

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS02

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 200 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
317933 E 256788.5 N

Ground Level (mOD)
34.91

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling											
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)		
											5 min	10 min	15 min	20 min			
			34.41	0.50	Concrete			3.20 6.20		Seepage Seepage							
					Cement/Bentonite Grout	Groundwater Observations During Drilling											
						Start of Shift		End of Shift									
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	
			31.91	3.00	Gravel Filter	10/05/05		2.30		DRY			2.30		DRY		
						11/05/05		9.40		DRY				9.40		DRY	
						12/05/05								9.60			
			31.41	3.50		Instrument Groundwater Observations											
						Inst. [A] Type :											
					Slotted Standpipe	Instrument [A]			Remarks								
						Date	Time	Depth (m)		Level (mOD)							
			25.91	9.00	Gravel Filter												
			25.31	9.60													

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap fitted at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS03

Boring Method Cable Percussion	Casing Diameter 200mm cased to 10.40m	Ground Level (mOD) 37.76	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318048 E 256817.8 N	Dates 09/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1				37.56	0.20	TOPSOIL		
1.00-1.45 1.00	SPT N=9 B1			2,2/3,2,2,2		(2.40)	MADE GROUND: Soft to firm brown gravelly sandy CLAY containing occasional smooth sub-angular cobbles		
1.50	J2								
2.00	B2								
2.50	J3								
3.00 3.00-3.45	B3 U1 No Recovery				35.16	2.60	Firm light brown slightly gravelly sandy CLAY. Gravel is sub-angular to sub-rounded fine to medium		
3.50	J4					(1.40)			
4.00-4.45 4.00	SPT N=10 B4			2,2/3,3,2,2	33.76	4.00	Stiff to very stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-angular fine to medium		▽1
4.50	J5			Seepage(1) at 4.30m.					
5.00 5.00-5.45	B5 U2								
5.50	J6								
6.00-6.45 6.00	SPT N=44 B6			12,12/11,11,10,12					
6.50	J7								
7.00 7.00-7.45	B7 U3					(6.00)			
7.50	J8								
8.00-8.45 8.00	SPT N=47 B8			6,10/11,12,12,12					
8.50	J9								
9.00 9.00-9.45	B9 U4								
9.50	J10								
10.00-10.40	SPT 50/250			12,12/10,12,12,16	27.76	10.00			


Remarks Permeability test carried out at 5.00m and 10.00m. Chiselling from 1.60m to 1.90m for 0.5 hours.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS03	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS03

Boring Method Cable Percussion	Casing Diameter 200mm cased to 10.40m	Ground Level (mOD) 37.76	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318048 E 256817.8 N	Dates 09/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00	B10			09/05/2005	27.36	(0.40) 10.40	Stiff to very stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-angular fine to medium.		
							Complete at 10.40m		

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Remarks Borehole terminated at scheduled depth.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS03	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS04

Boring Method Cable Percussion	Casing Diameter 200mm cased to 9.60m	Ground Level (mOD) 45.92	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317538.4 E 256720 N	Dates 19/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1				45.62	(0.30) 0.30	TOPSOIL		
1.00 1.00-1.45	B1 U1					(1.40)	Firm orange brown slightly gravelly sandy CLAY. Gravel is sub-angular to sub-rounded fine to medium		
1.50	J2				44.22	1.70	Stiff to very stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
2.00-2.45 2.00	SPT N=19 B2			4,5/5,5,5,4					
2.50	J3								
3.00 3.00-3.45	B3 U2								
3.50	J4								
4.00-4.45 4.00	SPT N=22 B4			5,5/6,6,5,5					
4.50	J5								
5.00 5.00-5.45	B5 U3								
5.50	J6					(7.90)			
6.00-6.45 6.00	SPT N=31 B6			7,7/8,8,8,7					
6.50	J7								
7.00 7.00-7.45	B7 U4								
7.50	J8								
8.00-8.45 8.00	SPT N=34 B8			7,8/8,8,9,9					
8.50	J9								
9.00 9.00-9.45	B9 U5								
9.50	J10								
				19/05/2005:DRY	36.32	9.60			

Remarks Virtual refusal met at 9.60m on boulder. Permeability test carried out at 5.00m. Standpipe installed to 9.00m. Chiselling from 9.50m to 9.60m for 1 hour.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS04	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS04

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 200 mm	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317538.4 E 256720 N	Ground Level (mOD) 45.92	Engineer RPS-MCOS
			Sheet 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
			45.42	0.50	Concrete															
					Cement/Bentonite Grout															
Groundwater Observations During Drilling																				
			43.42	2.50	Gravel Filter	Date	Start of Shift					End of Shift								
			42.92	3.00			Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
						19/05/05						9.60		DRY						
Instrument Groundwater Observations																				
Inst. [A] Type :																				
					Slotted Standpipe	Date	Instrument [A]			Remarks										
							Time	Depth (m)	Level (mOD)											
			36.92	9.00																
			36.32	9.60	Gravel Filter															

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap fitted at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS05

Boring Method Cable Percussion	Casing Diameter 200mm cased to 10.50m	Ground Level (mOD) 38.97	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317752.8 E 256717.2 N	Dates 11/05/2005- 12/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.30) 0.30	TOPSOIL		
1.00-1.45 1.00	SPT N=13 B1			4,4/3,4,3,3	38.67	(1.20)	Firm brown sandy CLAY containing occasional fine to medium sub-angular to sub-rounded gravel		
2.00 2.00-2.45	B2 U1				37.47	1.50	Stiff to very stiff black sandy gravelly CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
3.00-3.45 3.00	SPT N=28 B3			5,8/7,7,7,7					
4.00 4.00-4.45	B4 U2								
5.00-5.45 5.00	SPT N=25 B5			7,7/6,7,5,7					
6.00 6.00-6.45	B6 U3					(8.50)			
7.00-7.45 7.00	SPT N=39 B7			9,9/10,9,10,10					
8.00 8.00-8.45	B8 U4								
9.00-9.45 9.00	SPT N=37 B9			10,10/10,9,9,9					
				11/05/2005:DRY 12/05/2005:DRY	28.97	10.00			

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Remarks	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS05	

Glover Site Investigations Ltd							Site	Borehole Number	
Boring Method		Casing Diameter		Ground Level (mOD)		Client	FINGAL LANDFILL PROJECT	GS05	
Cable Percussion		200mm cased to 10.50m		38.97		FINGAL COUNTY COUNCIL	Job Number	05-271	
		Location		Dates		Engineer	Sheet		
		317752.8 E 256717.2 N		11/05/2005- 12/05/2005		RPS-MCOS	2/2		
Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00	B10			12/05/2005	28.47	(0.50) 10.50	Stiff to very stiff black sandy gravelly CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
							Complete at 10.50m		
Remarks Virtual refusal met at 10.50m on boulder. Chiselling from 10.30m to 10.50m for 1 hour.							Scale (approx) 1:50	Logged By TR	
							Figure No. 05-271.GS05		

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Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS06

Boring Method Cable Percussion	Casing Diameter 200mm cased to 7.90m	Ground Level (mOD) 33.42	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317974.3 E 256724 N	Dates 10/05/2005- 11/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1				33.22	0.20	TOPSOIL Firm light brown to greyish brown sandy gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-rounded fine to medium		
1.00-1.45 1.00	SPT N=11 B1			2,3/3,3,3,2		(1.50)			
1.50	J2				31.72	1.70	Firm to stiff dark grey sandy gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-rounded to sub-angular fine to medium		
2.00 2.00-2.45	B2 U1					(1.60)			
2.50	J3								
3.00-3.45 3.00	SPT N=39 B3			12,11/10,10,9,10					
3.50	J4				30.12	3.30	Stiff to very stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
4.00 4.00-4.45	B4 U2								
4.50	J5								
5.00-5.35 5.00	SPT 50/200 B5			11,13/15,18,17					
5.50	J6					(4.60)			
6.00 6.00-6.45	B6 U3 No Recovery								
6.50	J7								
7.00 7.00-7.45	B7 U4			10/05/2005:DRY 11/05/2005:6.30m					
7.50	J8			11/05/2005	25.52	7.90	Complete at 7.90m		

Remarks Virtual refusal met at 7.90m on boulders. Permeability test carried out at 5.00m. Standpipe installed to 7.50m. Chiselling from 7.80m to 7.90m for 0.5 hours.	Scale (approx)	1:50
	Logged By	TR
	Figure No.	05-271.GS06

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS06

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 200 mm	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317974.3 E 256724 N	Ground Level (mOD) 33.42	Engineer RPS-MCOS
			Sheet 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
					Concrete															
			32.92	0.50																
					Cement/Bentonite Grout	Groundwater Observations During Drilling														
						Date		Start of Shift				End of Shift								
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
						10/05/05		7.00		6.30	27.12		7.00							
						11/05/05							7.90					DRY		
			30.42	3.00	Gravel Filter															
			29.92	3.50																
						Instrument Groundwater Observations														
						Inst. [A] Type :														
						Instrument [A]			Remarks											
					Date	Time	Depth (m)	Level (mOD)												
					Slotted Standpipe															
			25.92	7.50	Gravel Filter															
			25.52	7.90																

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap fitted at base of standpipe.

Glover Site Investigations Ltd							Site	Borehole Number	
Boring Method		Casing Diameter		Ground Level (mOD)		Client	FINGAL LANDFILL PROJECT	GS07	
Cable Percussion		200mm cased to 10.00m		30.89		FINGAL COUNTY COUNCIL	Job Number	05-271	
		Location		Dates		Engineer	Sheet	1/1	
		318156.4 E 256716.3 N		17/05/2005		RPS-MCOS			
Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1				30.69	0.20 (0.60)	TOPSOIL Firm light brown to orange brown sandy CLAY containing fine to medium sub-angular to sub-rounded gravel		
1.00-1.45 1.00	CPT N=10 B1			2,3/3,2,3,2	30.09	0.80	Soft to firm light brown sandy CLAY containing occasional lenses of silty fine to coarse sand and fine to medium sub-rounded to sub-angular gravel		
1.50	J2					(1.40)			
2.00-2.45	B2 U1 No Recovery				28.69	2.20	Firm to stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-angular to sub-rounded fine to coarse		
2.50	J3								
3.00-3.45 3.00	CPT N=14 B3			3,3/4,3,3,4					
3.50	J4					(3.20)			
4.00-4.45	B4 U2 No Recovery								
4.50	J5								
5.00-5.45 5.00	CPT N=20 B5			4,5/5,4,6,5					
5.50	J6				25.49	5.40	Dense grey sandy fine to coarse sub-rounded GRAVEL containing occasional smooth sub-rounded cobbles and boulders		▼1
6.00-6.45 6.00	B6 CPT N=38 W1			Moderate Flow(1) at 5.70m, rose to 5.38m in 20 mins. 8,8/9,8,10,11					▽1
6.50	J7								
7.00-7.45 7.00	CPT N=36 B7			7,7/9,9,9,9					
7.50	J8					(4.60)			
8.00-8.45 8.00	CPT N=41 B8			8,8/10,11,10,10					
8.50	J9								
9.00-9.45 9.00	CPT N=36 B9			8,7/9,9,8,10					
9.50	J10								
10.00	B10			17/05/2005	20.89	10.00			
Remarks Virtual refusal met at 10.00m on boulder. Permeability test carried out at 5.00m and 6.50m. Standpipe installed to 10.00m. Chiselling from 9.80m to 10.00m for 2 hours.							Scale (approx)	Logged By	
							1:50	TR	
							Figure No.	05-271.GS07	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS07

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 200 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
318156.4 E 256716.3 N

Ground Level (mOD)
30.89

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling											
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)		
			30.39	0.50	Concrete			5.70		Moderate Flow				5.38			
Groundwater Observations During Drilling																	
						Start of Shift			End of Shift								
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						17/05/05								10.00			
Instrument Groundwater Observations																	
						Inst. [A] Type :											
			25.39	5.50	Gravel Filter	Instrument [A]				Remarks							
			24.89	6.00		Date	Time	Depth (m)	Level (mOD)								
					Slotted Standpipe												
			20.89	10.00													

Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap fitted at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS08

Boring Method Cable Percussion	Casing Diameter 200mm cased to 20.00m	Ground Level (mOD) 43.42	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317598.6 E 256602 N	Dates 20/05/2005- 24/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					43.22	0.20	TOPSOIL		
1.00	B1						Firm dark brown sandy CLAY containing occasional smooth sub-angular cobbles and fine to medium sub-angular to sub-rounded gravel		
1.50-1.95	U1					(2.20)			
2.00	B2								
2.50	J1				41.02	2.40	Stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
3.00-3.45	B3 U2								
3.50	J2								
4.00	B4								
4.50-4.95	SPT N=19			4,6/4,5,5,5					
5.00	B5								
6.00-6.45 6.00	SPT N=24 B6			3,7/9,4,5,6		(7.60)			
6.50	J3								
7.00	B7			20/05/2005:DRY					
				23/05/2005:DRY					
7.50-7.95	SPT N=19			5,5/4,6,5,4					
8.00	B8								
9.00-9.45 9.00	SPT N=21 B9			6,6/5,6,5,5					
9.50	J4								
					33.42	10.00			

