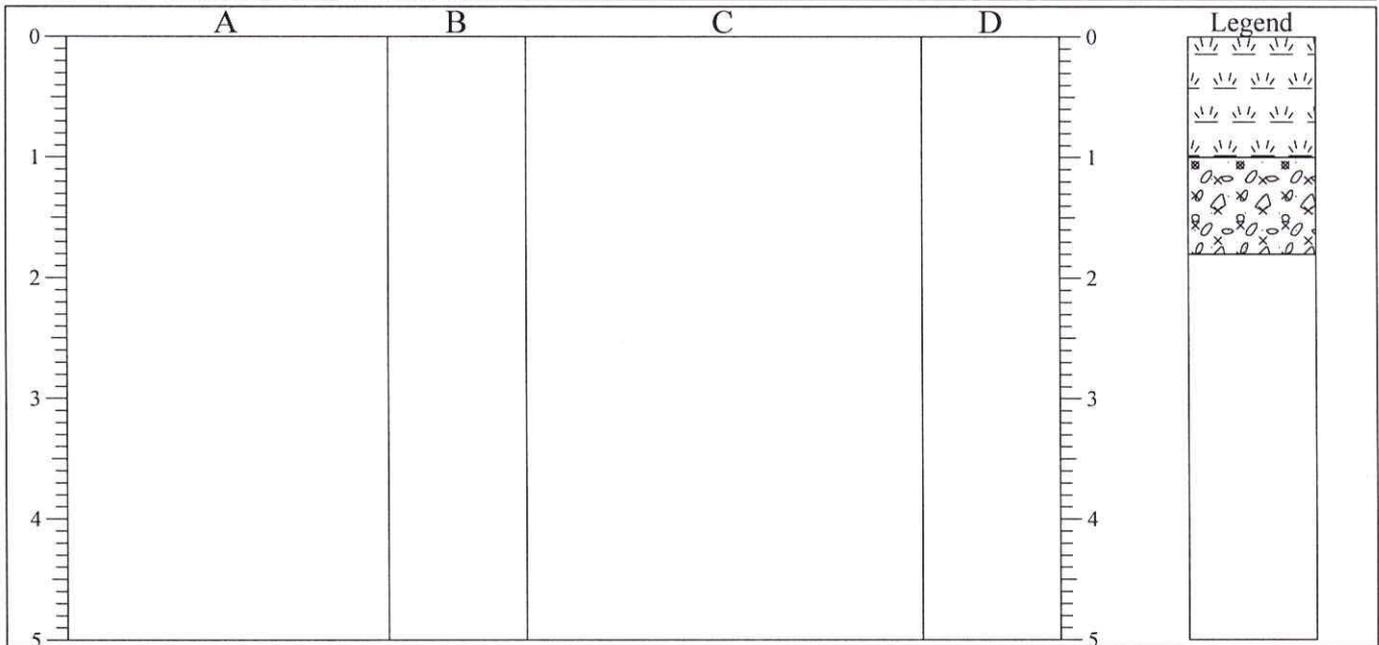
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TRIAL PIT LOG

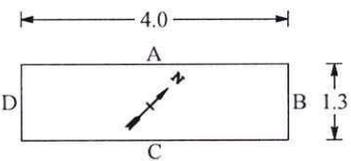
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1431	
Job No	Date 10-10-06 10-10-06	Ground Level (m) 6.42	Co-Ordinates () E 127,703.7 N 228,341.4		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.30m 2nd: 3rd:	Rose to (@ 20 min.): 0.40m	Sealed at: Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-1.00		Grass over black PEAT. H3/H4, W2.			0.30 0.50-1.00	W J	
1.00-1.80		Blue grey silty very sandy GRAVEL. Gravel is rounded to subangular and fine to medium grained.			1.00-1.50	B	
1.80		TP abandoned at 1.8m bgl. Obstruction - probable rock or boulders.					

IDL-AGS3 UK.TP_GALWAYBYPASSN6TPSLAB2.GPJ_AGS 3_1.GDT_30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Moderate ingress of water from 0.3m bgl. Pit stable during excavation.

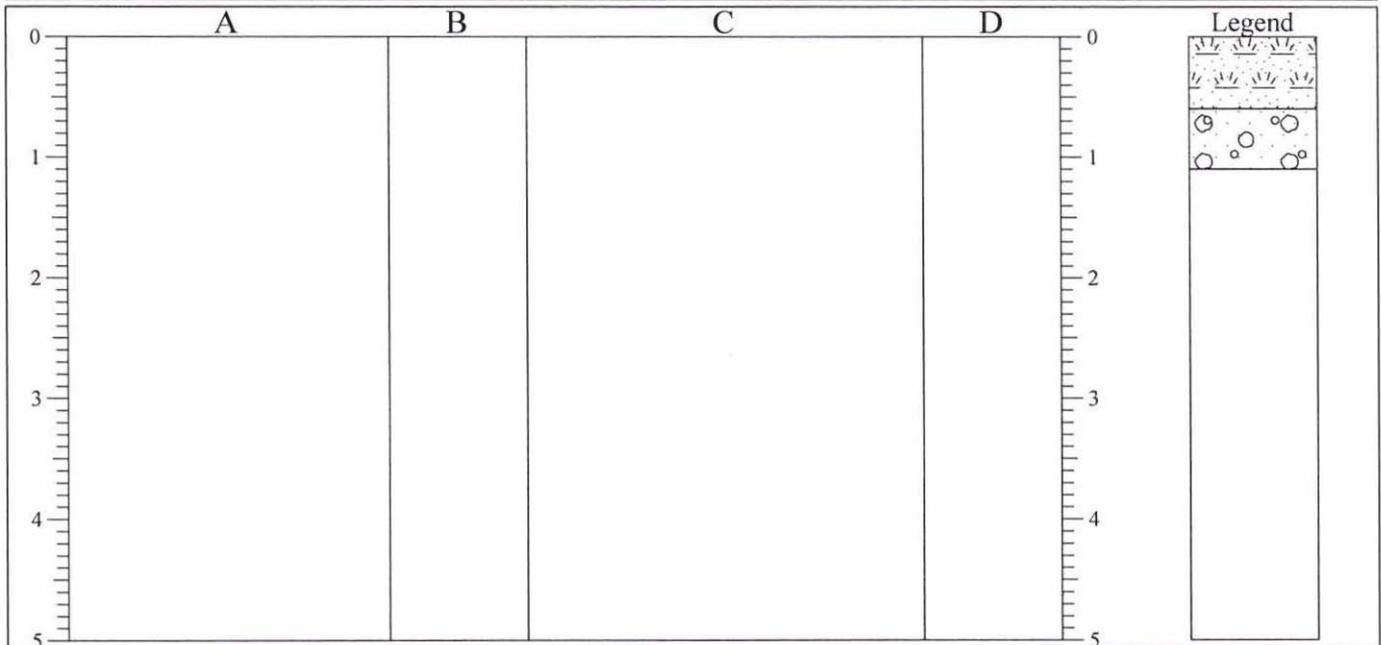
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 135	Bit Design	Logged By MM
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TRIAL PIT LOG

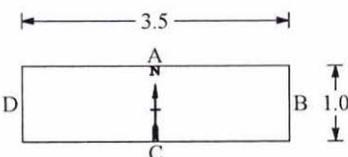
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1432	
Job No	Date 26-09-06 26-09-06	Ground Level (m) 16.97	Co-Ordinates () E 128,656.6 N 227,986.4		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
Sheet 1 of 1					



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.60		Brown sandy clayey TOPSOIL.					
0.60-1.10		Grey SAND & GRAVEL limestone cobbles and boulders. Cobbles and boulders are subrounded to subangular. Boulders are 600-700mm in size. Gravel is subrounded to subangular and is coarse grained.			0.50-0.60	D	
1.10		TP abandoned at 1.1m bgl. Obstruction - probable limestone rock or boulders.			1.00-1.10	B	
					1.00-1.10	D	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ AGS 3_1.GDT 30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

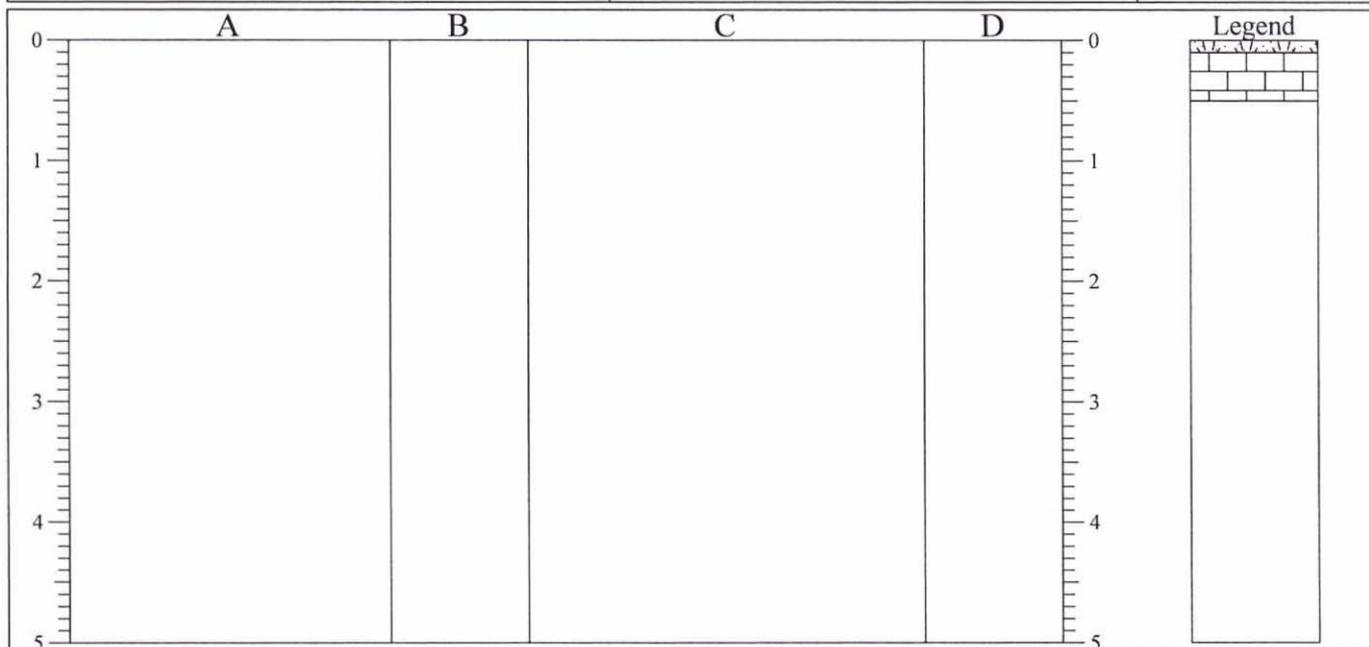
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used KF ex 135	Bit Design	Logged By DK
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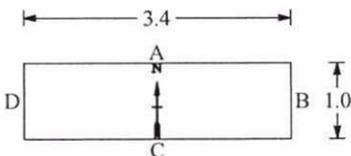
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1433	
Job No	Date 27-09-06 27-09-06	Ground Level (m) 14.30	Co-Ordinates () E 128,755.9 N 228,065.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		TOPSOIL.					
0.10-0.50		Possible rock. Recovered as clay band limestone cobbles and boulders. Cobbles and boulders are tabular to subangular. Boulders are 1500-2000mm in size. Becoming strong with depth. TP abandoned at 0.5m bgl. Obstruction - probable limestone rock or boulders.			0.40-0.50	D	
0.50							

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ AGS 3_1.GDT 30/01/07

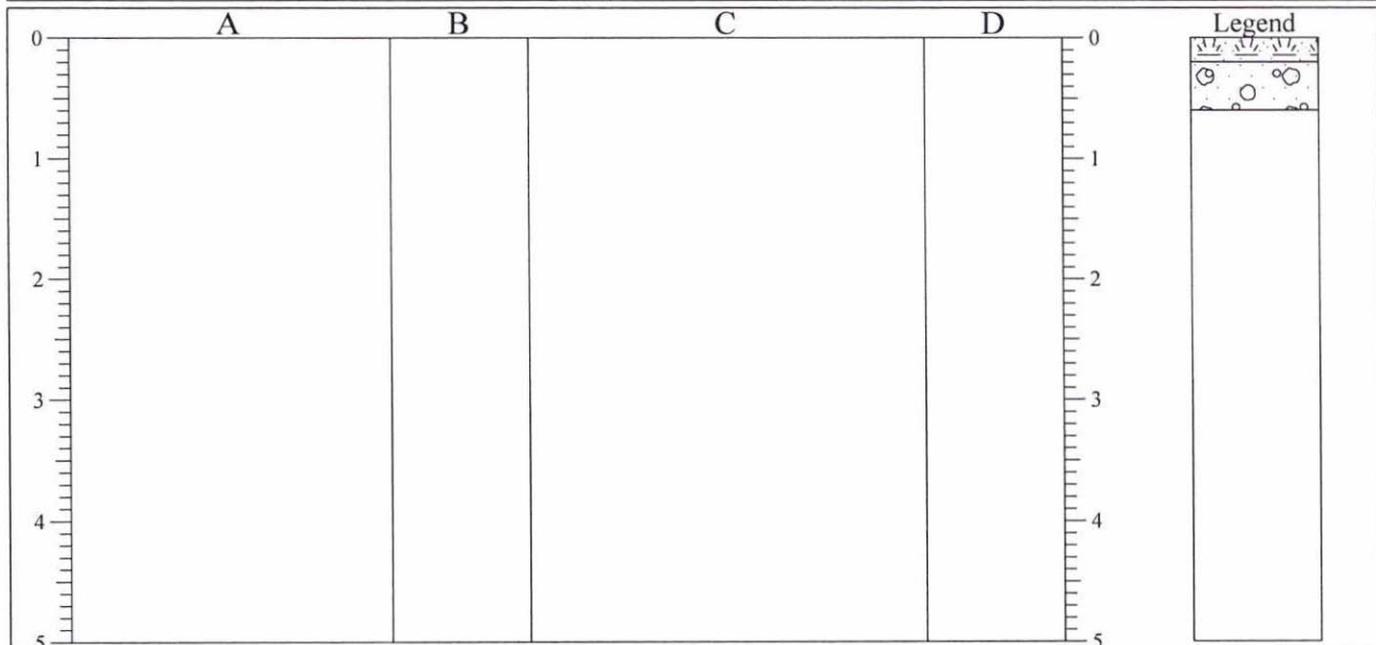
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used KF ex 135	Bit Design	Logged By DK
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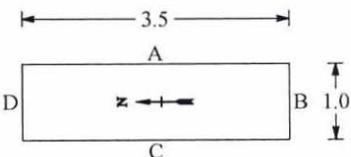
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1434	
Job No	Date 27-09-06 27-09-06	Ground Level (m) 16.13	Co-Ordinates () E 128,784.9 N 228,047.7		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.20		Brown sandy clayey TOPSOIL.					
0.20-0.60		Grey SAND & GRAVEL limestone cobbles and boulders. Cobbles and boulders are rounded to subrounded. Boulders are 600-700mm in size. Gravel is subrounded to subangular and is coarse grained.					
0.60		TP abandoned at 0.6m bgl. Obstruction - probable limestone rock or boulders.					

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ_AGS 3_1.GDT_30/01/07

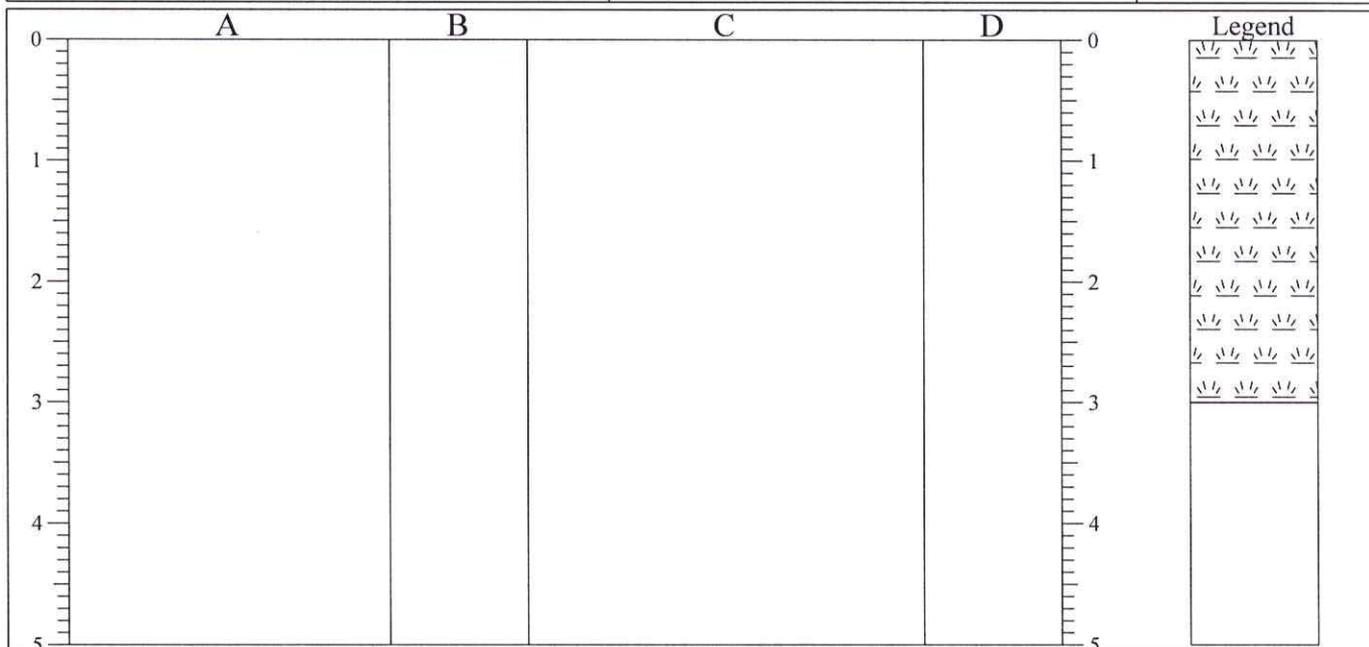
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used KF ex 135	Bit Design	Logged By DK
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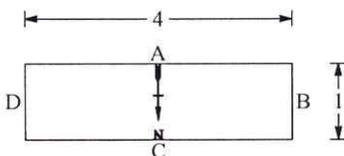
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1435	
Job No	Date 14-11-06 14-11-06	Ground Level (m) 6.24	Co-Ordinates () E 129,001.7 N 227,958.5		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 2.50m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
Sheet 1 of 1					



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-3.00		Soft light brown fibrous PEAT with many rootlets.			1.00 1.00	B J	
				↓	2.00 2.00	B J	
3.00		Pit abandoned - constant collapse of pit sides.					

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable during excavation. Collapsing of sides. Water seepage at 2.50m.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ AGS 3_1.GDT 30/01/07

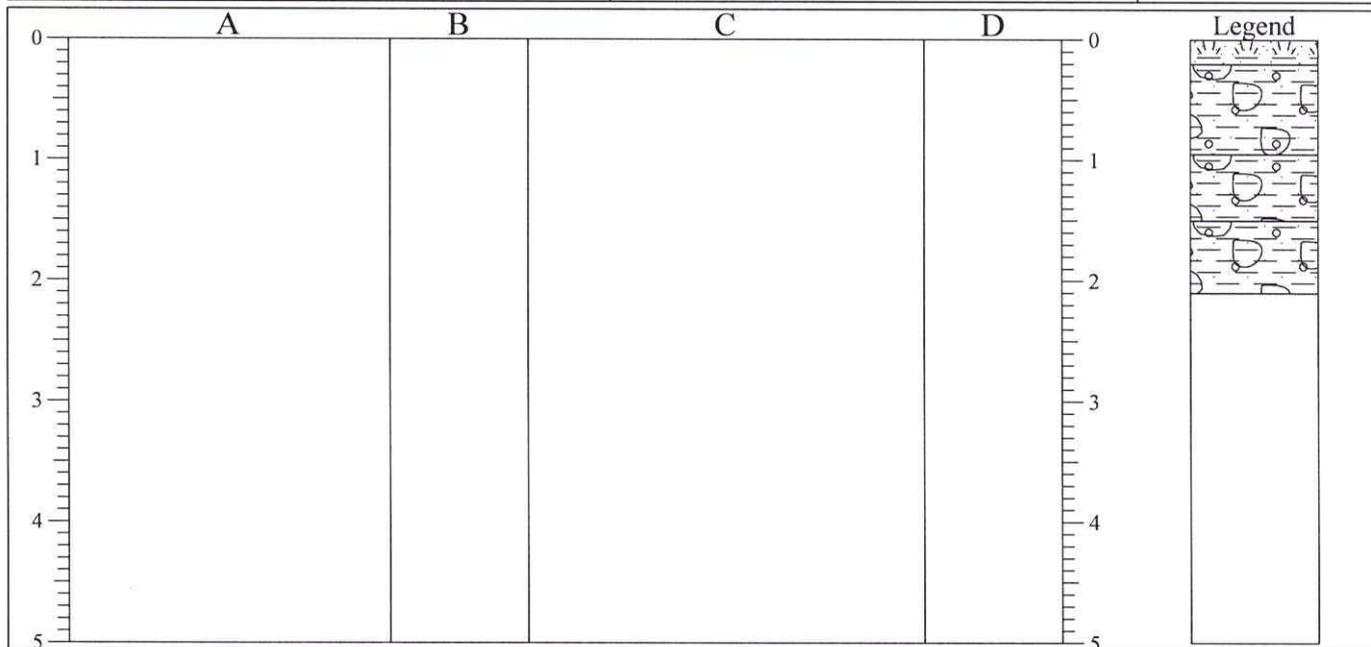
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 120	Bit Design	Logged By DK
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1436	
Job No	Date 25-10-06 25-10-06	Ground Level (m) 19.32	Co-Ordinates () E 129,155.4 N 228,113.8		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

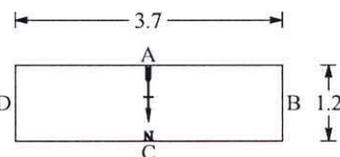


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.20		TOPSOIL with many roots and rootlets.			0.00-0.48	J	
0.20-0.95		Firm damp brown slightly sandy gravelly SILT/CLAY with some subrounded to subangular cobbles and rare subrounded to subangular boulders. Boulders are up to 290mm in size.			0.48-1.00	B	
					0.48-1.00	D	
					0.48-1.00	J	
0.95-1.50		Firm damp grey mottled brown and orange slightly sandy gravelly SILT/CLAY with some subrounded to subangular cobbles and rare subangular to angular boulders. Boulders are up to 300mm in size.			1.00-2.10	D	
					1.00-2.10	J	
1.50-2.10		Stiff damp grey mottled brown and orange slightly sandy gravelly SILT/CLAY with some subrounded to subangular cobbles and rare subangular to angular boulders. Boulders are up to 400mm in size.			1.50-2.10	B	
2.10		TP abandoned at 2.1m bgl. Obstruction - probable limestone rock or boulders.					