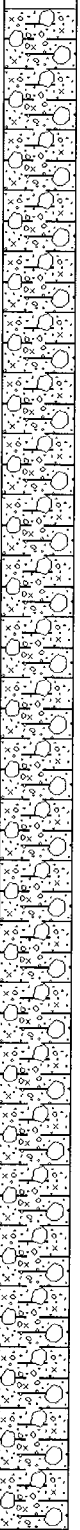
Remarks Permeability test carried out at 5.00m and 10.00m. Chiselling from 3.70m to 4.00m for 0.5 hours. Chiselling from 6.90m to 7.00m for 0.5 hours.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS08	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS08

Boring Method Cable Percussion	Casing Diameter 200mm cased to 20.00m	Ground Level (mOD) 43.42	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317598.6 E 256602 N	Dates 20/05/2005- 24/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00	B10						Stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
11.00	B11								
12.00-12.45 12.00	SPT N=33 B12			8,7/9,5,9,10					
12.50	J5								
13.00	B13								
14.00	B14								
15.00	B15					(10.00)			
16.00	B16			23/05/2005:DRY					
16.00-16.45 16.50	SPT N=40 J6			24/05/2005:DRY 8,9/10,12,8,10					
17.00	B17								
18.00	B18								
19.00-19.45 19.00	SPT N=46 B19			10,8/12,10,10,14					
19.50	J7								
				24/05/2005	23.42	20.00			

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Remarks Borehole terminated at scheduled depth. Chiselling from 10.80m to 11.00m for 1 hour. Chiselling from 15.00m to 15.30m for 1 hour.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS08	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS09

Boring Method Cable Percussion	Casing Diameter 200mm cased to 10.20m	Ground Level (mOD) 33.74	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317848 E 256619.4 N	Dates 12/05/2005- 13/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					33.54	0.20	TOPSOIL		
0.90 0.90-1.35	B1 U1					(1.50)	Firm brown sandy slightly gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-rounded fine to medium		
1.70 1.80-2.25 1.70	B2 SPT N=17 J1			5,5/4,3,4,6	32.04	1.70	Stiff to very stiff black sandy gravelly CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded to sub-angular fine to medium		
2.50	B3								
3.50 3.50 3.50-3.95	B4 J2 U2								
4.00	B5								
				12/05/2005:DRY 13/05/2005					
5.30-5.75 5.30 5.30	SPT N=17 J3 B6			2,2/3,4,4,6		(8.30)			
6.00	B7								
6.60-7.07	U3								
7.30 7.30	B8 J4								
8.40-8.85 8.40 8.40	SPT N=30 B9 J5			5,5/11,7,5,7					
9.00	B10								
				13/05/2005 16/05/2005	23.74	10.00			

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Remarks Standpipe installed to 10.20m. Virtual refusal met at 10.20m on boulder. Permeability test carried out at 5.00m. Chiselling from 9.10m to 9.50m for 1 hour. Chiselling from 9.50m to 9.80m for 0.5 hours.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS09	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS09

Boring Method Cable Percussion	Casing Diameter 200mm cased to 10.20m	Ground Level (mOD) 33.74	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317848 E 256619.4 N	Dates 12/05/2005- 13/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00	B11			16/05/2005	23.54	10.20	Stiff to very stiff black sandy gravelly CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded to sub-angular fine to medium Complete at 10.20m		

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Remarks Chiselling from 10.30m to 10.50m for 1 hour.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS09	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS09

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 200 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
317848 E 256619.4 N

Ground Level (mOD)
33.74

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
			33.24	0.50	Concrete															
					Cement/Bentonite Grout															
						Groundwater Observations During Drilling														
			31.04	2.70	Gravel Filter	Date	Start of Shift				End of Shift									
			30.74	3.00			Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
						12/05/05						4.50			DRY					
						13/05/05		4.50				10.00								
						16/05/05		10.00				10.20								
						Instrument Groundwater Observations														
						Inst. [A] Type :														
					Slotted Standpipe	Date	Instrument [A]			Remarks										
							Time	Depth (m)	Level (mOD)											
			23.74	10.00	Gravel Filter															
			23.54	10.20																

Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap fitted at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS10

Boring Method Cable Percussion	Casing Diameter 200mm cased to 7.80m	Ground Level (mOD) 40.00	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317591.8 E 256508.5 N	Dates 18/05/2005- 19/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.00	B1				39.80	0.20	TOPSOIL		
1.50-1.95	U1					(2.10)	Firm dark brown to greyish brown sandy slightly gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-angular fine to medium		
2.00	B2								
3.00	B3			Slight Flow(1) at 2.90m, rose to 2.50m in 10 mins. 1,1/1,1,2,2	37.70	2.30	Soft to firm greyish brown sandy CLAY containing occasional sub-rounded fine to medium gravel		▼1
3.00-3.45	SPT N=6					(1.70)			▽1
3.50	J1								
4.00	B4				36.00	4.00	Firm dark brown to greyish brown sandy slightly gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-angular fine to medium		
4.50-4.87	SPT 54/220			7,9/14,18,22	35.50	4.50	Dense grey silty sandy fine to coarse GRAVEL containing occasional smooth sub-rounded cobbles and boulders		
5.00	B5								
6.00-6.45	SPT N=45			18/05/2005: DRY					
6.00	J2			19/05/2005: 2.20m					
6.00	B6			8,10/9,12,12,12		(3.30)			
7.00	B7								
				19/05/2005	32.20	7.80	Complete at 7.80m		

Remarks Permeability test carried out at 7.80m. Virtual refusal met at 7.80m on boulders. Chiselling from 4.20m to 4.40m for 0.5 hours. Chiselling from 4.90m to 5.10m for 0.5 hours. Chiselling from 5.40m to 6.50m for 1 hour. Chiselling from 6.50m to 6.90m for 0.5 hours. Chiselling from 7.60m to 7.80m for 1 hour.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS10	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS11

Boring Method Cable Percussion	Casing Diameter 200mm cased to 11.50m	Ground Level (mOD) 38.68	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317745.2 E 256511.7 N	Dates 13/05/2005- 16/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1				38.48	0.20	TOPSOIL		
1.00 1.00-1.45	B1 U1					(2.20)	Firm brown sandy slightly gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-rounded fine to medium		
1.50	J2								
2.00-2.45 2.00	SPT N=21 B2			7,5/5,5,6,5					
2.50	J3				36.28	2.40	Stiff to very stiff black sandy gravelly CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
3.00 3.00-3.50	B3 U2								
3.50	J4								
4.00-4.45 4.00	SPT N=19 B4			5,5/5,4,5,5					
4.50	J5								
5.00 5.00-5.45	B5 U3 No Recovery								
5.50	J6								
6.00-6.45 6.00	SPT N=24 B6			7,7/6,6,7,5		(7.60)			
6.50	J7								
7.00 7.00-7.45	B7 U4								
7.50	J8								
8.00-8.45 8.00	SPT N=33 B8			7,8/7,9,9,8					
8.50	J9								
9.00	B9			13/05/2005: DRY					
9.00-9.45 9.50	SPT N=31 J10			16/05/2005: DRY 6,6/8,7,8,8					
					28.68	10.00			

Remarks Permeability test carried out at 5.00m and 10.00m.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS11	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS11

Boring Method Cable Percussion	Casing Diameter 200mm cased to 11.50m	Ground Level (mOD) 38.68	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317745.2 E 256511.7 N	Dates 13/05/2005- 16/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00 10.00-10.45	B10 U5						Stiff to very stiff black sandy gravelly CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
10.50	J11					(1.50)			
11.00-11.38 11.00	SPT 49/230 B11			79,12/19,30			Complete at 11.50m		
11.50	J12			16/05/2005	27.18	11.50			

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Remarks Standpipe installed to 11.00m. Virtual refusal met at 11.50m on boulders. Chiselling from 11.40m to 11.50m for 1 hour.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS11	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS11

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 200 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
317745.2 E 256511.7 N

Ground Level (mOD)
38.68

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
			38.18	0.50	Concrete															
					Cement/Bentonite Grout															
			36.18	2.50	Gravel Filter	Groundwater Observations During Drilling														
			35.68	3.00		Date	Start of Shift					End of Shift								
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
					13/05/05						9.00									
					16/05/05		9.00		DRY			11.50		DRY						
						Instrument Groundwater Observations														
						Inst. [A] Type :														
					Slotted Standpipe	Instrument [A]			Remarks											
						Date	Time	Depth (m)				Level (mOD)								
			27.68	11.00	Gravel Filter															
			27.18	11.50																

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap fitted at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS12

Boring Method Cable Percussion	Casing Diameter 200mm cased to 6.80m	Ground Level (mOD) 30.46	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317992 E 256416.1 N	Dates 16/05/2005- 17/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.00 1.00 1.00-1.45	J1 B1 U1				30.26	0.20	TOPSOIL Firm brown sandy slightly gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-angular to sub-rounded fine		
2.40-2.85 2.40	SPT N=8 J2			1,1/1,2,2,3		(3.50)			
2.80 2.80	J3 B2								
3.70	B3				26.76	3.70	Stiff to very stiff gravelly sandy CLAY containing occasional smooth sub-rounded to sub-angular cobbles and boulders. Gravel is sub-rounded fine to medium		
4.10-4.55 4.20	U2 B4								
5.00	B5					(3.10)			
5.80 5.50-5.95 5.80 6.00-6.23	J4 SPT N=23 B6 SPT 50/80			16/05/2005: DRY 17/05/2005: DRY 3,3/4,5,6,8 7,12/19,31 17/05/2005: DRY	23.66	6.80			
							Complete at 6.80m		

Remarks Virtual refusal met at 6.80m on boulder. Permeability test carried out at 5.00m. Driving boulder from 5.00m. Chiselling from 3.70m to 4.00m for 0.5 hours. Chiselling from 5.80m to 6.10m for 1 hour. Chiselling from 6.30m to 6.40m for 0.5 hours. Chiselling from 6.70m to 6.80m for 1.5 hours.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS12	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS13

Boring Method Cable Percussion	Casing Diameter 200mm cased to 13.00m	Ground Level (mOD) 39.25	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317630.8 E 256417.1 N	Dates 17/05/2005- 19/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					39.05	0.20	TOPSOIL		
1.00 1.00	J1 B1						Firm brown sandy gravelly CLAY. Gravel is sub-rounded to sub-angular fine to medium		
1.50 1.50-1.95	J2 U1					(2.70)			
2.00 2.00 2.30-2.75	B2 J3 SPT N=16			2,2/4,6,2,4					
2.60	J4								
3.00 3.00	B3 J5				36.35	2.90	Stiff to very stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded to sub-angular fine to coarse		
3.50	J6								
3.90-4.00	U2 Refusal								
				17/05/2005:DRY 18/05/2005:DRY					
4.70 4.70 4.90-5.35	B4 J7 SPT N=39			4,5/7,9,11,12					
5.50	J8								
6.00 6.20-6.65 6.30 6.30	B5 SPT N=32 J9 B6			3,4/4,8,9,11		(7.10)			
6.80-7.25	U3								
7.40 7.40	B7 J10								
8.40-8.85 8.40 8.40	SPT N=39 B8 J11			5,7/7,9,11,12					
9.40 9.40 9.50-9.95	B9 J12 U4				29.25	10.00			


Remarks Permeability test carried out at 5.00m. Chiselling from 4.00m to 4.10m for 0.5 hours. Chiselling from 4.10m to 4.70m for 1.5 hours. Chiselling from 5.50m to 5.70m for 0.5 hours. Chiselling from 7.80m to 8.00m for 0.5 hours.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS13	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS13

Boring Method Cable Percussion	Casing Diameter 200mm cased to 13.00m	Ground Level (mOD) 39.25	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317630.8 E 256417.1 N	Dates 17/05/2005- 19/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00	J13			18/05/2005: DRY 19/05/2005: DRY			Stiff to very stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded to sub-angular fine to coarse		
11.00	B10								
11.20	J14								
11.50-11.95	SPT N=35			5,5/8,8,10,9		(3.00)			
12.10 12.10	J15 B11								
12.60-12.90	SPT 50/150			7,12/21,28,1					
				19/05/2005	26.25	13.00	Complete at 13.00m		

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Remarks Borehole terminated due to obstruction. Chiselling from 12.90m to 13.00m for 1.5 hours.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS13	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS14

Boring Method Cable Percussion	Casing Diameter 200mm cased to 9.50m	Ground Level (mOD) 29.55	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318039.5 E 256585 N	Dates 25/05/2005- 26/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.00-1.45 1.00	SPT N=4 J1			1,1/1,1,1,1	29.45	0.10	TOPSOIL Soft black laminated sandy CLAY containing occasional smooth sub-rounded cobbles and fine to medium sub-rounded gravel		
1.60 1.60	B1 J2					(3.60)			
2.00-2.45	U1								
2.70	B2								
3.00-3.45	SPT N=4			1,2/1,1,1,1					
3.30	B3								
4.30 4.30 4.40-4.85	J3 B4 U2 No Recovery				25.85	3.70	Firm to stiff black sandy gravelly CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
5.50-5.95 5.50 5.50	SPT N=21 J4 B5			3,3/4,7,5,5					
6.50 6.50 6.50-6.95	B6 J5 U3					(5.80)			
7.50 7.50	B7 J6			25/05/2005:DRY 26/05/2005:DRY					
8.00	J7								
8.30-8.75	SPT N=68			7,13/15,12,19,22					
				26/05/2005	20.05	9.50			