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable between 0.6m and 1.2m bgl. Pit dry during excavation.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ_AGS_3_1.GDT_30/01/07

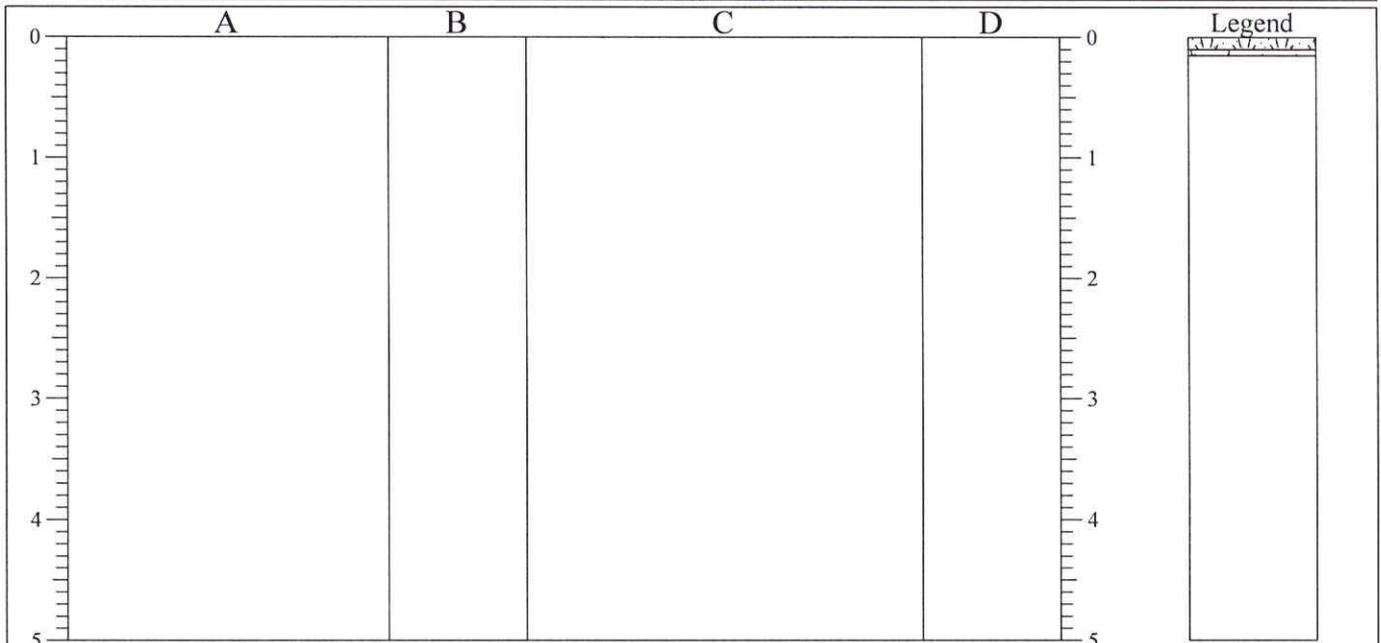
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 135	Bit Design	Logged By TS
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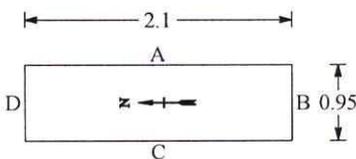
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1437	
Job No	Date 25-10-06 25-10-06	Ground Level (m) 15.24	Co-Ordinates () E 129,309.4 N 228,203.5		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.): Sealed at:	Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		TOPSOIL with many roots and rootlets.			0.00-0.15	J	
0.10-0.15		Soft damp dark brown slightly sandy slightly gravelly SILT/CLAY with some angular to subrounded cobbles and rare subangular to angular boulders. Boulders are up to 300mm in size.					
0.15		TP abandoned at 0.15m bgl. Obstruction - probable limestone rock.					

Shoring/Support:
Stability:

**GENERAL REMARKS**

Pit dry, stable during excavation.

IDL AGS3 UK TP GALWAYBYPASSNETPSLAB2.GPJ AGS 3_1.GDT 30/01/07

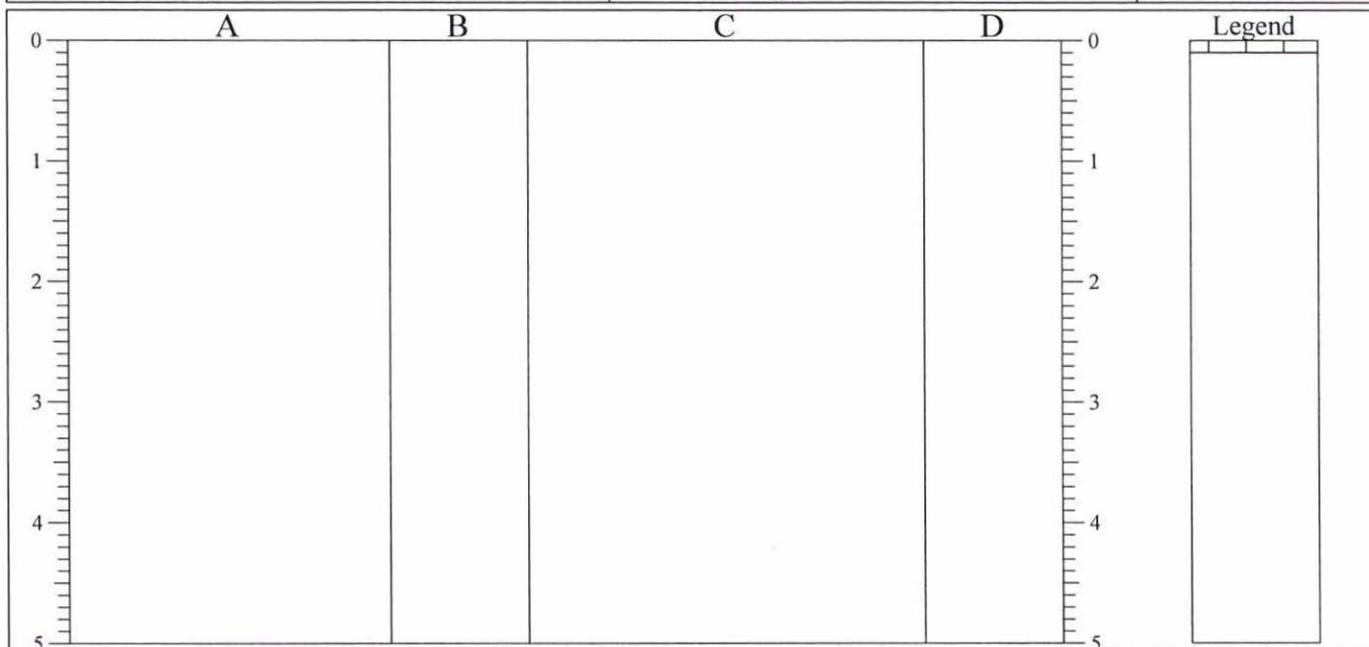
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 135	Bit Design	Logged By TS
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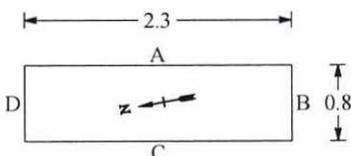
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1438	
Job No	Date 26-10-06 26-10-06	Ground Level (m) 15.91	Co-Ordinates () E 129,428.7 N 228,258.2		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10 0.10		Broken rock at surface as light grey LIMESTONE. TP abandoned at 0.1m bgl. Obstruction - probable rock.			0.00-0.10	J	

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

IDL_AGS3_UK_TP_GALWAYBYPASSN6TPSLAB2.GPJ_AGS_3_1.GDT_30/01/07

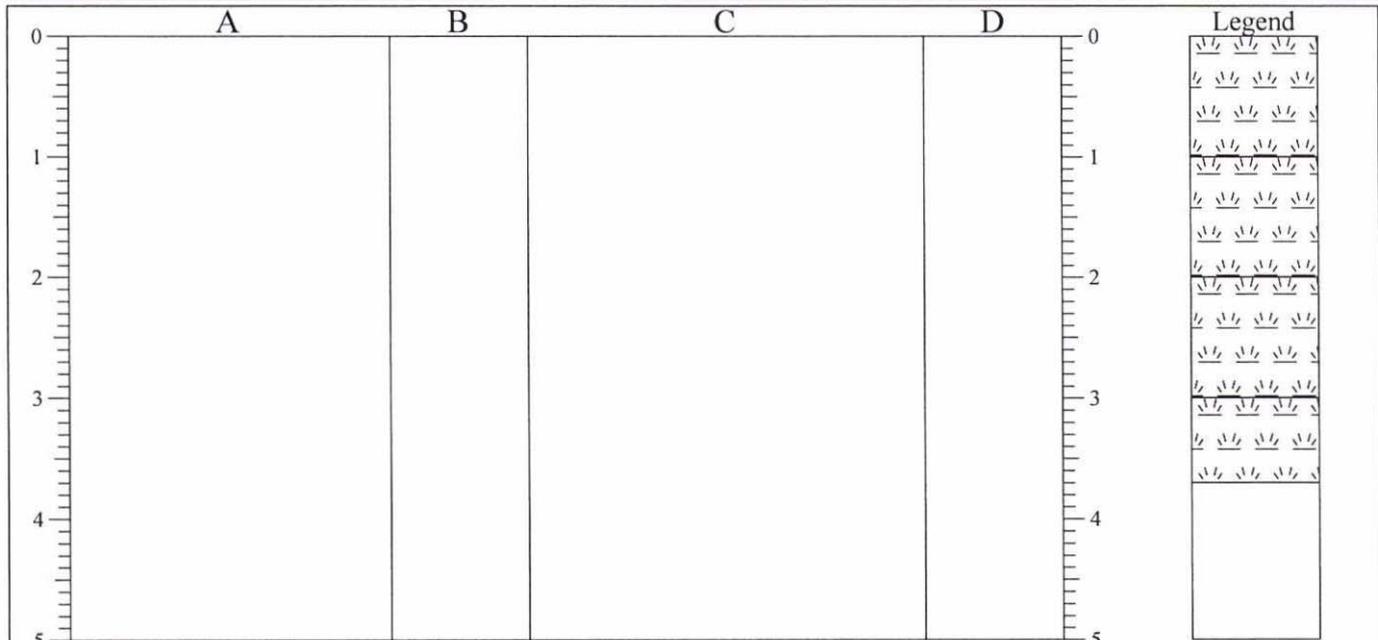
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 135	Bit Design	Logged By TS
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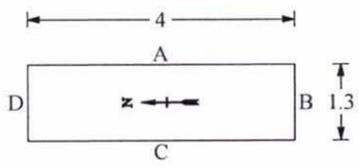
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1439	
Job No	Date 04-12-06 04-12-06	Ground Level (m) 9.46	Co-Ordinates () E 131,254.0 N 228,790.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.00m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-1.00		Very soft dark brown PEAT (H3,B3,P0,W0,N0,TV2,TH2,A0,P0,F0).					
1.00-2.00		Very soft dark brown PEAT (H4,B3,F3,W1,N2,TV2,TH1,A1,P0).			0.70	B	
				0.70	J		
2.00-3.00		Very soft dark brown PEAT (H7,B3,F3,W1,N1,TV1,TH0,A1,P1,R1).			1.70	B	
				1.70	J		
3.00-3.70		Very soft dark brown PEAT (H8,B2,F3,W0,N1,TV0,TH0,A2,P1,R2) with traces of cream grey calcareous silt and and roots.			2.50	B	
				2.50	J		
3.70		Pit abandoned - constant collapse of pit sides and surface water ingress.			3.10	B	
				3.10	J		

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable during excavation. Collapsing of sides from 1.20m depth. Very fast water ingress from surface.

IDL AGS3 UK TP GALWAY BYPASS N6 TP LAB2.GPJ AGS 3_1.GDT 30/01/07

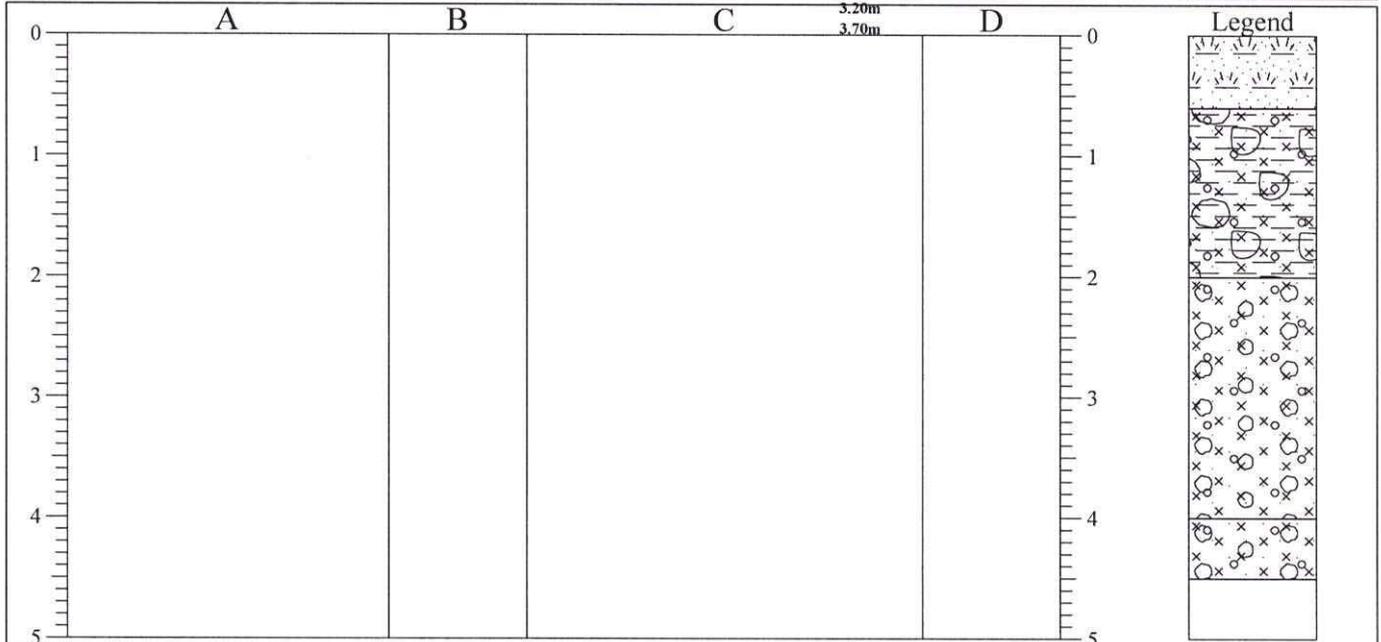
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 60	Bit Design	Logged By TS
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1111	
Job No	Date 22-09-06 22-09-06	Ground Level (m) 9.55	Co-Ordinates () E 131,195.0 N 228,845.9		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.20m 2nd: 0.50m 3rd: 2.50m	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.60		Firm dark brown slightly sandy gravelly SILT with roots and some rounded to subrounded cobbles (TOPSOIL).		↓	0.15	J	
0.60-2.00		Soft grey and mottled yellow brown slightly sandy gravelly SILT/CLAY with many subangular to rounded cobbles.		↓	1.00 1.00	B J	
2.00-4.00		Soft grey slightly sandy gravelly SILT with many subangular to rounded cobbles and some boulders. Boulders up to 300mm long.		↓	2.00 2.00	B J	
4.00-4.50		Soft brownish grey sandy gravelly SILT with many subangular to rounded cobbles and some boulders. Boulders up to 400mm long.		↓	3.00 3.00	B J	
4.50		Pit terminated.		↓	4.00 4.00	B J	