Remarks Permeability test carried out at 9.00m. Virtual refusal met at 9.50m on boulder. Seepage of water from surface. Chiselling from 3.70m to 4.00m for 0.5 hours. Chiselling from 4.10m to 4.40m for 1 hour. Chiselling from 4.40m to 5.00m for 1.5 hours. Chiselling from 5.20m to 5.40m for 0.5 hours. Chiselling from 7.90m to 8.30m for 0.5 hours. Chiselling from 9.40m to 9.50m for 1 hour.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS14	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS15

Boring Method Cable Percussion	Casing Diameter 200mm cased to 12.20m	Ground Level (mOD) 35.75	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318211.1 E 256755.8 N	Dates 23/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.00	B1				35.55	0.20	TOPSOIL		
2.00	B2					(4.90)	MADE GROUND: Soft to firm brown gravelly sandy CLAY containing occasional wire, brick, wood and concrete		
3.00	B3								
4.00-4.45 4.00	CPT N=26 B4			6,6/7,6,7,6					
5.00 5.10-5.55	B5 U1 No Recovery				30.65	5.10	Firm light brown to orange brown sandy slightly gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-rounded fine to medium		
5.50	J1					(1.10)			
6.00-6.45 6.00	CPT N=19 B6			4,4/5,5,5,4					
6.50	J2				29.55	6.20	Stiff black sandy gravelly CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
7.00 7.00-7.45	B7 U2 Short								
7.50	J3								
8.00-8.45 8.00	SPT N=26 B8			6,6/6,7,6,7		(3.80)			
8.50	J4								
9.00 9.00-9.45	B9 U3								
9.50	J5								
10.00-10.45	SPT N=32			7,8/8,8,8,8	25.75	10.00			

Remarks Permeability test carried out at 6.00m and 10.00m. Chiselling from 0.50m to 3.50m for 1.5 hours. Chiselling from 3.90m to 5.10m for 1.5 hours.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS15	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
GS15

Boring Method Cable Percussion	Casing Diameter 200mm cased to 12.20m	Ground Level (mOD) 35.75	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318211.1 E 256755.8 N	Dates 23/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00	B10						Stiff black sandy gravelly CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
10.50	J6								
11.00 11.00-11.45	B11 U4 No Recovery					(2.20)			
11.50	J7								
12.00	B12			23/05/2005	23.55	12.20			
							Complete at 12.20m		

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Remarks Virtual refusal met at 12.20m on boulders. Chiselling from 11.80m to 12.20m for 1 hour.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS15	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS16

Boring Method Cable Percussion	Casing Diameter 200mm cased to 11.60m	Ground Level (mOD) 33.71	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318271.3 E 256780.5 N	Dates 27/05/2005- 30/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					33.51	0.20	TOPSOIL		
1.00	B1						MADE GROUND: Soft to firm brown gravelly sandy CLAY containing occasional brick, plastic, wood, material, wire, metal and concrete		
1.50-1.95	SPT N=37			1,6/5,7,11,14					
2.00	B2					(4.30)			
3.00-3.45 3.00	SPT N=16 B3			9,11/7,4,4,1					
3.50	J1								
4.00	B4								
4.50-4.95	U1				29.27	4.50	Stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
5.00	B5			27/05/2005: DRY 30/05/2005: DRY					
6.00-6.45 6.00	SPT N=32 B6			7,8/7,7,8,10					
6.50	J2					(4.50)			
7.00	B7								
7.50-7.95	SPT N=35			5,8/6,9,9,11					
8.00	B8								
9.00-9.45 9.50	SPT N=40 J3			Slight Flow(1) at 9.00m, rose to 8.60m in 20 mins. 4,9/7,10,10,13	24.71	9.00	Dense grey silty sandy fine to coarse sub-rounded GRAVEL containing occasional smooth sub-rounded cobbles and boulders		
						(1.00)			
					23.71	10.00			

Remarks Chiselling from 0.60m to 1.00m for 0.5 hours. Chiselling from 9.20m to 9.60m for 1 hour.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS16	

Glover Site Investigations Ltd							Site	Borehole Number	
Boring Method		Casing Diameter		Ground Level (mOD)		Client	FINGAL LANDFILL PROJECT	GS16	
Cable Percussion		200mm cased to 11.60m		33.71		FINGAL COUNTY COUNCIL	Job Number	05-271	
		Location		Dates		Engineer	Sheet		
		318271.3 E 256780.5 N		27/05/2005-30/05/2005		RPS-MCOS	2/2		
Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00	B9						Dense grey silty sandy fine to coarse sub-rounded GRAVEL containing occasional smooth sub-rounded cobbles and boulders		
10.50-10.95	SPT N=43			5,11/7,8,14,14		(1.60)			
11.00	B10								
11.60	J4			30/05/2005	22.11	11.60	Complete at 11.60m		
<p style="color: red; transform: rotate(-45deg); opacity: 0.5;">Consent of copyright owner required for any other use.</p>									
Remarks Virtual refusal met at 11.60m on boulders. Chiselling from 11.40m to 11.60m for 1 hour.							Scale (approx)	Logged By	
							1:50	TR	
							Figure No.		
							05-271.GS16		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS17

Boring Method Cable Percussion	Casing Diameter 200mm cased to 11.50m	Ground Level (mOD) 35.08	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317824 E 256419.8 N	Dates 23/05/2005- 24/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.00-1.45 1.00 1.00	SPT N=9 J1 B1			1,1/2,1,3,3	34.78	(0.30) 0.30	TOPSOIL		
2.00 2.00 2.00-2.45	B2 J2 U1					(2.30)	Firm brown sandy gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-rounded fine to medium		
2.70 2.70 3.00-3.45 3.00 3.00	B3 J3 SPT N=28 B4 J4			5,4/6,7,7,8	32.48	2.60	Stiff to very stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
4.00 4.00 4.00-4.45	J5 B5 U2			23/05/2005: DRY 24/05/2005					
5.10-5.55 5.10	SPT N=27 J6			3,8/4,7,7,9					
6.20-6.65 6.40 6.40	U3 B6 J7					(7.40)			
7.30-7.75 7.30 7.30 7.70	SPT N=31 B7 J8 B8			3,4/10,5,7,9					
8.40 8.40-8.85	B9 U4								
9.90	B10				25.08	10.00			

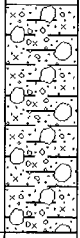
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Remarks Permeability test carried out at 5.00m and 10.50m.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS17	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS17

Boring Method Cable Percussion	Casing Diameter 200mm cased to 11.50m	Ground Level (mOD) 35.08	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317824 E 256419.8 N	Dates 23/05/2005- 24/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
9.90	J9								
10.30-10.52	SPT 24/70			13,12/24		(1.50)	Stiff to very stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
10.50	J10								
11.50-11.50	SPT 25*/0 50/0			24/05/2005 25,0/50	23.58	11.50	Complete at 11.50m		

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Remarks Virtual refusal met at 11.50m on boulder. Chiselling from 10.10m to 10.20m for 0.5 hours. Chiselling from 10.50m to 11.30m for 1 hour. Chiselling from 11.30m to 11.50m for 1 hour.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS17	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS18

Boring Method Cable Percussion	Casing Diameter 200mm cased to 11.80m	Ground Level (mOD) 37.38	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318145.7 E 256772.8 N	Dates 25/05/2005- 26/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					37.28	0.10	TOPSOIL		
1.00	B1						MADE GROUND: Soft to firm brown to black gravelly sandy CLAY containing occasional brick, wood, concrete, plastic and metal		
1.50-1.95	SPT N=27			2,1/7,9,7,4					
2.00	B2					(4.40)			
3.00-3.45 3.00	SPT N=23 B3			4,7/7,6,5,5					
3.50	J1								
4.00	B4								
4.50-4.95	SPT N=19			3,4/4,5,5,5	32.88	4.50	Firm dark brown sandy CLAY		
5.00	B5					(0.90)			
					31.98	5.40	Medium dense brown silty fine to medium SAND		
						(0.50)			
6.00-6.45 6.00	SPT N=6 B6			1,1/2,2,1,1	31.48	5.90	Loose to medium dense dark brown silty sandy fine to medium sub-rounded GRAVEL containing occasional pockets of brown gravelly clay		
6.50	J2					(1.60)			
7.00	B7								
7.50-7.95	U1 Short				29.88	7.50	Stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
8.00	B8					(2.50)			
9.00-9.45 9.00	SPT N=36 B9			7,8/9,9,8,10					
9.50	J3			25/05/2005:DRY 26/05/2005:6.90m	27.38	10.00			

Remarks Permeability test carried out at 5.00m. Chiselling from 1.20m to 1.50m for 1 hour. Chiselling from 3.70m to 4.10m for 1 hour. Chiselling from 7.90m to 8.10m for 1 hour. Chiselling from 9.70m to 9.80m for 1 hour.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.GS18	

Glover Site Investigations Ltd							Site	Borehole Number	
Boring Method		Casing Diameter		Ground Level (mOD)		Client	FINGAL LANDFILL PROJECT	GS18	
Cable Percussion		200mm cased to 11.80m		37.38		FINGAL COUNTY COUNCIL	Job Number	05-271	
		Location		Dates		Engineer	Sheet		
		318145.7 E 256772.8 N		25/05/2005- 26/05/2005		RPS-MCOS	2/2		
Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00	B10						Stiff black gravelly sandy CLAY containing occasional smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
10.50-10.95	SPT N=41			8,10/8,12,12,9		(1.80)			
11.00	B11								
11.80	J4			26/05/2005	25.58	11.80	Complete at 11.80m		
<p style="color: red; transform: rotate(-45deg); opacity: 0.5;">Consent of copyright owner required for any other use.</p>									
Remarks Standpipe installed to 11.80m. Virtual refusal met at 11.80m on boulder. Chiselling from 11.70m to 11.80m for 1.5 hours.							Scale (approx)	Logged By	
							1:50	TR	
							Figure No.		
							05-271.GS18		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
GS18

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 200 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
318145.7 E 256772.8 N

Ground Level (mOD)
37.38

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling																
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)							
			36.88	0.50	Concrete																	
					Cement/Bentonite Grout																	
			34.88	2.50	Gravel Filter	Groundwater Observations During Drilling																
			34.38	3.00		Date	Start of Shift					End of Shift										
						Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)							
						25/05/05																
						26/05/05	0800	10.00		6.90	30.48	1700	10.00	11.80						DRY		
						Instrument Groundwater Observations																
						Inst. [A] Type :																
					Slotted Standpipe	Instrument [A]			Remarks													
						Date	Time	Depth (m)				Level (mOD)										
			26.38	11.00	Gravel Filter																	
			25.58	11.80																		

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap fitted at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR01A

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75	Casing Diameter 114mm cased to 17.50m	Ground Level (mOD) 34.70	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Method : SYMMETRX TO 17.50m & CORING TO 27.70m	Location 318657.3 E 259233.2 N	Dates 05/05/2005-06/05/2005	Engineer RPS-MCOS	Sheet 1/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								MADE GROUND: Brown sandy gravelly CLAY		
						33.70	1.00	DRILLER'S DESCRIPTION: Black gravelly CLAY		
					Moderate Flow(1) at 3.00m.		(3.00)			∇1
						30.70	2.00	DRILLER'S DESCRIPTION: Brown slightly sandy GRAVEL becoming sandier with depth		
			0	0			(6.00)			
						24.70	10.00			

Remarks Borehole terminated at scheduled depth. Standpipe installed at 27.70m. Descriptions based on drillers logs. No testing or sampling of overburden required. Hand dug inspection pit to 1.20m.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HR01A	

Glover Site Investigations Ltd

Site FINGAL LANDFILL PROJECT	Borehole Number HR01A
Client FINGAL COUNTY COUNCIL	Job Number 05-271
Engineer RPS-MCOS	Sheet 2/3

Machine : HANS ENGLAND	Casing Diameter 114mm cased to 17.50m	Ground Level (mOD) 34.70
Flush : AIR/MIST		
Core Dia: 75		
Method : SYMMETRIX TO 17.50m & CORING TO 27.70m	Location 318657.3 E 259233.2 N	Dates 05/05/2005-06/05/2005