Shoring/Support:
Stability:

GENERAL REMARKS

Pit unstable during excavation. Spalling of sides from 1.20m. Water ingress from 0.2 to 3.7m.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By TS
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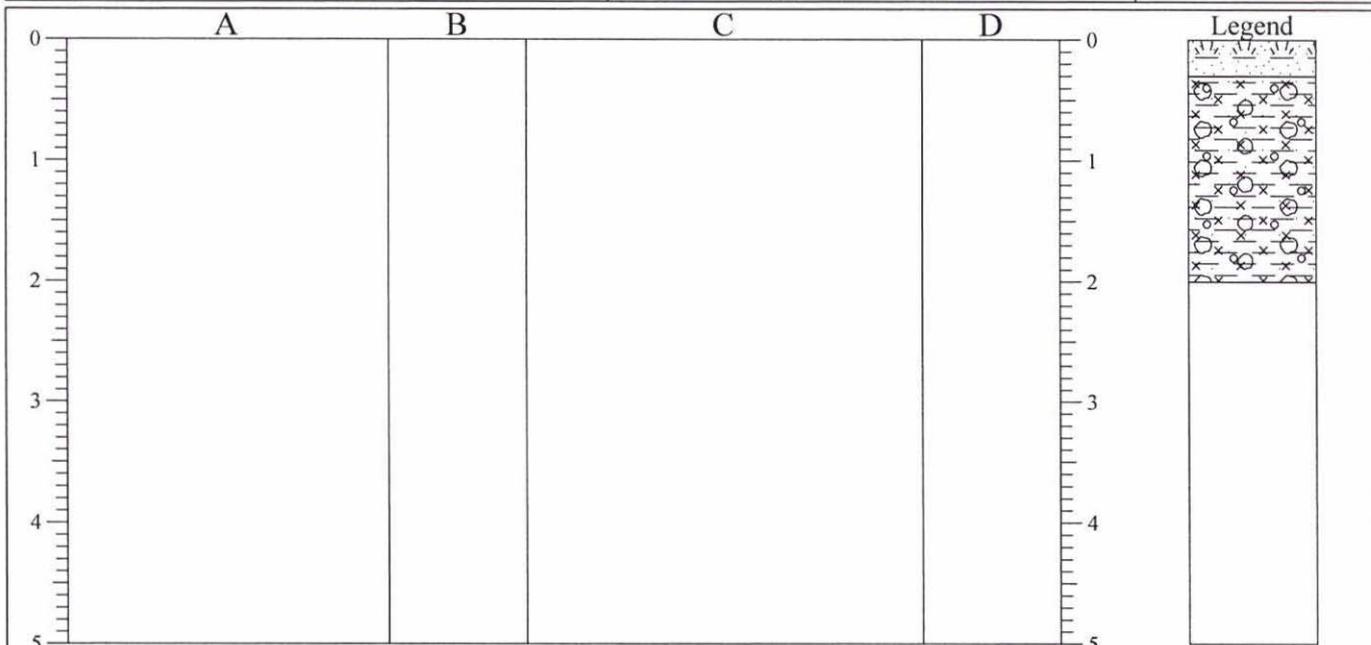
IDL:AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ_AGS_3_1.GDT_30/01/07



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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1132	
Job No	Date 02-11-06 02-11-06	Ground Level (m) 11.88	Co-Ordinates () E 131,169.7 N 228,723.6		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

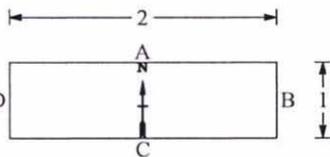


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		TOPSOIL - brown sandy clay.					
0.30-2.00		Firm grey brown slightly sandy slightly gravelly SILT/CLAY with many subrounded to rounded cobbles and some boulders of limestone. Boulders up to 400m long. Gravel is coarse, subrounded to subangular.			1.00	B	
2.00		Refusal - possible rock or boulders.			2.00	B	

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, unstable during excavation-spalling of sides.

IDL_AGS3_UK_TP_GALWAYBYPASSN6TPSLAB2.GPJ_AGS_3_1.GDT_30/01/07

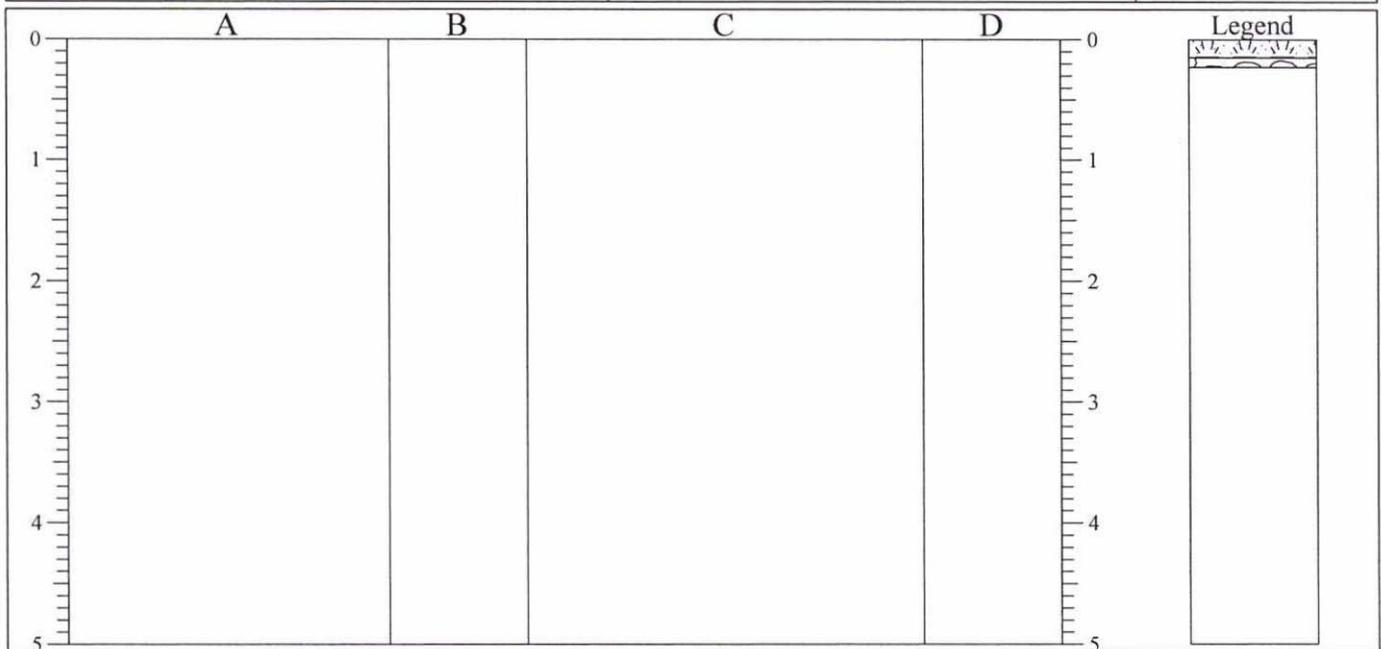
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex120	Bit Design	Logged By DK
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TRIAL PIT LOG

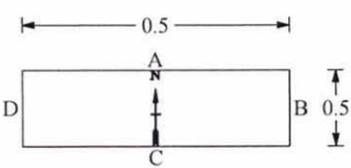
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1400	
Job No	Date 12-10-06 12-10-06	Ground Level (m) 9.31	Co-Ordinates () E 121,140.7 N 222,532.7		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.15 0.15-0.23 0.23		Soft wet dark brown slightly sandy silty/clayey TOPSOIL with many roots and rootlets. Large subangular and subrounded light brown speckled grey and white granite BOULDERS. TP abandoned at 0.23m bgl obstruction - probable rock.			0.00-0.23	J	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2GPJ_AGS_3_1.GDT_30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation. Hand dug pit - no access for excavator.

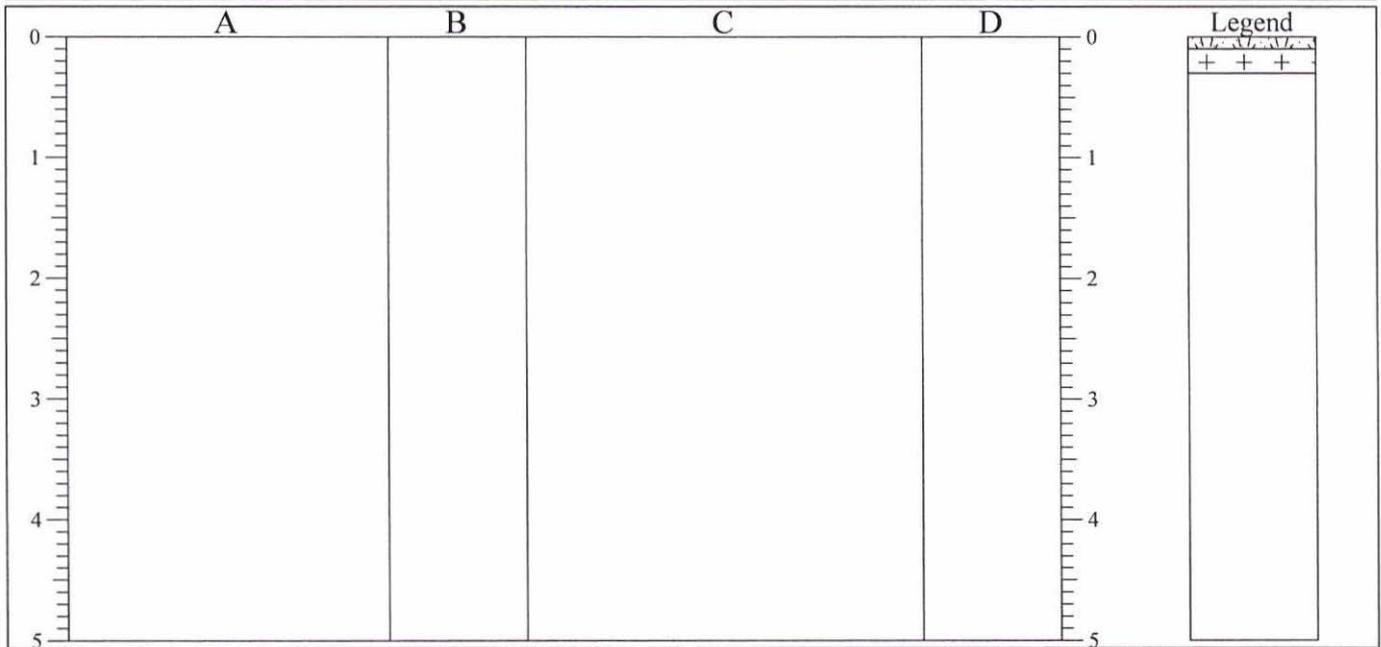
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 60	Bit Design	Logged By TS
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TRIAL PIT LOG

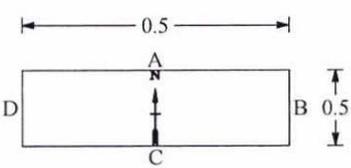
Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1401	
Job No	Date 11-10-06 11-10-06	Ground Level (m) 12.31	Co-Ordinates () E 121,320.8 N 222,578.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		Soft damp brown slightly sandy gravelly silty/clayey TOPSOIL with some subangular and angular cobbles with many roots and rootlets. Broken rock at 0.1m bgl. Recovered as grey speckled white and pink GRANITE. TP abandoned at 0.3m bgl obstruction - probable rock.			0.00-0.15	J	
0.10-0.30							
0.30							

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ_AGS 3_1.GDT_30/01/07

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation. Hand dug pit - no access for excavator.