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					Moderate Flow(2) at 10.00m.		(0.50)	DRILLER'S DESCRIPTION: Brown slightly sandy GRAVEL becoming sandier with depth		∇2
						24.20	10.50	DRILLER'S DESCRIPTION: Gravelly SAND		
							(1.00)			
					05/05/2005	23.20	11.50	DRILLER'S DESCRIPTION: Slightly sandy GRAVEL		
					06/05/2005:6.00m		(1.50)			
					Moderate Flow(3) at 13.00m.	21.70	13.00	DRILLER'S DESCRIPTION: Sandy GRAVEL		∇3
							(1.00)			
						20.70	14.00	DRILLER'S DESCRIPTION: Very sandy GRAVEL		
							(0.50)			
						20.20	14.50	DRILLER'S DESCRIPTION: Sandy GRAVEL with occasional cobbles		
							(2.50)			
					Moderate Flow(4) at 17.20m.	17.70	17.00	Strong thin to medium bedded medium grey fine grained micritic LIMESTONE interbedded in medium beds of moderately weak to weak thinly laminated very dark grey shaley mudstone.		∇4
17.50				4						
17.75				Non-Intact						
17.85				28						
18.05				29						
18.40	100	67	39	4			(3.00)	Discontinuities are close to medium spaced in limestone, very to extremely close in mudstone, dipping 20-30 degrees. Bedding parallel, smooth, planar, tight, clean.		
18.80				45				Discontinuities in mudstone, medium spaced, dipping 70 degrees, smooth planar, tight, coated in very thin calcite		
19.10				2						
19.55	100	93	60							
						14.70	20.00			

Remarks	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HR01A	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR01A

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75	Casing Diameter 114mm cased to 17.50m	Ground Level (mOD) 34.70	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Method : SYMMETRIX TO 17.50m & CORING TO 27.70m	Location 318657.3 E 259233.2 N	Dates 05/05/2005-06/05/2005	Engineer RPS-MCOS	Sheet 3/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.60				4				<p>Strong thin to medium bedded medium grey fine grained micritic LIMESTONE interbedded in medium beds of moderately weak to weak thinly laminated very dark grey shaley mudstone.</p> <p>Discontinuities are close to medium spaced in limestone, very to extremely close in mudstone, dipping 20-30 degrees. Bedding parallel, smooth, planar, tight, clean.</p> <p>Discontinuities in mudstone, medium spaced, dipping 70 degrees, smooth planar, tight, coated in very thinly calcite</p>	[Brick Pattern]	
20.80				45						
21.25	97	80	60	2						
21.75				48						
22.10				3						
22.40				55						
23.10	100	93	57	2						
23.20				NI						
23.60				35						
24.60	97	84	63	18		(7.70)				
25.00				3						
25.10				Non-Intact						
25.60	100	77	62	10						
26.40				5						
26.80	100	96	62	20						
27.10				4						
27.55				20						
27.70					06/05/2005:4.20m	7.00	27.70	Complete at 27.70m		

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Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.HR01A		

Glover Site Investigations Ltd

Site FINGAL LANDFILL PROJECT	Borehole Number HR01A
Client FINGAL COUNTY COUNCIL	Job Number 05-271
Engineer RPS-MCOS	Sheet 1/1

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 114 mm
	Location 318657.3 E 259233.2 N

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
			34.40	0.30	Concrete															
			31.70	3.00	Cement/Bentonite Grout			3.00 10.00 13.00 17.20		Moderate Flow Moderate Flow Moderate Flow Moderate Flow										
Groundwater Observations During Drilling																				
Topfill																				
Instrument Groundwater Observations																				
Inst. [A] Type :																				
			18.60	16.10	Cement/Bentonite Grout	Date	Instrument [A]				Remarks									
			16.60	18.10	Gravel Filter	Time	Depth (m)	Level (mOD)												
			15.95	18.75	Gravel Filter															
			7.00	27.70	Slotted Standpipe															

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR01B

Boring Method SYMMETRIX DRILLING	Casing Diameter 114mm cased to 17.00m	Ground Level (mOD) 34.93	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318657.7 E 259238.2 N	Dates 09/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							MADE GROUND: Brown sandy gravelly CLAY		
					33.93	1.00	DRILLER'S DESCRIPTION: Black slightly sandy CLAY containing occasional fine to medium sub-rounded gravel		
				Moderate Flow(1) at 2.50m.	32.43	2.50	DRILLER'S DESCRIPTION: Black slightly sandy clayey GRAVEL with cobbles		∇1
						(2.70)			
				Moderate Flow(2) at 5.20m.	29.73	5.20	DRILLER'S DESCRIPTION: GRAVEL		∇2
						(2.30)			
					27.43	7.50	DRILLER'S DESCRIPTION: SAND and GRAVEL with cobbles		
						(1.00)			
					26.43	8.50	DRILLER'S DESCRIPTION: Gravelly SAND		
						(1.50)			
					24.93	10.00			

Remarks Symmetrix drilling to 17.00m. Descriptions based on driller's logs. No testing or sampling of overburden. Standpipe installed to 17.00m. Borehole terminated at scheduled depth.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HR01B	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR01B

Boring Method SYMMETRIX DRILLING	Casing Diameter 114mm cased to 17.00m	Ground Level (mOD) 34.93	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318657.7 E 259238.2 N	Dates 09/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.50)	DRILLER'S DESCRIPTION: Gravelly SAND		
					24.43	10.50	DRILLER'S DESCRIPTION: Brown gravelly CLAY containing cobbles		
						(1.50)			
				Moderate Flow(3) at 12.00m.	22.93	12.00	DRILLER'S DESCRIPTION: Sandy GRAVEL containing cobbles		∇3
						(5.00)			
				09/05/2005	17.93	17.00	Complete at 17.00m		

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Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.HR01B		

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Site FINGAL LANDFILL PROJECT	Borehole Number HR01B
Client FINGAL COUNTY COUNCIL	Job Number 05-271
Engineer RPS-MCOS	Sheet 1/1

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 114 mm
	Location 318657.7 E 259238.2 N

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			34.43	0.50	Concrete			2.50		Moderate Flow						
					Cement/Bentonite Grout			5.20		Moderate Flow						
								12.00		Moderate Flow						
			31.93	3.00		Groundwater Observations During Drilling										
						Date	Start of Shift					End of Shift				
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						09/05/05						1700	17.00			
					Topfill	Instrument Groundwater Observations										
						Inst. [A] Type :										
			24.43	10.50		Date	Instrument [A]			Remarks						
						Time	Depth (m)	Level (mOD)								
					Cement/Bentonite Grout											
			22.23	12.70	Gravel Filter											
			21.93	13.00												
					Slotted Standpipe											
			17.93	17.00												

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR02A

Boring Method SYMMETRIX DRILLING	Casing Diameter 168mm cased to 33.00m	Ground Level (mOD) 37.45	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318665.2 E 258817.5 N	Dates 16/05/2005- 17/05/2005	Engineer RPS-MCOS	Sheet 1/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					37.35	0.10	TOPSOIL DRILLER'S DESCRIPTION: Brown BOULDER CLAY		
						(9.90)			
					27.45	10.00			

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Remarks Descriptions based on driller's logs. No testing or sampling required. Standpipe installed to 33.00m. Borehole terminated at scheduled depth.	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR2A	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR02A

Boring Method SYMMETRIX DRILLING	Casing Diameter 168mm cased to 33.00m	Ground Level (mOD) 37.45	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318665.2 E 258817.5 N	Dates 16/05/2005- 17/05/2005	Engineer RPS-MCOS	Sheet 2/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				Moderate Flow(1) at 10.00m.			DRILLER'S DESCRIPTION: SAND and GRAVEL		∇1
				Moderate Flow(2) at 19.00m.		(10.00)			
				16/05/2005					
				17/05/2005	17.45	20.00			∇2

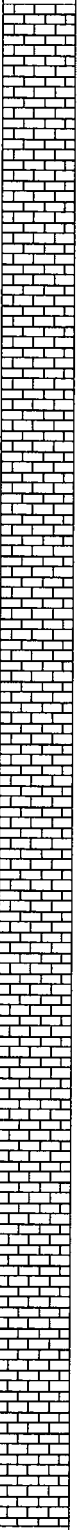
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Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.HR2A		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR02A

Boring Method SYMMETRIX DRILLING	Casing Diameter 168mm cased to 33.00m	Ground Level (mOD) 37.45	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318665.2 E 258817.5 N	Dates 16/05/2005- 17/05/2005	Engineer RPS-MCOS	Sheet 3/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					7.45	(10.00)	Black fine to medium grained LIMESTONE containing thin mudstone layers. Highly fractured		

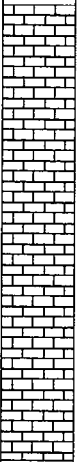
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Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.HR2A		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR02A

Boring Method SYMMETRIX DRILLING	Casing Diameter 168mm cased to 33.00m	Ground Level (mOD) 37.45	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318665.2 E 258817.5 N	Dates 16/05/2005- 17/05/2005	Engineer RPS-MCOS	Sheet 4/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							Black fine to medium grained LIMESTONE containing thin mudstone layers. Highly fractured		
				17/05/2005	4.45	33.00	Complete at 33.00m		

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Remarks	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR2A	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR02A

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 168 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
318665.2 E 258817.5 N

Ground Level (mOD)
37.45

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			36.95	0.50	Concrete			10.00 19.00		Moderate Flow Moderate Flow						
						Groundwater Observations During Drilling										
						Date	Start of Shift					End of Shift				
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
					Cement/Bentonite Grout	16/05/05					1700	20.00				
						17/05/05	0800	20.00				33.00				
						Instrument Groundwater Observations										
						Inst. [A] Type :										
						Date	Instrument [A]			Remarks						
							Time	Depth (m)	Level (mOD)							
			16.45	21.00	Gravel Filter											
			15.95	21.50												
					Slotted Standpipe											
			4.45	33.00												

Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR02B

Boring Method SYMMETRIX DRILLING	Casing Diameter 168mm cased to 15.70m	Ground Level (mOD) 37.30	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318665.9 E 258810.8 N	Dates 17/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					37.20	0.10	TOPSOIL DRILLER'S DESCRIPTION: Brown BOULDER CLAY		
				Slight Flow(1) at 4.00m.		(9.40)			∇1
				Moderate Flow(2) at 9.50m.	27.80	9.50 (0.50)	DRILLER'S DESCRIPTION: GRAVEL and SAND		∇2
					27.30	10.00			

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Remarks Standpipe installed to 15.70m. No testing or sampling required. Descriptions based on driller's logs. Borehole terminated at scheduled depth.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HR2B	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR02B

Boring Method SYMMETRIX DRILLING	Casing Diameter 168mm cased to 15.70m	Ground Level (mOD) 37.30	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318665.9 E 258810.8 N	Dates 17/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				Moderate Flow(3) at 13.00m.		(5.70)	DRILLER'S DESCRIPTION: GRAVEL and SAND		
				17/05/2005	21.60	15.70	Complete at 15.70m		

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Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.HR2B		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR02B

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 168 mm	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318665.9 E 258810.8 N	Ground Level (mOD) 37.30	Engineer RPS-MCOS
		Sheet 1/1	

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			36.80	0.50	Concrete			4.00 9.50 13.00		Slight Flow Moderate Flow Moderate Flow						
Groundwater Observations During Drilling																
					Cement/Bentonite Grout	Date	Start of Shift					End of Shift				
						Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	
						17/05/05						15.70				
Instrument Groundwater Observations																
Inst. [A] Type :																
					Gravel Filter	Date	Instrument [A]			Remarks						
			27.70	9.60		Time	Depth (m)	Level (mOD)								
			26.60	10.70												
					Slotted Standpipe											
			21.60	15.70												

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR03

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75	Casing Diameter 114mm cased to 10.00m	Ground Level (mOD) 59.32	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Method : SYMMETRIX DRILLING TO 10.00m & CORING TO 20.20m	Location 319069.9 E 258662.5 N	Dates 10/05/2005	Engineer RPS-MCOS	Sheet 1/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								TOPSOIL		
						58.82	(0.50) 0.50	DRILLER'S DESCRIPTION: Brown slightly sandy CLAY		
						57.82	(1.00) 1.50	DRILLER'S DESCRIPTION: Brown SAND with occasional cobbles		
						55.32	(2.50) 4.00	DRILLER'S DESCRIPTION: Black clay bound SAND		
						54.32	(1.00) 5.00	DRILLER'S DESCRIPTION: Dark brown sandy SILT		
						53.82	(0.50) 5.50	DRILLER'S DESCRIPTION: Grey silty GRAVEL and SAND		
						52.32	(1.50) 7.00	DRILLER'S DESCRIPTION: Grey silty SAND with gravel		
						50.32	(2.00) 9.00	DRILLER'S DESCRIPTION: Moderately strong thinly bedded silty micritic LIMESTONE. Jointing bedding parallel, dipping 20 degrees.		
						49.32	(1.00) 10.00	DRILLER'S DESCRIPTION: Medium spaced joints dipping 70 degrees, planar smooth, tight, clean or thin calcitic mineral coating		
10.00										

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Seepage(1) at 8.50m.

Remarks Borehole terminated at scheduled depth. Hand dug inspection pit to 1.00m. Descriptions based on drillers logs. No testing or sampling of overburden required. Packer tests carried out at 13.50m and 20.20m = Single. Standpipe installed to 20.20m.	Scale (approx)	Logged By
	1:50	AM
Figure No. 05-271.HR03		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR03

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75	Casing Diameter 114mm cased to 10.00m	Ground Level (mOD) 59.32	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Method : SYMMETRIX DRILLING TO 10.00m & CORING TO 20.20m	Location 319069.9 E 258662.5 N	Dates 10/05/2005	Engineer RPS-MCOS	Sheet 2/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.70	90	27	0	Non-Intact				Moderately strong thinly bedded silty micritic LIMESTONE. Jointing bedding parallel, dipping 20 degrees, closely spaced to very closely spaced to 13.60m, planar, smooth, tight, clean, occasional slightly weathered slightly stained/weak, crumbly. Below 13.60m, medium to closely spaced.		
11.00								Medium spaced joints dipping 70 degrees, planar smooth, tight, clean or thin calcitic mineral coating		
12.50	100	90	26	24						
13.20										
13.30				Non-Intact						
13.60	100	71	68	12						
14.70										
16.20	100	87	83	10		(10.00)				
17.70										
19.20	93	90	80	10						
	100	100	69	9						
						39.32	20.00			

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Remarks	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.HR03	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR03

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75	Casing Diameter 114mm cased to 10.00m	Ground Level (mOD) 59.32	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Method : SYMMETRIX DRILLING TO 10.00m & CORING TO 20.20m	Location 319069.9 E 258662.5 N	Dates 10/05/2005	Engineer RPS-MCOS	Sheet 3/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.20					10/05/2005	39.12	20.20	Moderately strong thinly bedded silty micritic LIMESTONE. Jointing bedding parallel, dipping 20 degrees. Complete at 20.20m		

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Remarks	Scale (approx)	Logged By
	1:50	AM
Figure No. 05-271.HR03		

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Site
FINGAL LANDFILL PROJECT
Borehole Number
HR03

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 114 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
319069.9 E 258662.5 N

Ground Level (mOD)
59.32

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling														
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)					
						Groundwater Observations During Drilling														
						Date	Start of Shift					End of Shift								
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
			58.82	0.50	Concrete			8.50		Seepage										
					Cement/Bentonite Grout															
			49.92	9.40	Gravel Filter															
			47.97	11.35	Slotted Standpipe															
			39.12	20.20																

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Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap at base of standpipe.

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Site
FINGAL LANDFILL PROJECT

Borehole Number
HR04

Boring Method SYMMETRIX DRILLING	Casing Diameter 114mm cased to 31.50m	Ground Level (mOD) 72.47	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317704.4 E 258737.7 N	Dates 12/05/2005- 16/05/2005	Engineer RPS-MCOS	Sheet 1/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					72.32	0.15	TOPSOIL		
						(1.65)	DRILLER'S DESCRIPTION: Light brown BOULDER CLAY		
					70.67	1.80	DRILLER'S DESCRIPTION: Dark BOULDER CLAY		
						(8.20)			
				12/05/2005 16/05/2005	62.47	10.00			

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Remarks
Borehole terminated at scheduled depth.
Descriptions based on driller's logs.
No testing or sampling required.
Standpipe installed to 29.00m.
Borehole collapsed between 29.00m - 31.50m.

Scale (approx)	1:50	Logged By	TR
Figure No.	05-271.HR04		

Glover Site Investigations Ltd

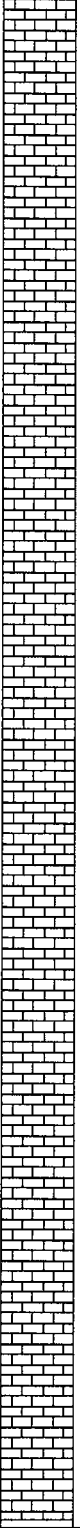
Site
FINGAL LANDFILL PROJECT
Borehole Number
HR04

Boring Method SYMMETRIX DRILLING	Casing Diameter 114mm cased to 31.50m	Ground Level (mOD) 72.47	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317704.4 E 258737.7 N	Dates 12/05/2005- 16/05/2005	Engineer RPS-MCOS	Sheet 2/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							DRILLER'S DESCRIPTION: Brown BOULDER CLAY		
					54.47	18.00	Brown highly weathered fine grained MUDSTONE		
					52.47	20.00			

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Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.HR04		

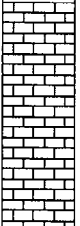
Glover Site Investigations Ltd						Site FINGAL LANDFILL PROJECT		Borehole Number HR04	
Boring Method SYMMETRIX DRILLING		Casing Diameter 114mm cased to 31.50m		Ground Level (mOD) 72.47		Client FINGAL COUNTY COUNCIL		Job Number 05-271	
		Location 317704.4 E 258737.7 N		Dates 12/05/2005- 16/05/2005		Engineer RPS-MCOS		Sheet 3/4	
Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					42.47	30.00	Dark grey fine to medium grained LIMESTONE interbedded with siltstone		
Remarks							Scale (approx) 1:50	Logged By TR	Figure No. 05-271.HR04

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Site
FINGAL LANDFILL PROJECT
Borehole Number
HR04

Boring Method SYMMETRIX DRILLING	Casing Diameter 114mm cased to 31.50m	Ground Level (mOD) 72.47	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317704.4 E 258737.7 N	Dates 12/05/2005- 16/05/2005	Engineer RPS-MCOS	Sheet 4/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				16/05/2005	40.97	31.50	Dark grey fine to medium grained LIMESTONE interbedded with siltstone		
							Complete at 31.50m		

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Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.HR04		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR04

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 114 mm

Client
FINGAL COUNTY COUNCIL
Job Number
05-271

Location
317704.4 E 258737.7 N
Ground Level (mOD)
72.47

Engineer
RPS-MCOS
Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling															
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)						
			71.97	0.50	Concrete																
					Cement/Bentonite Grout	Groundwater Observations During Drilling															
						Start of Shift					End of Shift										
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)					
						12/05/05						1700	9.00								
						16/05/05	0800	9.00					31.50								
						Instrument Groundwater Observations															
						Inst. [A] Type :															
			53.47	19.00	Gravel Filter	Date	Instrument [A]			Remarks											
			53.27	19.20			Time	Depth (m)	Level (mOD)												
					Slotted Standpipe																
			43.47	29.00	Gravel Filter																
			40.97	31.50																	

Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap at base of standpipe.

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Site
FINGAL LANDFILL PROJECT


Borehole Number
HR05

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75	Casing Diameter 114mm cased to 10.75m	Ground Level (mOD) 74.30	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Method : SYMMETRIX DRILLING TO 10.75m & CORING TO 20.50m	Location 317374.9 E 258500.4 N	Dates 11/05/2005- 12/05/2005	Engineer RPS-MCOS	Sheet 1/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						73.95	(0.35) 0.35	TOPSOIL		
							(2.65)	DRILLER'S DESCRIPTION: Brown sandy silty CLAY		
						71.30	3.00	DRILLER'S DESCRIPTION: Black BOULDER CLAY		
							(7.00)			
					Seepage(1) at 8.50m.	64.30	10.00			

Remarks Borehole terminated at scheduled depth. Descriptions based on drillers logs. No sampling or testing required. Standpipe installed to 20.50m.	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.HR05	

Glover Site Investigations Ltd						Site FINGAL LANDFILL PROJECT		Borehole Number HR05		
Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75		Casing Diameter 114mm cased to 10.75m		Ground Level (mOD) 74.30		Client FINGAL COUNTY COUNCIL		Job Number 05-271		
Method : SYMMETRIX DRILLING TO 10.75m & CORING TO 20.50m		Location 317374.9 E 258500.4 N		Dates 11/05/2005- 12/05/2005		Engineer RPS-MCOS		Sheet 2/3		
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.75	29	6	0			63.55	10.75	DRILLER'S DESCRIPTION: Black BOULDER CLAY		
11.60	20	0	0		Moderate Flow(2) at 11.60m.			Strong thinly laminated very dark grey MUDSTONE, mostly highly weathered to a firm clay very to extremely closely spaced fractures dipping 20 degrees, planar, smooth, either clean or filled with gravelly clay, intersecting with similar set dipping 60 degrees, medium spaced, non-intact recovery		V2
13.10	93	21	0							
14.45	93	19	0		Non-Intact		(9.25)			
15.90	100	30	0							
17.40	100	56	0							
19.00					11/05/2005 12/05/2005					
20.00	93	50	13			54.30	20.00			
Remarks								Scale (approx) 1:50	Logged By AM	Figure No. 05-271.HR05

Glover Site Investigations Ltd						Site FINGAL LANDFILL PROJECT		Borehole Number HR05		
Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75		Casing Diameter 114mm cased to 10.75m		Ground Level (mOD) 74.30		Client FINGAL COUNTY COUNCIL		Job Number 05-271		
Method : SYMMETRIX DRILLING TO 10.75m & CORING TO 20.50m		Location 317374.9 E 258500.4 N		Dates 11/05/2005- 12/05/2005		Engineer RPS-MCOS		Sheet 3/3		
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.50				Non-Intact	12/05/2005	53.80	20.50	Strong thinly laminated very dark grey MUDSTONE, mostly highly weathered to a firm clay very to extremely closely spaced fractures dipping 20 degrees, planar, smooth, either clean or filled with gravelly clay, intersecting with similar set dipping 60 degrees, medium spaced, non-intact recovery Complete at 20.50m		
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Remarks								Scale (approx) 1:50	Logged By AM	Figure No. 05-271.HR05

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR05

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 114 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
317374.9 E 258500.4 N

Ground Level (mOD)
74.30

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling									
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)
			73.80	0.50	Concrete			8.50 11.60		Seepage Moderate Flow					
						Groundwater Observations During Drilling									
						Date	Start of Shift				End of Shift				
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)
						11/05/05					1700	19.00			
						12/05/05	0800	19.00				20.50			
						Instrument Groundwater Observations									
						Inst. [A] Type :									
			62.80	11.50	Gravel Filter	Date	Instrument [A]			Remarks					
			62.30	12.00			Time	Depth (m)	Level (mOD)						
					Slotted Standpipe										
			53.80	20.50											

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR06

Boring Method SYMMETRIX DRILLING	Casing Diameter 168mm cased to 40.00m	Ground Level (mOD) 45.53	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318044.4 E 258462.2 N	Dates 18/05/2005- 19/05/2005	Engineer RPS-MCOS	Sheet 1/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					45.43	0.10	TOPSOIL DRILLER'S DESCRIPTION: Brown BOULDER CLAY		
						(2.90)			
					42.53	3.00	DRILLER'S DESCRIPTION: Dark brown gravelly SILT with cobbles (damp)		
						(1.50)			
				Slight Flow(1) at 5.00m.	41.03	4.50	DRILLER'S DESCRIPTION: Black gravelly sandy CLAY containing occasional smooth cobbles and boulders. Gravel is sub-rounded fine to medium		Σ1
						(5.50)			
					35.53	10.00			


Remarks Descriptions based on driller's logs. No testing or sampling required. Standpipe installed to 40.00m. Borehole terminated at scheduled depth.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HR06	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR06

Boring Method SYMMETRIX DRILLING	Casing Diameter 168mm cased to 40.00m	Ground Level (mOD) 45.53	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318044.4 E 258462.2 N	Dates 18/05/2005- 19/05/2005	Engineer RPS-MCOS	Sheet 2/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				Slight Flow(2) at 11.60m.		(10.00)	DRILLER'S DESCRIPTION: Brown gravelly sandy CLAY containing occasional smooth cobbles and boulders. Gravel is sub-rounded fine to medium		
					25.53	20.00			

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Remarks	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR06	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR06

Boring Method SYMMETRIX DRILLING	Casing Diameter 168mm cased to 40.00m	Ground Level (mOD) 45.53	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318044.4 E 258462.2 N	Dates 18/05/2005- 19/05/2005	Engineer RPS-MCOS	Sheet 3/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							DRILLER'S DESCRIPTION: Brown gravelly sandy CLAY containing occasional smooth cobbles and boulders. Gravel is sub-rounded fine to medium		
						(9.70)			
				Moderate Flow(3) at 29.50m. 18/05/2005	15.83 15.53	29.70 30.00	Grey fine to medium grained LIMESTONE		V3

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Remarks	Scale (approx)	1:50	Logged By	TR
	Figure No.	05-271.HR06		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR06

Boring Method SYMMETRIX DRILLING	Casing Diameter 168mm cased to 40.00m	Ground Level (mOD) 45.53	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318044.4 E 258462.2 N	Dates 18/05/2005- 19/05/2005	Engineer RPS-MCOS	Sheet 4/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				Moderate Flow(4) at 30.00m.			Grey fine to medium grained LIMESTONE		√4
				19/05/2005	5.53	40.00			

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Remarks	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR06	

Glover Site Investigations Ltd

Site FINGAL LANDFILL PROJECT	Borehole Number HR06
Client FINGAL COUNTY COUNCIL	Job Number 05-271
Engineer RPS-MCOS	Sheet 1/1

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 168 mm
Location 318044.4 E 258462.2 N	Ground Level (mOD) 45.53

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			45.03	0.50	Concrete			5.00 11.60 29.50 30.00		Slight Flow Slight Flow Moderate Flow Moderate Flow						
Groundwater Observations During Drilling																
						Start of Shift		End of Shift								
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						18/05/05						1700	29.70			
					Cement/Bentonite Grout	19/05/05	0800	29.70					40.00			
Instrument Groundwater Observations																
Inst. [A] Type :																
						Instrument [A]			Remarks							
						Date	Time	Depth (m)							Level (mOD)	
			15.08	30.45	Gravel Filter											
			14.38	31.15	Gravel Filter											
					Slotted Standpipe											
			5.53	40.00												

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap at base of standpipe.