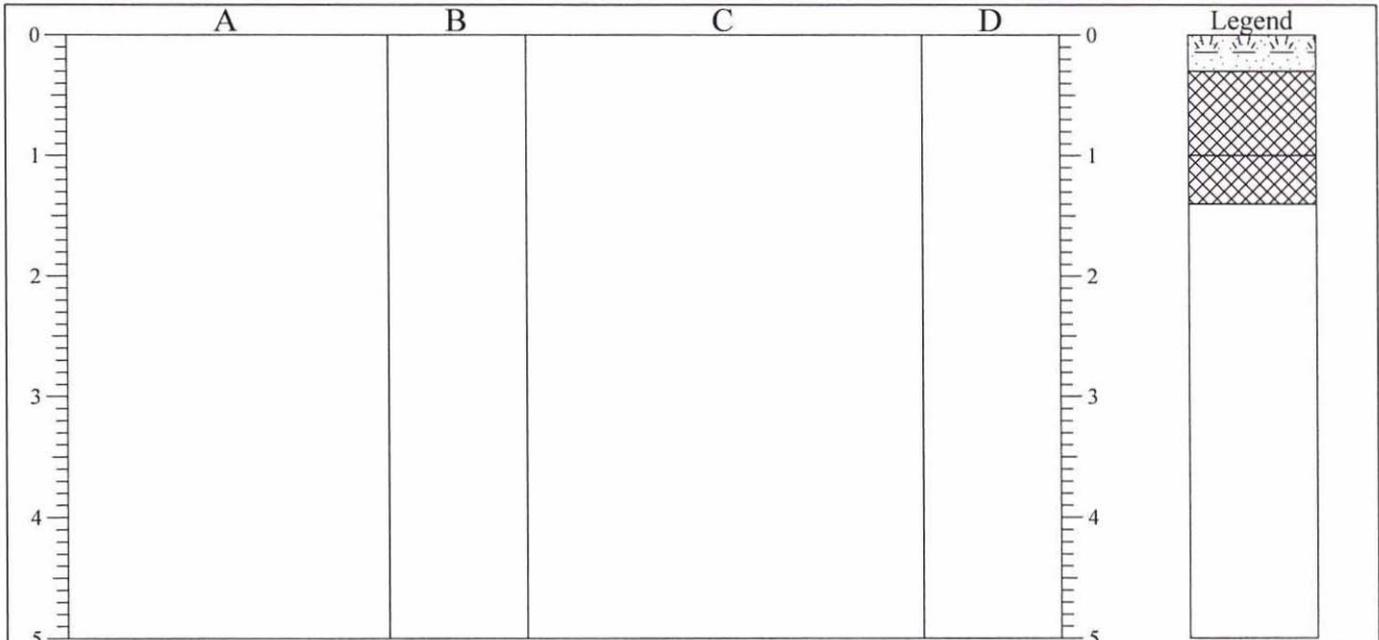
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 60	Bit Design	Logged By TS
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1402	
Job No	Date 16-10-06 16-10-06	Ground Level (m) 29.15	Co-Ordinates () E 121,295.5 N 223,019.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.30		Soft damp TOPSOIL with many roots and rootlets.			0.20-0.75	J	
0.30-1.00		MADE GROUND: Dark brown gravelly sandy SILT with many angular to rounded cobbles and some angular to subrounded with boulders. Boulders are up to 500mm in size.			0.75-1.40	B	
1.00-1.40		MADE GROUND: Damp light brown mottled orange and dark brown gravelly very silty SAND with many angular to subrounded cobbles and boulders. Boulders are up to 1500mm in size.			0.75-1.40	D	
1.40		TP abandoned at 1.4m bgl obstruction.			0.75-1.40	J	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ_AGS 3.1.GDT 30/01/07

Shoring/Support:
Stability:

GENERAL REMARKS

Pit dry, stable during excavation.

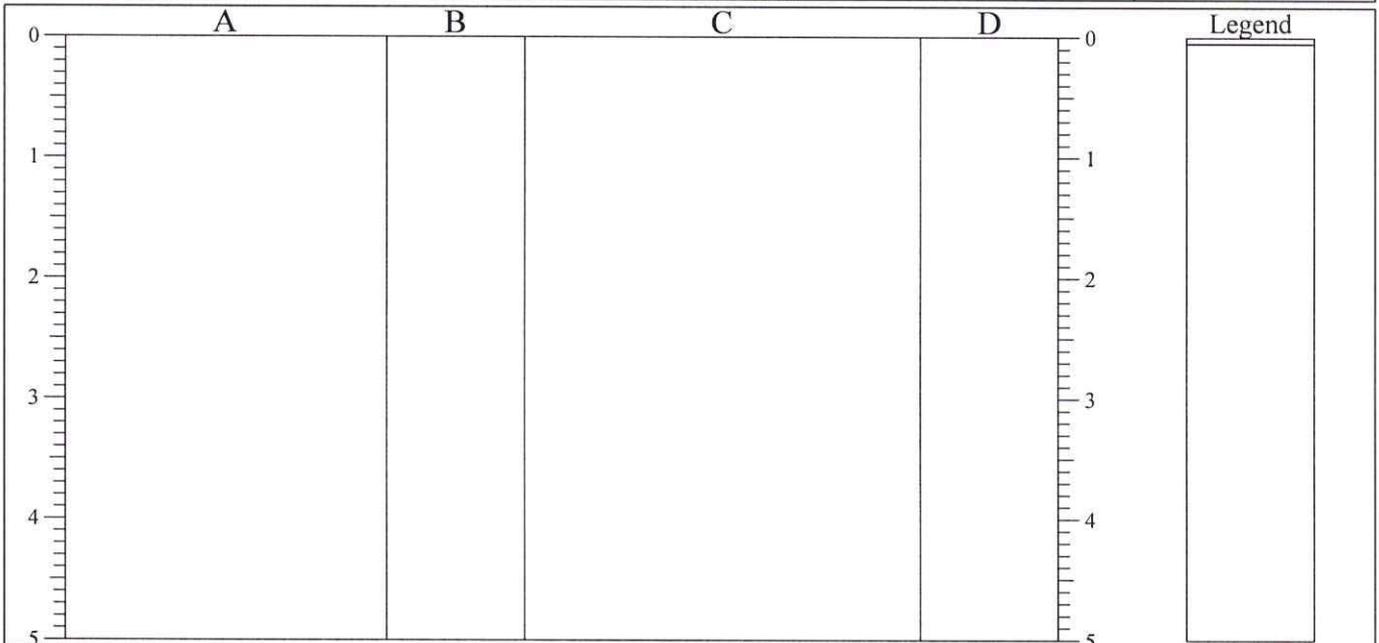
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 60	Bit Design	Logged By TS
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1403	
Job No	Date 12-10-06 12-10-06	Ground Level (m) 37.46	Co-Ordinates () E 121,237.8 N 223,265.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.05 0.05		Rock at surface as brown speckled grey and white GRANITE. TP abandoned at 0.05m bgl obstruction - probable rock.					

Shoring/Support:
Stability:

The diagram shows a rectangular pit with a width of 0.5 meters and a depth of 0.5 meters. The corners are labeled A (top), B (right), C (bottom), and D (left).

GENERAL REMARKS

Pit dry, stable during excavation. Hand dug pit - no access for excavator.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 60	Bit Design	Logged By TS
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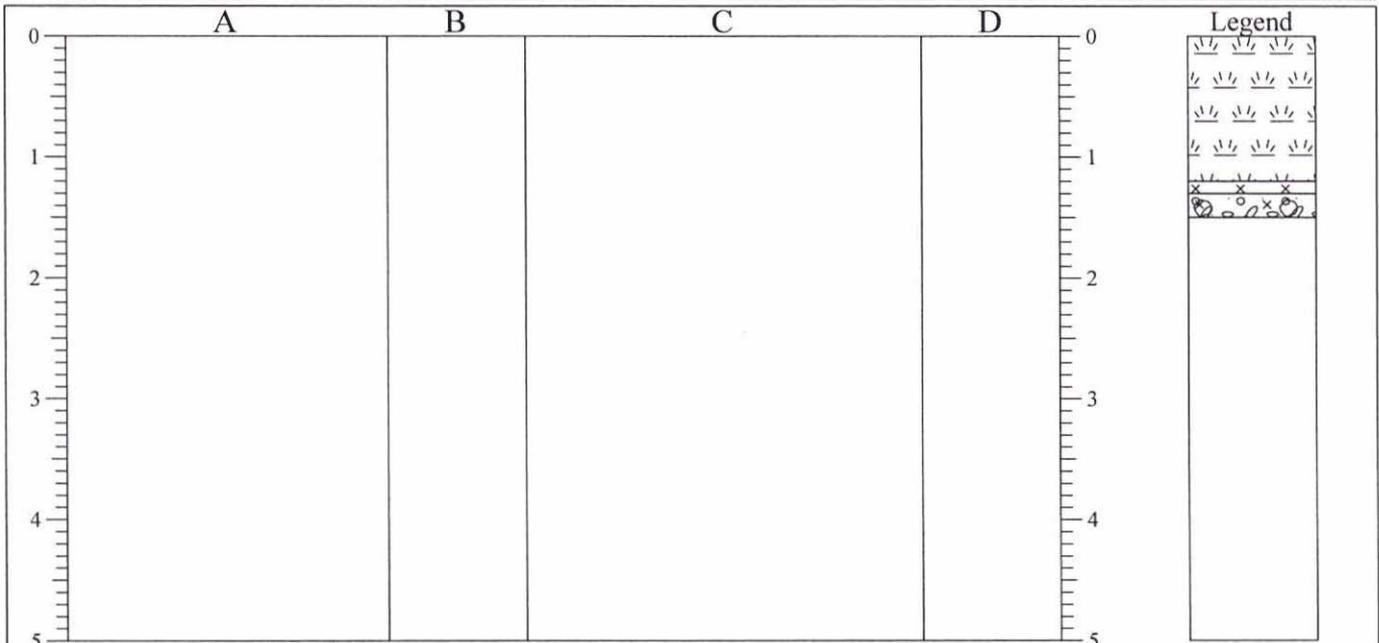
IDL.AGS3.UK.TP.GALWAYBYPASSN6TPSLAB2.GPJ.AGS.3.1.GDT.30/01/07

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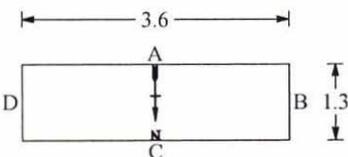
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1430	
Job No	Date 10-10-06 10-10-06	Ground Level (m) 6.25	Co-Ordinates () E 127,560.1 N 228,410.1		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.00m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

**STRATA****SAMPLES & TESTS**

Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-1.20		Black fibrous PEAT. H3/H4, W3.			0.50-1.00	J	
1.20-1.30		Very soft creamy grey calcareous SILT.			1.30-1.50	B	
1.30-1.50		Blue grey silty sandy GRAVEL with some angular to subangular cobbles and boulders. Gravel is angular to subangular and fine to medium grained.					
1.50		TP abandoned at 1.5m bgl. Obstruction - probable rock or boulders.					

Shoring/Support:
Stability:

**GENERAL REMARKS**

Pit stable during excavation. Inflow to TP from surface.

IDL_AGS3_UK_TP_GALWAYBYPASSN6TPSLAB2.GPJ_AGS_3_1.GDT_30/01/07

All dimensions in metres
Scale 1:62.5

Client Galway County Council

Method/ Plant Used Hitachi ex 135

Bit Design

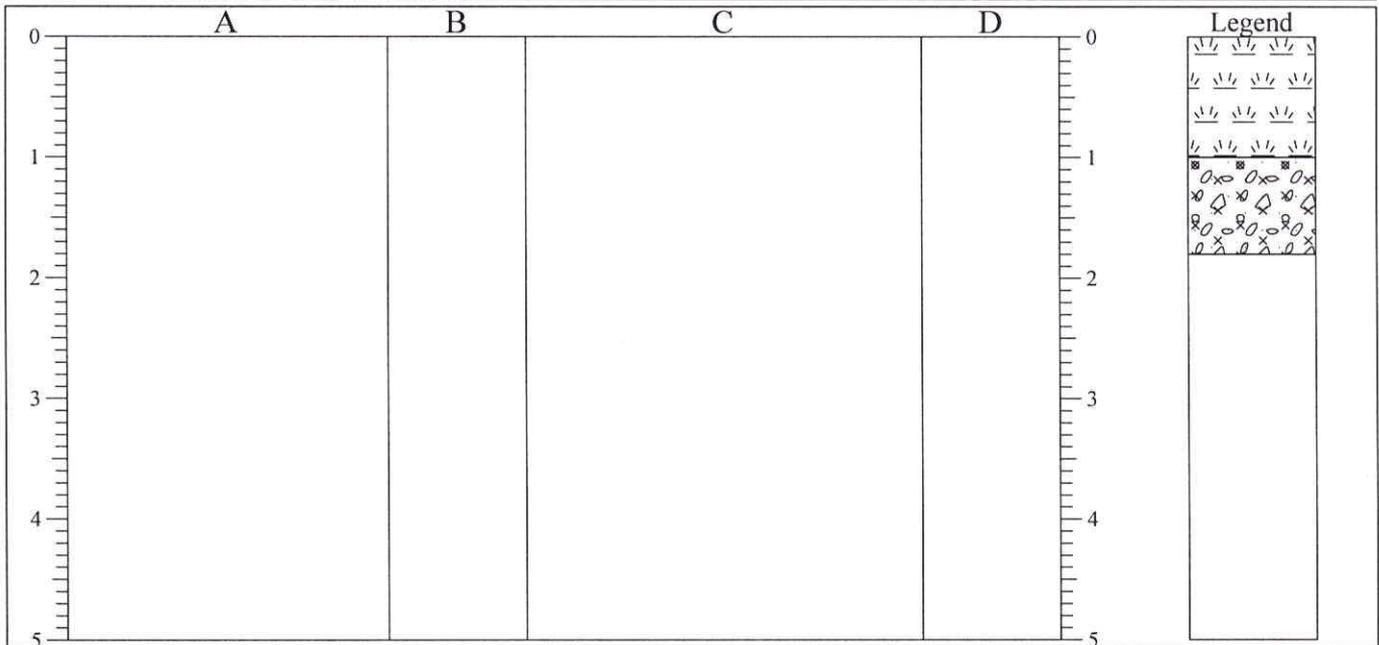
Logged By MM



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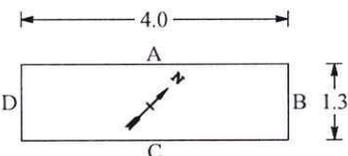
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1431	
Job No	Date 10-10-06 10-10-06	Ground Level (m) 6.42	Co-Ordinates () E 127,703.7 N 228,341.4		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.30m 2nd: 3rd:	Rose to (@ 20 min.): 0.40m	Sealed at: Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-1.00		Grass over black PEAT. H3/H4, W2.			0.30 0.50-1.00	W J	
1.00-1.80		Blue grey silty very sandy GRAVEL. Gravel is rounded to subangular and fine to medium grained.			1.00-1.50	B	
1.80		TP abandoned at 1.8m bgl. Obstruction - probable rock or boulders.					

Shoring/Support:
Stability:



GENERAL REMARKS

Moderate ingress of water from 0.3m bgl. Pit stable during excavation.

All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 135	Bit Design	Logged By MM
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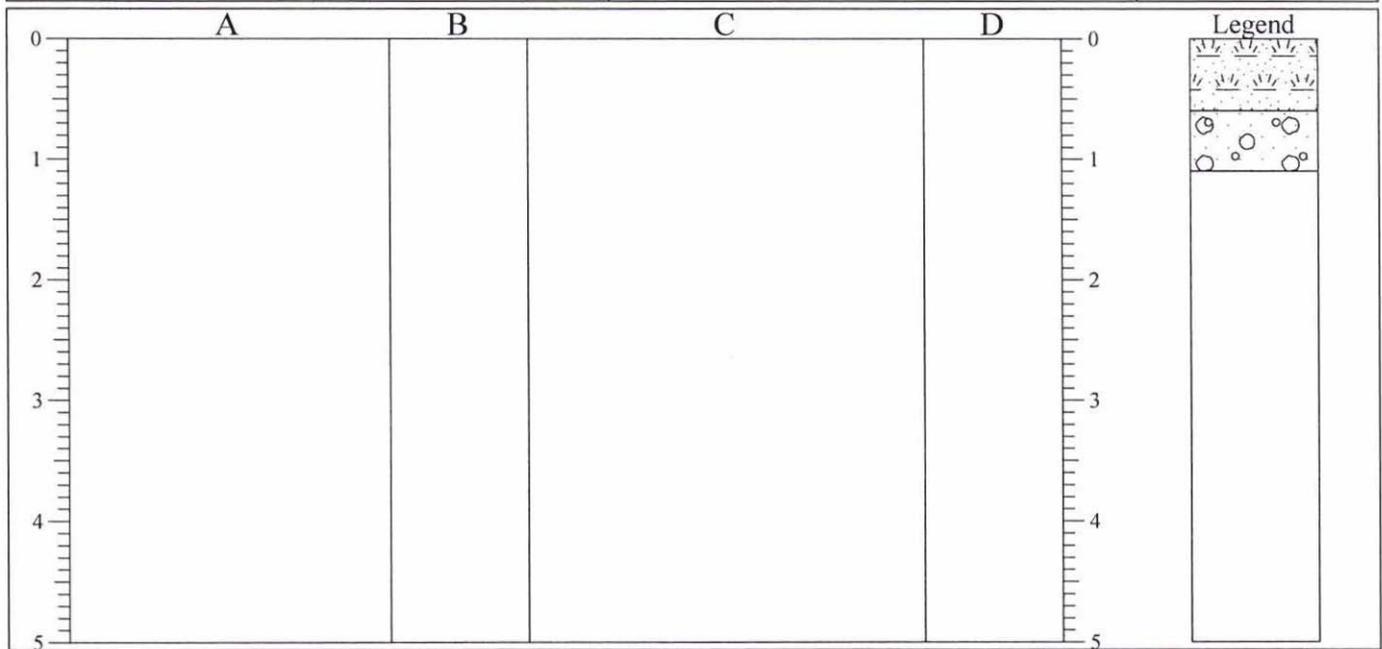
IDL-AGS3 UK.TP_GALWAYBYPASSN6TPSLAB2.GPJ_AGS 3_1.GDT_30/01/07



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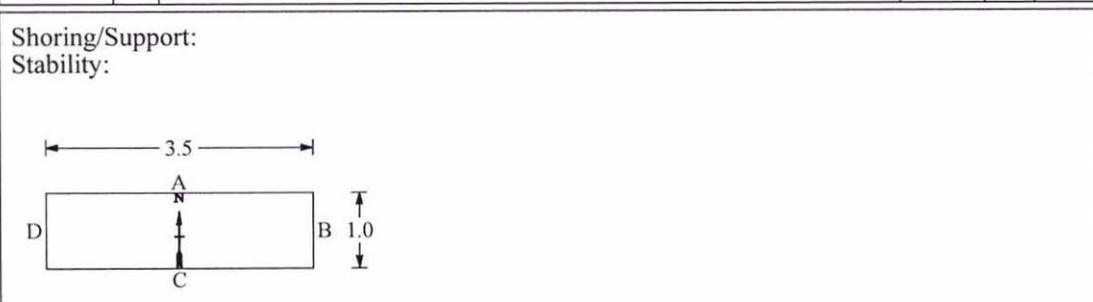
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1432	
Job No	Date 26-09-06 26-09-06	Ground Level (m) 16.97	Co-Ordinates () E 128,656.6 N 227,986.4		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.60		Brown sandy clayey TOPSOIL.					
0.60-1.10		Grey SAND & GRAVEL limestone cobbles and boulders. Cobbles and boulders are subrounded to subangular. Boulders are 600-700mm in size. Gravel is subrounded to subangular and is coarse grained.			0.50-0.60	D	
1.10		TP abandoned at 1.1m bgl. Obstruction - probable limestone rock or boulders.			1.00-1.10	B D	

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ AGS 3_1.GDT 30/01/07



GENERAL REMARKS

Pit dry, stable during excavation.

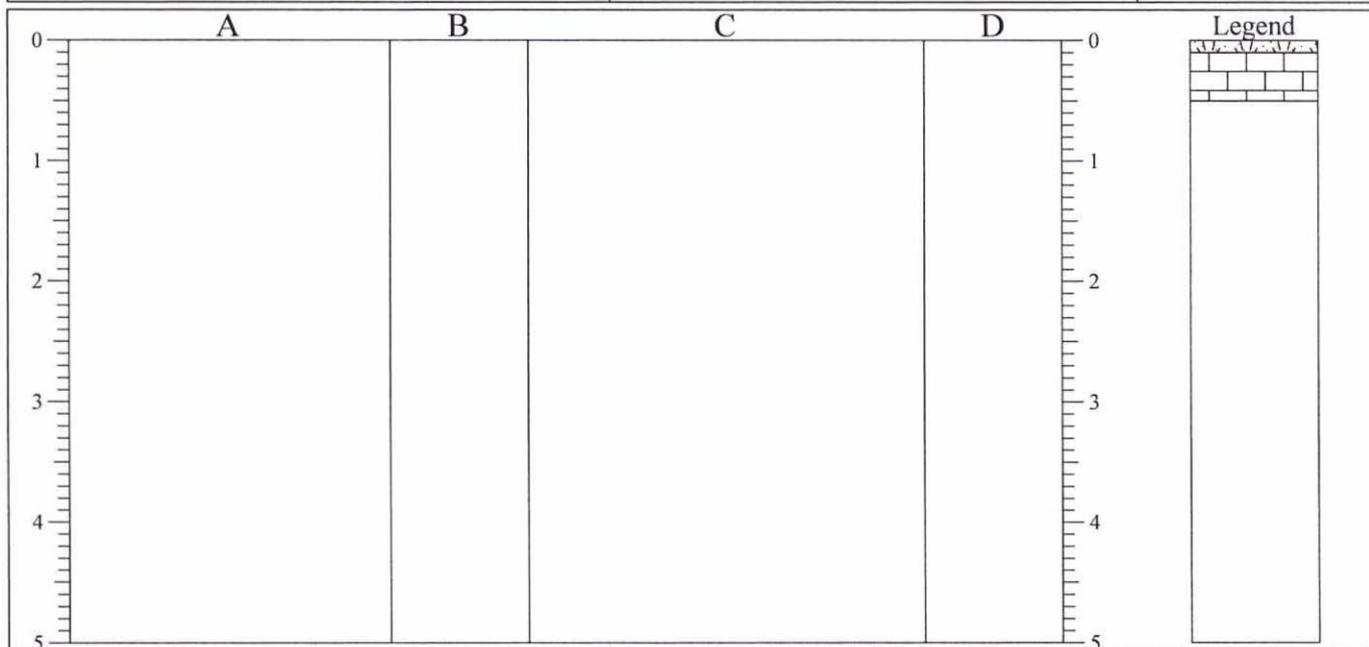
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used KF ex 135	Bit Design	Logged By DK
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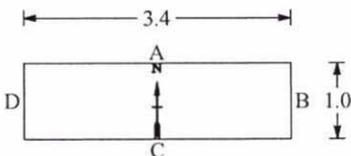
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1433	
Job No	Date 27-09-06 27-09-06	Ground Level (m) 14.30	Co-Ordinates () E 128,755.9 N 228,065.0		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		TOPSOIL.					
0.10-0.50		Possible rock. Recovered as clay band limestone cobbles and boulders. Cobbles and boulders are tabular to subangular. Boulders are 1500-2000mm in size. Becoming strong with depth. TP abandoned at 0.5m bgl. Obstruction - probable limestone rock or boulders.			0.40-0.50	D	
0.50							