Glover Site Investigations Ltd

Site: FINGAL LANDFILL PROJECT
Borehole Number: HR07

Machine : KNEBEL Flush : AIR/MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 5.50m	Ground Level (mOD) 35.38	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318629 E 258202.2 N	Dates 16/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						35.18	0.20	TOPSOIL		
							(0.90)	DRILLER'S DESCRIPTION: Brown BOULDER CLAY		
						34.28	1.10	DRILLER'S DESCRIPTION: Grey BOULDER CLAY		
							(1.30)			
						32.98	2.40	DRILLER'S DESCRIPTION: Grey silty CLAY		
							(0.70)			
						32.28	3.10	DRILLER'S DESCRIPTION: Weak dark grey fine grained micritic LIMESTONE. Highly fractured		
							(6.90)			
5.50	100	0	0							
5.70	100	0	0	Non-Intact						
6.00	100	80	80	13						
6.15				Non-Intact						
6.20	0	0	0	Non-Intact						
7.20	100	0	0							
7.50										
						25.38	10.00			

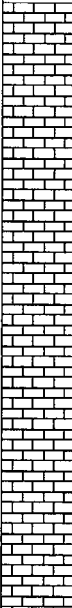
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Remarks Difficult to core due to extremely weathered and fractured limestone. Descriptions based on driller's logs. No testing or sampling required. Standpipe installed to 14.00m. Symmetrix Drilling to 5.50m. Rotary Coring to 7.50m. Symmetrix Drilling to 14.00m.	Scale (approx) 1:50	Logged By AM
	Figure No. 05-271.HR07	

Glover Site Investigations Ltd

Site: FINGAL LANDFILL PROJECT
Borehole Number: HR07

Machine : KNEBEL Flush : AIR/MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 5.50m	Ground Level (mOD) 35.38	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318629 E 258202.2 N	Dates 16/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								DRILLER'S DESCRIPTION: Weak dark grey fine grained micritic LIMESTONE. Highly fractured		
						21.38	(4.00)	Complete at 14.00m		

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Remarks	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.HR07	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR07

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 168 mm		Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318629 E 258202.2 N	Ground Level (mOD) 35.38	Engineer RPS-MCOS	Sheet 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling															
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)						
			34.88	0.50	Concrete																
					Cement/Bentonite Grout																
						Groundwater Observations During Drilling															
						Start of Shift					End of Shift										
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)				
			30.38	5.00	Gravel Filter																
			29.88	5.50																	
						Instrument Groundwater Observations															
						Inst. [A] Type :															
					Slotted Standpipe	Instrument [A]			Remarks												
						Date	Time	Depth (m)								Level (mOD)					
			21.38	14.00																	

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR08

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75	Casing Diameter 114mm cased to 5.00m	Ground Level (mOD) 39.19	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Method : SYMMETRIX DRILLING TO 5.00m & CORING TO 15.40m	Location 318545 E 257529.2 N	Dates 17/05/2005- 18/05/2005	Engineer RPS-MCOS	Sheet 1/2

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						38.99	0.20	TOPSOIL		
							(1.00)	DRILLER'S DESCRIPTION: Light brown CLAY		
						37.99	1.20	DRILLER'S DESCRIPTION: Dark BOULDER CLAY		
							(3.80)			
5.00	100	27	0		Moderate Flow (1.0 l/min) at 5.00m.	34.19	5.00	Moderately strong massive dark grey micritic LIMESTONE. Highly fractured, non-intact recovery		∇1
6.10	100	32	8							
7.40	87	29	29		17/05/2005:5.00m 18/05/2005:1.40m		(5.00)			
8.90	100	33	33							
						29.19	10.00			

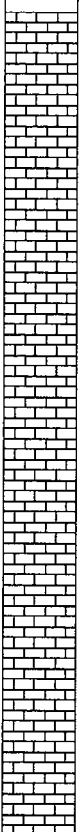
Remarks Borehole ended at scheduled depth. Standpipe installed to 15.40m. No testing or sampling required. Description of overburden based on driller's logs. Packer test carried out at 8.50m and 13.00m.	Scale (approx) 1:50	Logged By AM
	Figure No. 05-271.HR08	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR08

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75	Casing Diameter 114mm cased to 5.00m	Ground Level (mOD) 39.19	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Method : SYMMETRIX DRILLING TO 5.00m & CORING TO 15.40m	Location 318545 E 257529.2 N	Dates 17/05/2005- 18/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.40				Non-Intact				Moderately strong massive dark grey micritic LIMESTONE. Highly fractured, non-intact recovery		
	100	29	12							
11.50							 11.50m - 12.50m - clay rock gouge		
	75	0	0							
12.50							(5.40)			
	80	0	0							
14.00							 13.50m - 15.40m - clay rock gouge		
	57	0	0							
15.40					18/05/2005	23.79	15.40	Complete at 15.40m		

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Remarks	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.HR08	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR08

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Engineer
RPS-MCOS

Sheet
1/1

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 114 mm

Location
318545 E 257529.2 N

Ground Level (mOD)
39.19

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			38.69	0.50	Concrete			5.00		Moderate Flow						
					Cement/Bentonite Grout	Groundwater Observations During Drilling										
						Start of Shift					End of Shift					
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						17/05/05						1700	7.40		5.00	34.19
			33.69	5.50	Gravel Filter											
			32.79	6.40												
						Instrument Groundwater Observations										
						Inst. [A] Type :										
						Date	Instrument [A]			Remarks						
						Time	Depth (m)	Level (mOD)								
			23.79	15.40	Slotted Standpipe											

Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR09

Boring Method SYMMETRIX DRILLING TO 29.00m	Casing Diameter 114mm cased to 29.00m	Ground Level (mOD) 37.52	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318395 E 257097.6 N	Dates 25/05/2005	Engineer RPS-MCOS	Sheet 1/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					37.22	(0.30) 0.30	TOPSOIL		
						(0.50)	DRILLER'S DESCRIPTION: Light brown CLAY		
					36.72	0.80	DRILLER'S DESCRIPTION: Dark brown gravelly CLAY		
						(2.90)			
					33.82	3.70 (0.80)	DRILLER'S DESCRIPTION: Grey very gravelly slightly sandy CLAY		
					33.09	4.50	DRILLER'S DESCRIPTION: Grey CLAY		
				Slight Flow(1) at 5.00m.		(4.00)			∇1
					29.02	8.50 (1.50)	DRILLER'S DESCRIPTION: Slightly sandy GRAVEL with cobbles		
					27.52	10.00			

Remarks Borehole terminated at scheduled depth. Standpipe installed to 24.00m. No testing or sampling required. Descriptions of overburden based on driller's logs.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HR09	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR09

Boring Method SYMMETRIX DRILLING TO 29.00m	Casing Diameter 114mm cased to 29.00m	Ground Level (mOD) 37.52	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318395 E 257097.6 N	Dates 25/05/2005	Engineer RPS-MCOS	Sheet 2/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					17.52	20.00	DRILLER'S DESCRIPTION: Slightly sandy GRAVEL with cobbles		

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Remarks	Scale (approx)	1:50	Logged By	TR
	Figure No.	05-271.HR09		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR09

Boring Method SYMMETRIX DRILLING TO 29.00m	Casing Diameter 114mm cased to 29.00m	Ground Level (mOD) 37.52	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318395 E 257097.6 N	Dates 25/05/2005	Engineer RPS-MCOS	Sheet 3/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(5.20)	DRILLER'S DESCRIPTION: Slightly sandy GRAVEL with cobbles		
					12.32	25.20	DRILLER'S DESCRIPTION: Grey CLAY with coarse gravel sized fragments of limestone and siltstone		
					11.02	26.50	DRILLER'S DESCRIPTION: GRAVEL with traces of dark grey siltstone/limestone		
					8.52	29.00	Complete at 29.00m		

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Remarks	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR09	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole
Number
HR09

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 114 mm	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318395 E 257097.6 N	Ground Level (mOD) 37.52	Engineer RPS-MCOS

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
5 min	10 min	15 min	20 min													
			37.02	0.50	Concrete			5.00		Slight Flow						
Groundwater Observations During Drilling																
Cement/Bentonite Grout						Start of Shift					End of Shift					
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
			23.52	14.00	Gravel Filter	Instrument Groundwater Observations										
			22.52	15.00		Inst. [A] Type :										
						Date	Instrument [A]			Remarks						
						Time	Depth (m)	Level (mOD)								
					Slotted Standpipe											
			13.52 13.32	24.00 24.20	Gravel Filter											
					Bentonite Seal											
			8.52	29.00												

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR10

Boring Method SYMMETRIX DRILLING TO 25.50m	Casing Diameter 114mm cased to 25.50m	Ground Level (mOD) 35.19	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318777.3 E 256927.7 N	Dates 18/05/2005-19/05/2005	Engineer RPS-MCOS	Sheet 1/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.30) 0.30	TOPSOIL		
						(0.90) 0.90	DRILLER'S DESCRIPTION: Light brown to yellowish brown sandy gravelly CLAY. Gravel is sub-rounded fine to medium		
						1.20	DRILLER'S DESCRIPTION: Dark brown to dark grey CLAY with gravel (Boulder Clay)		
				Seepage(1) at 5.00m. 18/05/2005					
				19/05/2005		(8.80)			
					25.19	10.00			

Remarks Borehole terminated at scheduled depth. Descriptions of overburden based on driller's logs. No testing or sampling required. Standpipe installed to 25.50m.	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR10	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR10

Boring Method SYMMETRIX DRILLING TO 25.50m	Casing Diameter 114mm cased to 25.50m	Ground Level (mOD) 35.19	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318777.3 E 256927.7 N	Dates 18/05/2005-19/05/2005	Engineer RPS-MCOS	Sheet 2/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							DRILLER'S DESCRIPTION: Dark brown to dark grey CLAY with gravel (Boulder Clay)		
					23.19	12.00	Dark grey fine grained SILTSTONE with sandy clay (Possibly highly to completely weathered rockhead)		
						(6.00)			
				Slight Flow(2) at 18.00m.	17.19	18.00	Dark grey fine grained LIMESTONE containing occasional thin layers of siltstone		∇2
						(2.00)			
					15.19	20.00			

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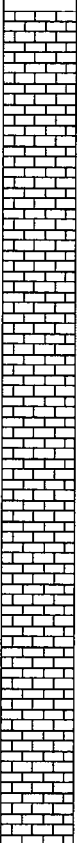
Remarks	Scale (approx)	1:50	Logged By	TR
	Figure No.	05-271.HR10		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR10

Boring Method SYMMETRIX DRILLING TO 25.50m	Casing Diameter 114mm cased to 25.50m	Ground Level (mOD) 35.19	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318777.3 E 256927.7 N	Dates 18/05/2005- 19/05/2005	Engineer RPS-MCOS	Sheet 3/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(5.50)	Dark grey fine grained LIMESTONE containing occasional thin layers of siltstone		
				19/05/2005	9.69	25.50	Complete at 25.50m		

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Remarks	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR10	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR10

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 114 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
318777.3 E 256927.7 N

Ground Level (mOD)
35.19

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			34.89	0.30	Concrete			5.00 18.00		Seepage Slight Flow						
						Groundwater Observations During Drilling										
						Start of Shift					End of Shift					
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						18/05/05						1700	5.00			
						19/05/05	0800	5.00					25.50			
						Instrument Groundwater Observations										
						Inst. [A] Type :										
						Date	Instrument [A]			Remarks						
							Time	Depth (m)	Level (mOD)							
			18.69	16.50	Gravel Filter											
			18.19	17.00	Gravel Filter											
			9.69	25.50	Slotted Standpipe											

Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap at base of standpipe.