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ AGS 3_1.GDT 30/01/07

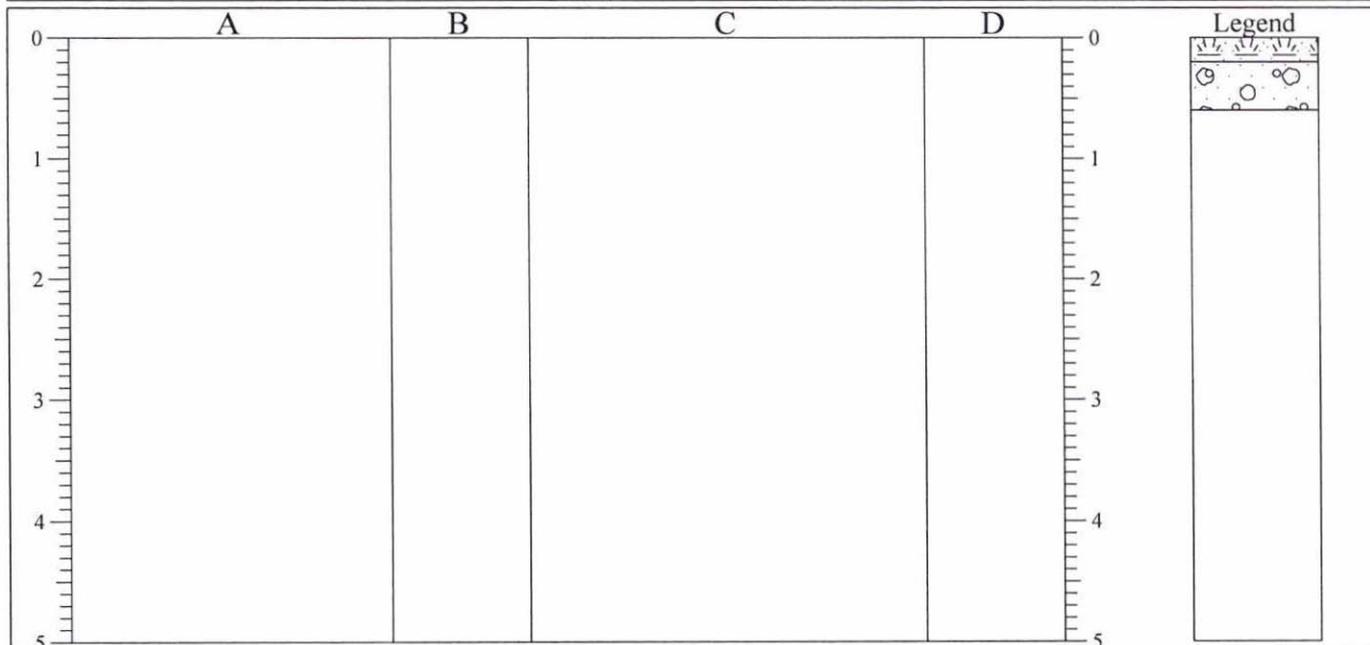
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used KF ex 135	Bit Design	Logged By DK
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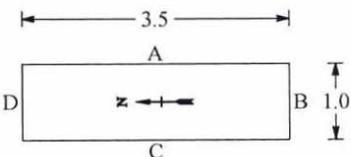
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1434	
Job No	Date 27-09-06 27-09-06	Ground Level (m) 16.13	Co-Ordinates () E 128,784.9 N 228,047.7		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.20		Brown sandy clayey TOPSOIL.					
0.20-0.60		Grey SAND & GRAVEL limestone cobbles and boulders. Cobbles and boulders are rounded to subrounded. Boulders are 600-700mm in size. Gravel is subrounded to subangular and is coarse grained.					
0.60		TP abandoned at 0.6m bgl. Obstruction - probable limestone rock or boulders.					

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ AGS 3 1.GDT 30/01/07

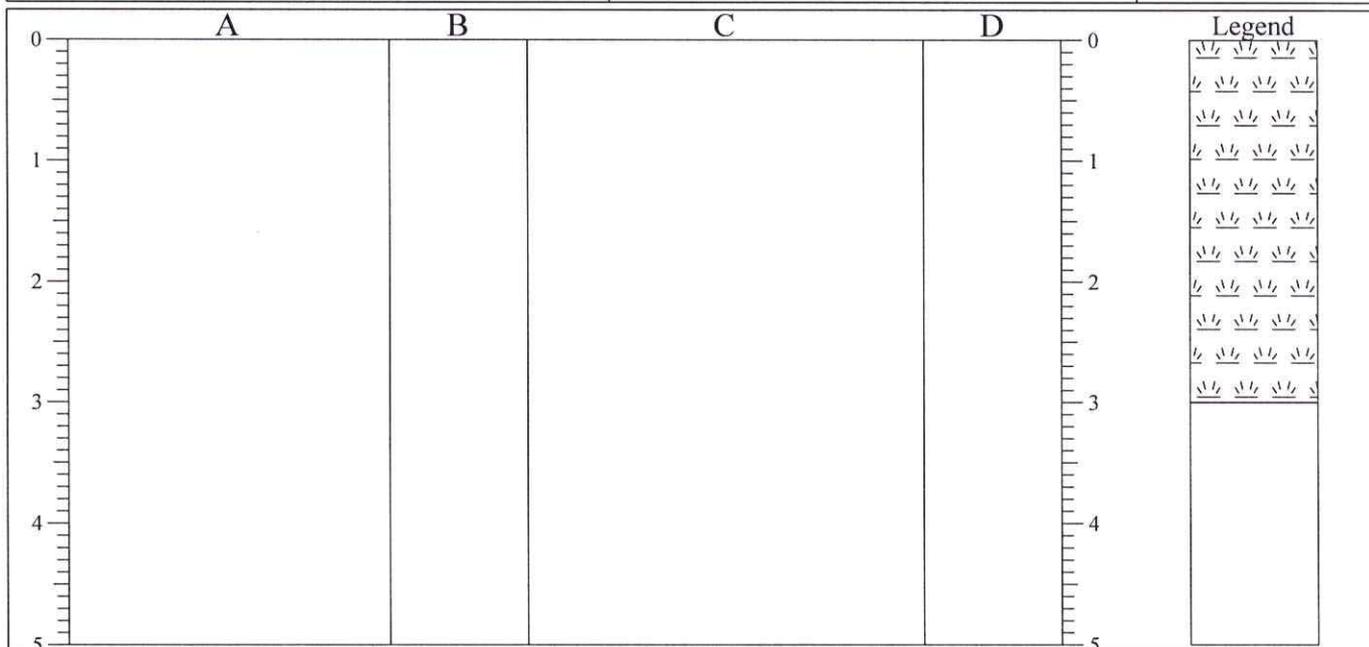
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used KF ex 135	Bit Design	Logged By DK
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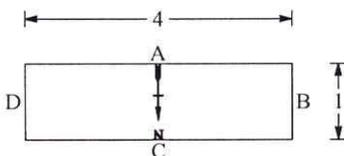
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1435	
Job No	Date 14-11-06 14-11-06	Ground Level (m) 6.24	Co-Ordinates () E 129,001.7 N 227,958.5		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 2.50m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-3.00		Soft light brown fibrous PEAT with many rootlets.			1.00 1.00	B J	
				↓	2.00 2.00	B J	
3.00		Pit abandoned - constant collapse of pit sides.					

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable during excavation. Collapsing of sides. Water seepage at 2.50m.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ AGS 3_1.GDT 30/01/07

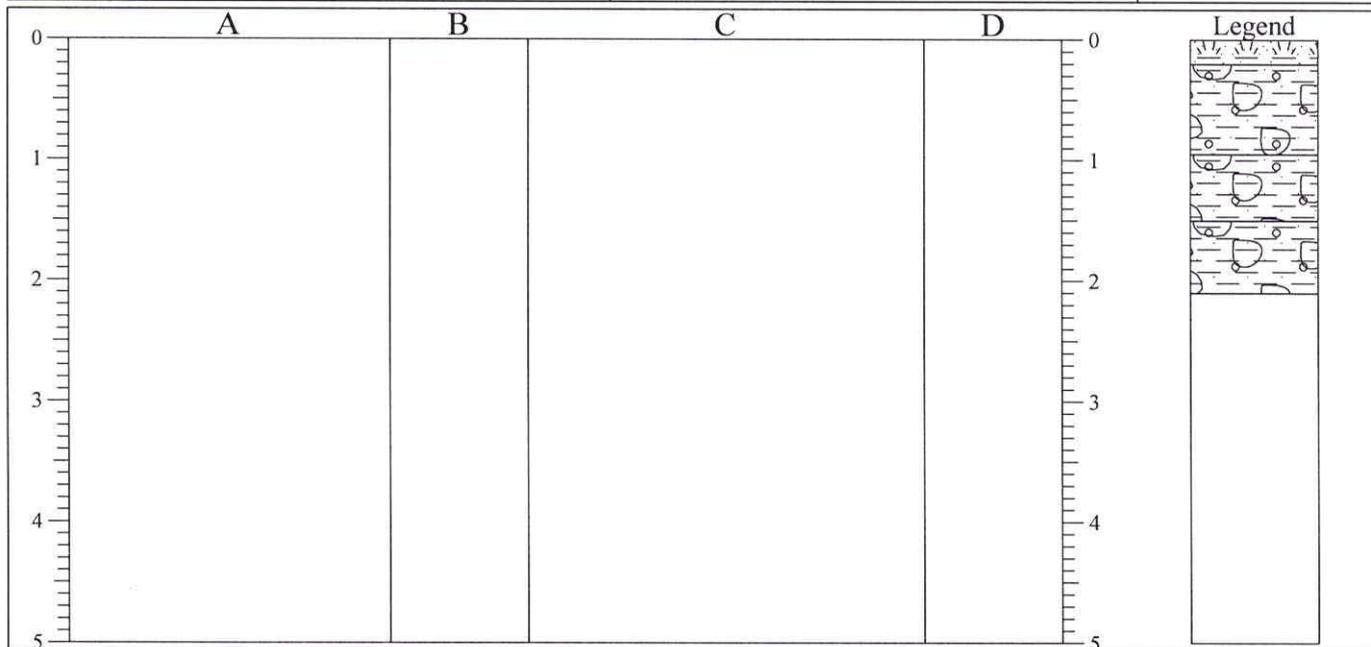
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 120	Bit Design	Logged By DK
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TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1436	
Job No	Date 25-10-06 25-10-06	Ground Level (m) 19.32	Co-Ordinates () E 129,155.4 N 228,113.8		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1

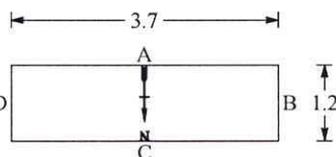


STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.20		TOPSOIL with many roots and rootlets.			0.00-0.48	J	
0.20-0.95		Firm damp brown slightly sandy gravelly SILT/CLAY with some subrounded to subangular cobbles and rare subrounded to subangular boulders. Boulders are up to 290mm in size.			0.48-1.00	B	
					0.48-1.00	D	
					0.48-1.00	J	
0.95-1.50		Firm damp grey mottled brown and orange slightly sandy gravelly SILT/CLAY with some subrounded to subangular cobbles and rare subangular to angular boulders. Boulders are up to 300mm in size.			1.00-2.10	D	
					1.00-2.10	J	
1.50-2.10		Stiff damp grey mottled brown and orange slightly sandy gravelly SILT/CLAY with some subrounded to subangular cobbles and rare subangular to angular boulders. Boulders are up to 400mm in size.			1.50-2.10	B	
2.10		TP abandoned at 2.1m bgl. Obstruction - probable limestone rock or boulders.					

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable between 0.6m and 1.2m bgl. Pit dry during excavation.