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Site
FINGAL LANDFILL PROJECT

Borehole Number
HR11A

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75 Method : SYMMETRIX & ROTARY CORING	Casing Diameter 114mm cased to 15.50m	Ground Level (mOD) 27.79	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318353.5 E 256516 N	Dates 20/05/2005-23/05/2005	Engineer RPS-MCOS	Sheet 1/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						27.59	0.20	TOPSOIL		
							(1.80)	DRILLER'S DESCRIPTION: Brown sandy very gravelly CLAY containing smooth sub-rounded cobbles and boulders. Gravel is sub-rounded fine to medium		
						25.79	2.00	DRILLER'S DESCRIPTION: Brown slightly sandy gravelly CLAY		
							(4.00)			
					Slight Flow(1) at 6.00m.	21.79	6.00	DRILLER'S DESCRIPTION: Sandy GRAVEL with occasional cobbles or medium boulders		∇1
							(4.00)			
						17.79	10.00			

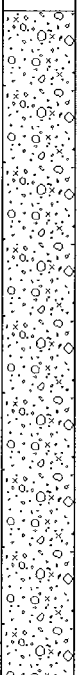
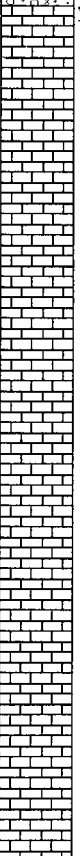
Remarks Descriptions of overburden based on driller's logs. No testing or sampling required within overburden. Standpipe installed to 17.50m. Symmetrix Drilling to 14.70m. Rotary Coring to 20.00m.. Open holed to 26.00m. Borehole terminated on scheduled depth.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HR11A	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR11A

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75 Method : SYMMETRIX & ROTARY CORING	Casing Diameter 114mm cased to 15.50m	Ground Level (mOD) 27.79	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318353.5 E 256516 N	Dates 20/05/2005-23/05/2005	Engineer RPS-MCOS	Sheet 2/3

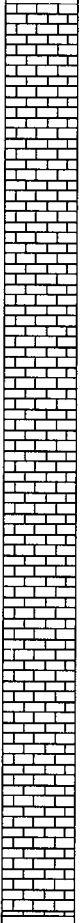
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								DRILLER'S DESCRIPTION: Sandy GRAVEL with occasional cobbles or medium boulders		
14.70	19	19	14		Moderate Flow(2) at 14.50m. 20/05/2005	13.39	14.40	Moderately strong thinly laminated grey highly weathered micritic LIMESTONE with bands of weak black siltstone. Highly fractured recovery as angular gravel (Borehole on suspected fault zone)		∇2
16.10	0	0	0							
17.50	77	0	0	Non-Intact			(5.60) unstable below 17.50m - continually collapsing		
19.00	88	0	0							
20.00						7.79	20.00			

Remarks	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HR11A	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR11A

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75 Method : SYMMETRIX & ROTARY CORING	Casing Diameter 114mm cased to 15.50m	Ground Level (mOD) 27.79	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318353.5 E 256516 N	Dates 20/05/2005- 23/05/2005	Engineer RPS-MCOS	Sheet 3/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
								Moderately strong thinly laminated grey highly weathered micritic LIMESTONE with bands of weak black siltstone. Highly fractured recovery as angular gravel (Borehole on suspected fault zone)			
						23/05/2005	1.79	26.00	Complete at 26.00m		

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Remarks	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HR11A	

Glover Site Investigations Ltd

Site FINGAL LANDFILL PROJECT	Borehole Number HR11A
Client FINGAL COUNTY COUNCIL	Job Number 05-271
Engineer RPS-MCOS	Sheet 1/1

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 100 mm
	Location 318353.5 E 256516 N

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling									
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)
			27.29	0.50	Concrete			6.00 14.50		Slight Flow Moderate Flow					
Groundwater Observations During Drilling															
					Cement/Bentonite Grout	Date	Start of Shift				End of Shift				
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)
						20/05/05 23/05/05	0800	14.70			1700 1700	14.70 26.00			
Instrument Groundwater Observations															
Inst. [A] Type :															
			12.79 12.49	15.00 15.30	Gravel Filter Slotted Standpipe	Date	Instrument [A]			Remarks					
					Time		Depth (m)	Level (mOD)							
			10.29	17.50	Gravel Filter										
			1.79	26.00											

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 Borehole collapsed below 17.50m.
 End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR11B

Boring Method SYMMETRIX DRILLING TO 13.00m	Casing Diameter 114mm cased to 13.00m	Ground Level (mOD) 27.64	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318355.6 E 256523.6 N	Dates 24/05/2005	Engineer RPS-MCOS	Sheet 1/2


Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					27.44	0.20	TOPSOIL		
						(2.30)	DRILLER'S DESCRIPTION: Brown CLAY with occasional gravel		
				Slight Flow(1) at 2.50m.	25.14	2.50	DRILLER'S DESCRIPTION: Brown gravelly CLAY with occasional cobbles		∇1
						(1.50)			
					23.64	4.00	DRILLER'S DESCRIPTION: Dark brown to black CLAY containing occasional gravels		
						(1.00)			
				Moderate Flow(2) at 6.00m.	22.64	5.00	DRILLER'S DESCRIPTION: Sandy GRAVEL		∇2
						(5.00)			
					17.64	10.00			

Remarks Description of overburden based on driller's logs. No testing or sampling required. Standpipe installed to 13.00m. Borehole terminated at scheduled depth.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HR11B	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR11B

Boring Method SYMMETRIX DRILLING TO 13.00m	Casing Diameter 114mm cased to 13.00m	Ground Level (mOD) 27.64	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318355.6 E 256523.6 N	Dates 24/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							DRILLER'S DESCRIPTION: Sandy GRAVEL		
				24/05/2005	14.64	13.00	Complete at 13.00m		

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Remarks	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR11B	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR11B

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 114 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
318355.6 E 256523.6 N

Ground Level (mOD)
27.64

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			27.14	0.50	Concrete			2.50 6.00		Slight Flow Moderate Flow						
					Cement/Bentonite Grout	Groundwater Observations During Drilling										
						Start of Shift		End of Shift								
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						24/05/05							13.00			
			21.14	6.50	Gravel Filter	Instrument Groundwater Observations										
			20.64	7.00		Inst. [A] Type :										
						Date	Instrument [A]			Remarks						
						Time	Depth (m)	Level (mOD)								
			14.64	13.00	Slotted Standpipe											

Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR12

Boring Method SYMMETRIX DRILLING TO 8.50m OPEN HOLE DRILLING TO 16.00m	Casing Diameter 168mm cased to 8.50m 125mm cased to 16.00m	Ground Level (mOD) 25.86	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318311.3 E 256233.2 N	Dates 13/05/2005- 14/05/2005	Engineer RPS-MCOS	Sheet 1/2

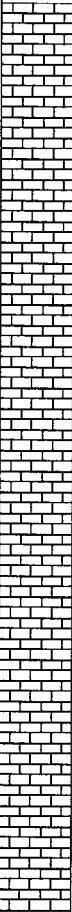
Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					25.66	0.20	TOPSOIL		
						(2.30)	DRILLER'S DESCRIPTION: Brown sandy CLAY		
				Slight Flow(1) at 2.50m.	23.36	2.50 (0.60)	DRILLER'S DESCRIPTION: Brown sandy GRAVEL		∇1
					22.76	3.10 (1.30)	DRILLER'S DESCRIPTION: Brown silty fine SAND		
					21.46	4.40 (1.60)	DRILLER'S DESCRIPTION: Grey silty CLAY		
				Strong Flow(2) at 7.00m.	19.86	6.00 (4.00)	Black fine to medium grained LIMESTONE containing thin mudstone layers. Highly fractured		∇2
					15.86	10.00			

Remarks Borehole terminated at scheduled depth. No testing or sampling required. Descriptions based on drillers logs Standpipe installed to 16.00m.	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR12	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR12

Boring Method SYMMETRIX DRILLING TO 8.50m OPEN HOLE DRILLING TO 16.00m	Casing Diameter 168mm cased to 8.50m 125mm cased to 16.00m	Ground Level (mOD) 25.86	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318311.3 E 256233.2 N	Dates 13/05/2005- 14/05/2005	Engineer RPS-MCOS	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							Black fine to medium grained LIMESTONE containing thin mudstone layers. Highly fractured		
				14/05/2005	9.86	16.00	Complete at 16.00m		

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Remarks	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR12	

Glover Site Investigations Ltd

Site FINGAL LANDFILL PROJECT	Borehole Number HR12
Client FINGAL COUNTY COUNCIL	Job Number 05-271
Engineer RPS-MCOS	Sheet 1/1

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 125 mm
	Location 318311.3 E 256233.2 N

Ground Level (mOD) 25.86	Engineer RPS-MCOS
-----------------------------	----------------------

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			25.36	0.50	Concrete			2.50 7.00		Slight Flow Strong Flow						
					Cement/Bentonite Grout	Groundwater Observations During Drilling										
						Date	Start of Shift				End of Shift					
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						14/05/05							16.00			
			19.36 18.86	6.50 7.00	Gravel Filter	Instrument Groundwater Observations										
						Inst. [A] Type :										
					Slotted Standpipe	Date	Instrument [A]			Remarks						
						Time	Depth (m)	Level (mOD)								
			9.86	16.00												

Remarks
 Upright cover fitted.
 Geotextile sock fitted around filter.
 End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR13A

Boring Method SYMMETRIX DRILLING TO 21.00m	Casing Diameter 114mm cased to 21.00m	Ground Level (mOD) 41.40	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318271.1 E 258239.2 N	Dates 10/06/2005-13/06/2005	Engineer RPS-MCOS	Sheet 1/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					41.20	0.20	TOPSOIL		
						(1.80)	DRILLER'S DESCRIPTION: Light brown CLAY		
					39.40	2.00	DRILLER'S DESCRIPTION: Brown and grey CLAY		
						(8.00)			
					31.40	10.00			

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Remarks Borehole terminated on Engineer's instruction. Virtual refusal met at 21.00m. Standpipe installed to 17.50m. No testing or sampling required. Descriptions of overburden based on driller's logs.	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HR13A	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR13A

Boring Method SYMMETRIX DRILLING TO 21.00m	Casing Diameter 114mm cased to 21.00m	Ground Level (mOD) 41.40	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318271.1 E 258239.2 N	Dates 10/06/2005-13/06/2005	Engineer RPS-MCOS	Sheet 2/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				Slight Flow(1) at 10.20m.		(2.00)	DRILLER'S DESCRIPTION: Brown and grey CLAY		∇1
				Slight Flow(2) at 12.00m.	29.40	12.00	DRILLER'S DESCRIPTION: Brown gravelly silty BOULDER CLAY		∇2
				10/06/2005 13/06/2005:10.20m		(5.00)			
				Moderate Flow(3) at 17.00m.	24.40	17.00	DRILLER'S DESCRIPTION: SAND and GRAVEL		∇3
						(3.00)			
					21.40	20.00			


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Remarks	Scale (approx)	1:50	Logged By	TR
	Figure No.	05-271.HR13A		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR13A

Boring Method SYMMETRIX DRILLING TO 21.00m	Casing Diameter 114mm cased to 21.00m	Ground Level (mOD) 41.40	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318271.1 E 258239.2 N	Dates 10/06/2005- 13/06/2005	Engineer RPS-MCOS	Sheet 3/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				13/06/2005	20.40	21.00	DRILLER'S DESCRIPTION: SAND and GRAVEL		
							Complete at 21.00m		

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Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.HR13A		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR13A

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 114 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
318271.1 E 258239.2 N

Ground Level (mOD)
41.40

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			40.90	0.50	Concrete			10.20 12.00 17.00		Slight Flow Slight Flow Moderate Flow						
						Groundwater Observations During Drilling										
						Start of Shift					End of Shift					
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						10/06/05						1700	15.00			
						13/06/05	0800	15.00		10.20	31.20		21.00			
						Instrument Groundwater Observations										
						Inst. [A] Type :										
						Instrument [A]				Remarks						
						Date	Time	Depth (m)	Level (mOD)							
			26.20 26.00	15.20 15.40	Gravel Filter Slotted Standpipe											
			24.00	17.40	Bentonite Seal											
			20.40	21.00												

Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap at base of standpipe.

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Site
FINGAL LANDFILL PROJECT
Borehole Number
HR13B

Boring Method OPEN HOLE DRILLING TO 17.00m SYMMETRIX DRILLING TO 23.50m OPEN HOLE DRILLING 33.80m	Casing Diameter 165mm cased to 17.00m 114mm cased to 23.50m 100mm cased to 33.80m	Ground Level (mOD) 41.52	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318265.2 E 258239.3 N	Dates 27/06/2005- 28/06/2005	Engineer RPS-MCOS	Sheet 1/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					41.32	0.20	TOPSOIL DRILLER'S DESCRIPTION: Grey and brown BOULDER CLAY with occasional cobbles and boulders		
						(9.80)			
					31.52	10.00			

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For inspection purposes only.