IDL AGS3 UK TP GALWAYBYPASSN6TPSLAB2.GPJ_AGS_3_1.GDT_30/01/07

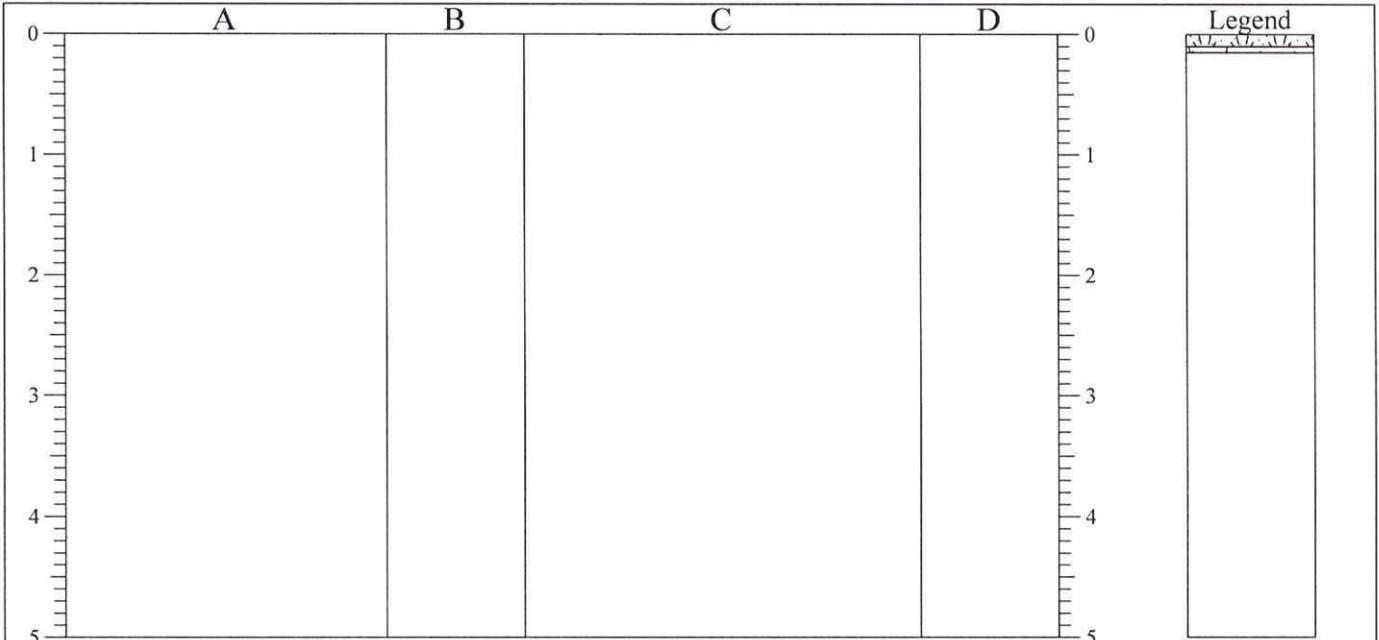
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 135	Bit Design	Logged By TS
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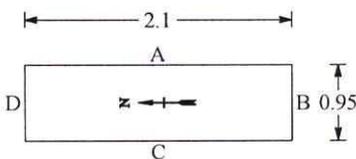
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1437	
Job No	Date 25-10-06 25-10-06	Ground Level (m) 15.24	Co-Ordinates () E 129,309.4 N 228,203.5		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.): Sealed at:	Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10		TOPSOIL with many roots and rootlets.			0.00-0.15	J	
0.10-0.15		Soft damp dark brown slightly sandy slightly gravelly SILT/CLAY with some angular to subrounded cobbles and rare subangular to angular boulders. Boulders are up to 300mm in size.					
0.15		TP abandoned at 0.15m bgl. Obstruction - probable limestone rock.					

Shoring/Support:
Stability:

**GENERAL REMARKS**

Pit dry, stable during excavation.

IDL AGS3 UK TP GALWAYBYPASSNETPSLAB2.GPJ AGS 3_1.GDT 30/01/07

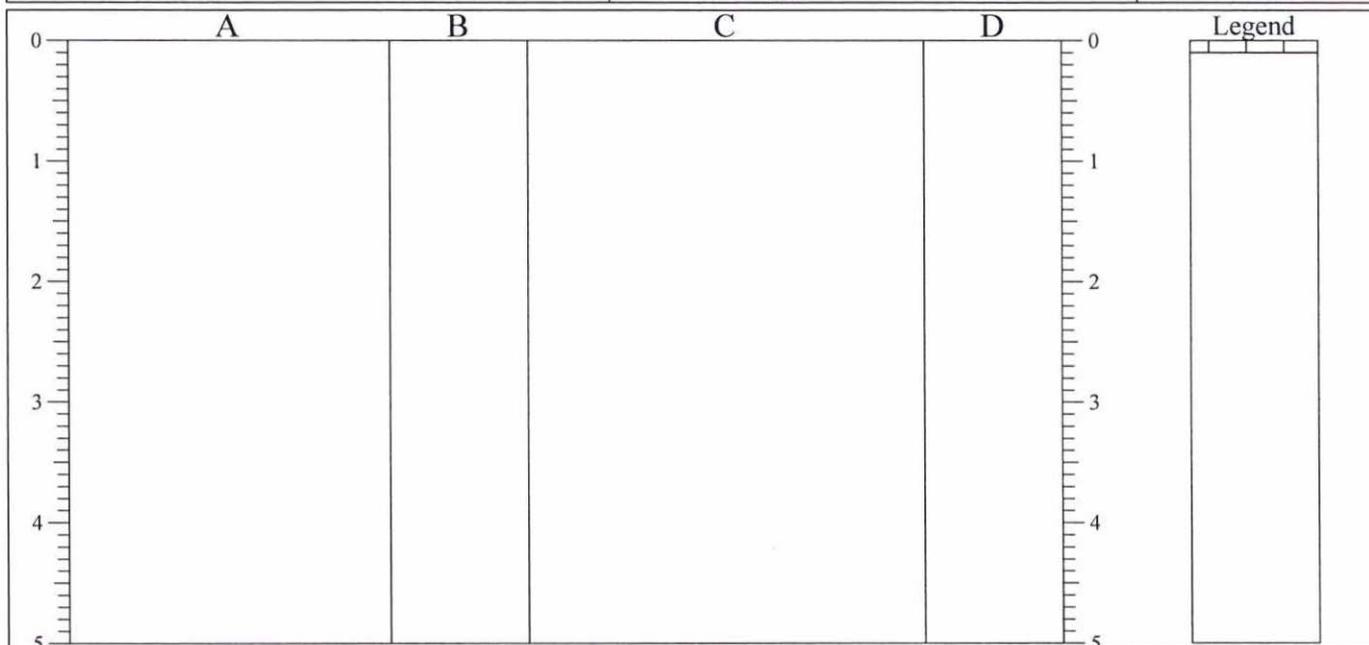
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 135	Bit Design	Logged By TS
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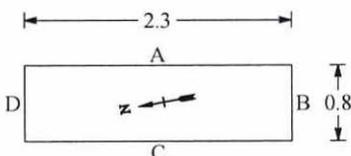
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1438	
Job No	Date 26-10-06 26-10-06	Ground Level (m) 15.91	Co-Ordinates () E 129,428.7 N 228,258.2		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: dry 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
					Sheet 1 of 1



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-0.10 0.10		Broken rock at surface as light grey LIMESTONE. TP abandoned at 0.1m bgl. Obstruction - probable rock.			0.00-0.10	J	

Shoring/Support:
Stability:



GENERAL REMARKS

Pit dry, stable during excavation.

IDL_AGS3_UK_TP_GALWAYBYPASSN6TPSLAB2.GPJ_AGS_3_1.GDT_30/01/07

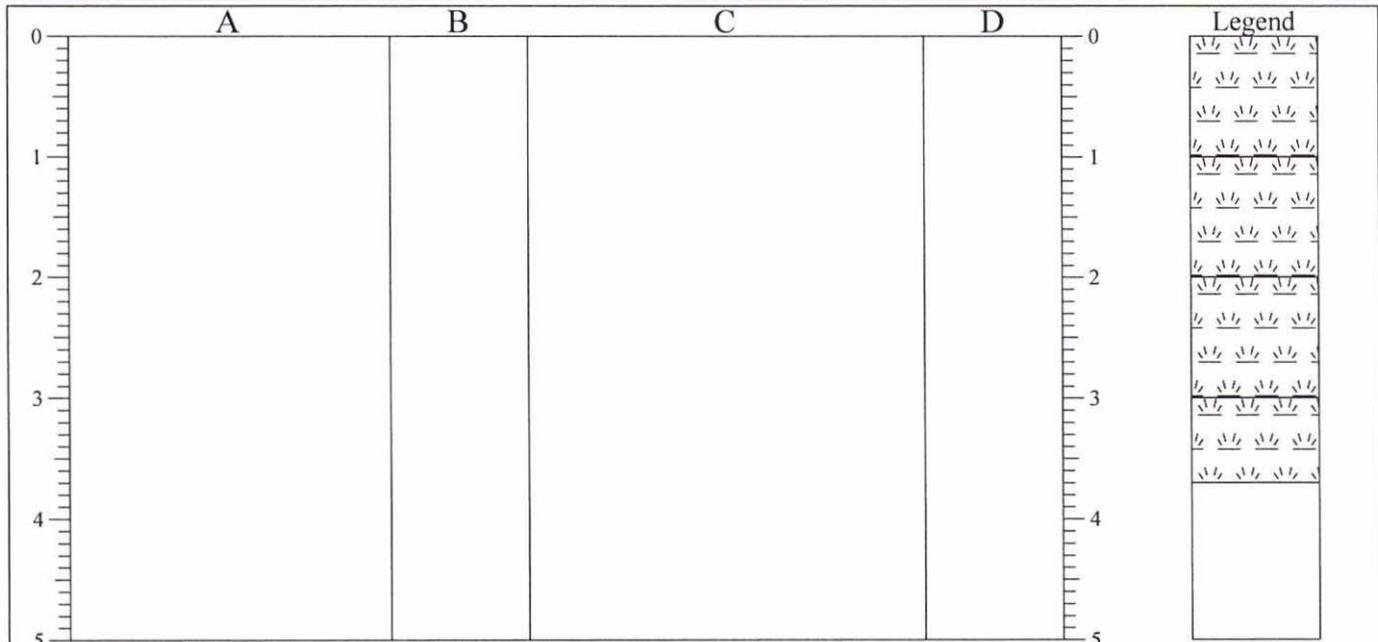
All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 135	Bit Design	Logged By TS
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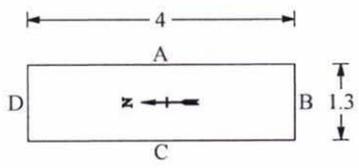
TRIAL PIT LOG

Project N6 Galway City Outer Bypass				TRIAL PIT No TP 1439	
Job No	Date 04-12-06 04-12-06	Ground Level (m) 9.46	Co-Ordinates () E 131,254.0 N 228,790.3		
Contractor IDL		GROUNDWATER STRIKES	Water strikes: 1st: 0.00m 2nd: 3rd:	Rose to (@ 20 min.):	Sealed at:
Sheet 1 of 1					



STRATA				SAMPLES & TESTS			
Depth	No	DESCRIPTION	In Situ Tests	Water	Depth (m)	No	Remarks/Tests
0.00-1.00		Very soft dark brown PEAT (H3,B3,P0,W0,N0,TV2,TH2,A0,P0,F0).					
1.00-2.00		Very soft dark brown PEAT (H4,B3,F3,W1,N2,TV2,TH1,A1,P0).			0.70	B	
				0.70	J		
2.00-3.00		Very soft dark brown PEAT (H7,B3,F3,W1,N1,TV1,TH0,A1,P1,R1).			1.70	B	
				1.70	J		
3.00-3.70		Very soft dark brown PEAT (H8,B2,F3,W0,N1,TV0,TH0,A2,P1,R2) with traces of cream grey calcareous silt and roots.			2.50	B	
				2.50	J		
3.70		Pit abandoned - constant collapse of pit sides and surface water ingress.			3.10	B	
				3.10	J		

Shoring/Support:
Stability:



GENERAL REMARKS

Pit unstable during excavation. Collapsing of sides from 1.20m depth. Very fast water ingress from surface.

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All dimensions in metres Scale 1:62.5	Client Galway County Council	Method/ Plant Used Hitachi ex 60	Bit Design	Logged By TS
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