Remarks Descriptions of overburden based on drillers logs. Standpipe installed to 33.80m. No testing or sampling required. Borehole terminated at scheduled depth.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.HRBB	

Glover Site Investigations Ltd						Site FINGAL LANDFILL PROJECT		Borehole Number HR13B	
Boring Method OPEN HOLE DRILLING TO 17.00m SYMMETRIX DRILLING TO 23.50m OPEN HOLE DRILLING 33.80m		Casing Diameter 165mm cased to 17.00m 114mm cased to 23.50m 100mm cased to 33.80m		Ground Level (mOD) 41.52		Client FINGAL COUNTY COUNCIL		Job Number 05-271	
		Location 318265.2 E 258239.3 N		Dates 27/06/2005- 28/06/2005		Engineer RPS-MCOS		Sheet 2/4	
Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				Slight Flow(1) at 10.20m.			DRILLER'S DESCRIPTION: Grey and brown BOULDER CLAY with occasional cobbles and boulders		▽1
						(7.00)			
				27/06/2005 28/06/2005	24.52	17.00	DRILLER'S DESCRIPTION: Grey sandy fine to coarse sub-rounded GRAVEL containing occasional smooth sub-rounded cobbles		
						(3.00)			
					21.52	20.00			
Remarks								Scale (approx)	Logged By
								1:50	TR
Remarks								Figure No.	
								05-271.HRBB	


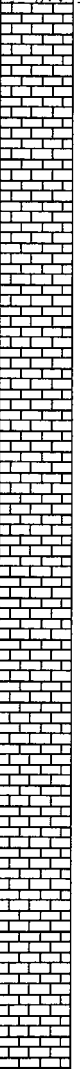
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Site
FINGAL LANDFILL PROJECT

Borehole Number
HR13B

Boring Method OPEN HOLE DRILLING TO 17.00m SYMMETRIX DRILLING TO 23.50m OPEN HOLE DRILLING 33.80m	Casing Diameter 165mm cased to 17.00m 114mm cased to 23.50m 100mm cased to 33.80m	Ground Level (mOD) 41.52	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318265.2 E 258239.3 N	Dates 27/06/2005-28/06/2005	Engineer RPS-MCOS	Sheet 3/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							DRILLER'S DESCRIPTION: Grey sandy fine to coarse sub-rounded GRAVEL containing occasional smooth sub-rounded cobbles		
				Moderate Flow(2) at 23.00m.	18.52	23.00	DRILLER'S DESCRIPTION: Dark grey fine grained LIMESTONE and SILTSTONE		∇2
					11.52	30.00			

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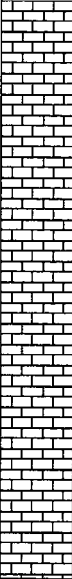
Remarks	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HRBB	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
HR13B

Boring Method OPEN HOLE DRILLING TO 17.00m SYMMETRIX DRILLING TO 23.50m OPEN HOLE DRILLING 33.80m	Casing Diameter 165mm cased to 17.00m 114mm cased to 23.50m 100mm cased to 33.80m	Ground Level (mOD) 41.52	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318265.2 E 258239.3 N	Dates 27/06/2005-28/06/2005	Engineer RPS-MCOS	Sheet 4/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							DRILLER'S DESCRIPTION: Dark grey fine grained LIMESTONE and SILTSTONE		
				28/06/2005	7.72	(3.80) 33.80	Complete at 33.80m		

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Remarks	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.HRBB	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
HR13B

Installation Type
WATER MONITORING

Dimensions
Internal Diameter of Tube [A] = 50 mm
Diameter of Filter Zone = 114 mm

Location
318265.2 E 258239.3 N

Client
FINGAL COUNTY COUNCIL
Job Number
05-271

Engineer
RPS-MCOS
Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			41.02	0.50	Concrete			10.20 23.00		Slight Flow Moderate Flow						
						Groundwater Observations During Drilling										
						Start of Shift					End of Shift					
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						27/06/05		17.00					17.00			
						28/06/05							33.80			
						Instrument Groundwater Observations										
						Inst. [A] Type :										
						Date	Instrument [A]			Remarks						
						Time	Depth (m)	Level (mOD)								
			17.52	24.00	Gravel Filter											
			16.72	24.80	Gravel Filter											
					Slotted Standpipe											
			7.72	33.80	Slotted Standpipe											

Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR01

Machine : HANS ENGLAND	Casing Diameter 114mm cased to 26.50m	Ground Level (mOD) 57.01	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Flush : AIR/MIST	Location 317469.7 E 257478.5 N	Dates 14/06/2005- 16/06/2005	Engineer RPS-MCOS	Sheet 1/6
Core Dia: 75				
Method : SYMMETRIX, CORING, OPEN HOLE				

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						56.81	0.20	TOPSOIL		
							(0.80)	DRILLER'S DESCRIPTION: Light brown BOULDER CLAY		
						56.01	1.00	DRILLER'S DESCRIPTION: Dark grey BOULDER CLAY		
							(9.00)			
						47.01	10.00			

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Remarks Symmetrix Drilling to 26.50m. Rotary Coring to 43.50m. Open Holed to 59.50. 100mm open hole drilled from 26.50m - 59.50m Descriptions of overburden based on drillers logs. Difficulties encountered below 43.50m due to highly fractured rock. Standpipe installed to 55.00m.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.SHR01	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR01

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75 Method : SYMMETRIX, CORING, OPEN HOLE	Casing Diameter 114mm cased to 26.50m	Ground Level (mOD) 57.01	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317469.7 E 257478.5 N	Dates 14/06/2005- 16/06/2005	Engineer RPS-MCOS	Sheet 2/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								DRILLER'S DESCRIPTION: Dark grey BOULDER CLAY		
							(7.00)			
						40.01	17.00	DRILLER'S DESCRIPTION: Grey clayey GRAVEL		▽1
					Slight Flow(1) at 17.00m.		(3.00)			
						37.01	20.00			

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Remarks	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.SHR01	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR01

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75 Method : SYMMETRIX, CORING, OPEN HOLE	Casing Diameter 114mm cased to 26.50m	Ground Level (mOD) 57.01	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317469.7 E 257478.5 N	Dates 14/06/2005- 16/06/2005	Engineer RPS-MCOS	Sheet 3/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								DRILLER'S DESCRIPTION: Grey clayey GRAVEL		
					Slight Flow(2) at 21.00m.	36.01	(1.00) 21.00	DRILLER'S DESCRIPTION: Brown CLAY containing occasional cobbles		∇2
					Major Water Strike(3) at 23.00m.	34.51	(1.50) 22.50	DRILLER'S DESCRIPTION: SAND and GRAVEL with a slight trace of clay		∇3
					Major Water Strike(4) at 26.00m.	31.01	(2.50) 26.00	Moderately weak to moderately strong thinly laminated dark grey shaley MUDSTONE, non-intact. Fractures very to extremely close, dipping 20-30 degrees, smooth planar, tight, clean, moderately weak, rock shattered		∇4
26.50	83	0	0		14/06/2005 15/06/2005					
27.70	88	8	8				(4.00)			
29.00	100	0	0							
29.40										
						27.01	30.00			

Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.SHR01		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR01

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75	Casing Diameter 114mm cased to 26.50m	Ground Level (mOD) 57.01	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Method : SYMMETRIX, CORING, OPEN HOLE	Location 317469.7 E 257478.5 N	Dates 14/06/2005- 16/06/2005	Engineer RPS-MCOS	Sheet 4/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
30.60	92	0	0					Moderately weak to moderately strong thinly laminated dark grey shaley MUDSTONE, non-intact. Fractures very to extremely close, dipping 20-30 degrees, smooth planar, tight, clean, moderately weak, rock shattered		
32.50	55	0	0							
34.50	35	0	0							
35.70	70	0	0	Non-Intact		(10.00) 35.70m: Weak (very weak)			
36.40	100	0	0			 36.00m: Light grey micaceous Siltstone, disaggregated			
37.50	0	0	0							
39.50	30	0	0							
						15/06/2005 16/06/2005	17.01 40.00			

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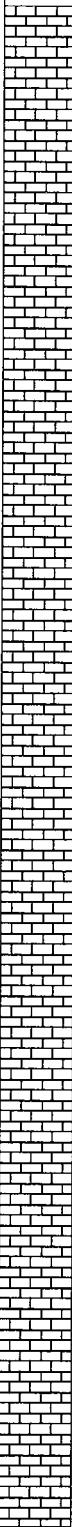
Remarks	Scale (approx)	1:50	Logged By	TR
	Figure No.	05-271.SHR01		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR01

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75 Method : SYMMETRIX, CORING, OPEN HOLE	Casing Diameter 114mm cased to 26.50m	Ground Level (mOD) 57.01	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317469.7 E 257478.5 N	Dates 14/06/2005- 16/06/2005	Engineer RPS-MCOS	Sheet 5/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	0	0	0					Moderately weak to moderately strong thinly laminated dark grey shaley MUDSTONE, non-intact. Fractures very to extremely close, dipping 20-30 degrees, smooth planar, tight, clean, moderately weak, rock shattered		
42.50	40	0	0							
43.50										
						7.01	50.00			

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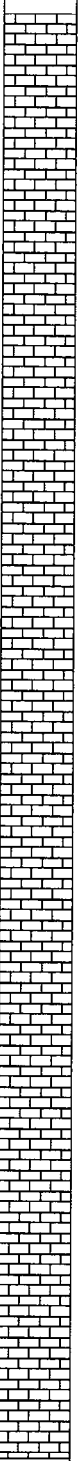
Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.SHR01		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR01

Machine : HANS ENGLAND Flush : AIR/MIST Core Dia: 75 Method : SYMMETRIX, CORING, OPEN HOLE	Casing Diameter 114mm cased to 26.50m	Ground Level (mOD) 57.01	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317469.7 E 257478.5 N	Dates 14/06/2005- 16/06/2005	Engineer RPS-MCOS	Sheet 6/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								Moderately weak to moderately strong thinly laminated dark grey shaley MUDSTONE, non-intact. Fractures very to extremely close, dipping 20-30 degrees, smooth planar, tight, clean, moderately weak, rock shattered		
							(9.50)			
					16/06/2005	-2.49	59.50	Complete at 59.50m		

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Remarks Borehole collapsed between 59.50m - 55.00m. Borehole terminated at scheduled depth.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.SHR01	

Glover Site Investigations Ltd

Site FINGAL LANDFILL PROJECT	Borehole Number SHR01
Client FINGAL COUNTY COUNCIL	Job Number 05-271
Engineer RPS-MCOS	Sheet 1/1

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 38 mm Diameter of Filter Zone = 100 mm
	Location 317469.7 E 257478.5 N

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
						Groundwater Observations During Drilling										
						Date	Start of Shift					End of Shift				
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
			56.51	0.50	Concrete			17.00 21.00 23.00 26.00		Slight Flow Slight Flow Major Water Strike Major Water Strike						
					Cement/Bentonite Grout	14/06/05	0800	26.50			1700	26.50				
				15/06/05		0800	39.50				1700	39.50				
				16/06/05		0800						59.50				
						Instrument Groundwater Observations										
						Inst. [A] Type :										
						Date	Instrument [A]			Remarks						
					Time		Depth (m)	Level (mOD)								
			14.01	43.00	Sand Filter											
			9.51	47.50	Gravel Filter											
			4.96	52.05	Slotted Standpipe											
			2.01	55.00												

Remarks
 Upright cover fitted.
 Geotextile sock fitted around filter.
 End cap at base of standpipe.
 Sand filter placed to 45.00m. From 47.50m. Well dipped at 43.00m prior to grouting.
 Possible collapse from 45.00m to 43.00m.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR02

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 20.70m	Ground Level (mOD) 34.96	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318179.9 E 257122.7 N	Dates 10/05/2005-13/05/2005	Engineer RPS-MCOS	Sheet 1/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						34.76	0.20	TOPSOIL		
								DRILLER'S DESCRIPTION: Brown BOULDER CLAY		
							(8.90)			
						25.86	9.10	DRILLER'S DESCRIPTION: Brown sandy GRAVEL		∇1
					Slight Flow(1) at 9.50m.		(0.90)			
						24.96	10.00			

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Remarks
Symmetrix Drilling to 20.70m. Rotary Coring to 55.00m.
Permeability test carried out at 14.80m.
Packer tests carried out at 23.50m - 28.50m and 32.00m -37.00m = Double. 43.00m - 55.00m = Single.
Standpipe installed to 55.00m.
Descriptions of overburden based on drillers logs.
Borehole complete at scheduled depth.

Scale (approx)	Logged By
1:50	TR
Figure No. 05-271.SHR02	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR02

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 20.70m	Ground Level (mOD) 34.96	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318179.9 E 257122.7 N	Dates 10/05/2005-13/05/2005	Engineer RPS-MCOS	Sheet 2/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
			0	0				DRILLER'S DESCRIPTION: Brown sandy GRAVEL		
						23.46	11.50	DRILLER'S DESCRIPTION: Brown silty gravelly SAND		
						22.06	12.90	DRILLER'S DESCRIPTION: Brown sandy gravelly BOULDER CLAY		
						18.26	16.70	DRILLER'S DESCRIPTION: Brown stoney sandy GRAVEL		
						14.96	20.00			

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Remarks	Scale (approx)	1:50	Logged By	TR
	Figure No.	05-271.SHR02		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR02

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 20.70m	Ground Level (mOD) 34.96	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318179.9 E 257122.7 N	Dates 10/05/2005- 13/05/2005	Engineer RPS-MCOS	Sheet 3/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.70	100	25	0		10/05/2005:5.95m 11/05/2005			Moderately weak, becoming moderately strong thinly laminated dark grey MUDSTONE with thin bands of weak to very weak, very dark slightly brownish grey fine grained siltstone (siltstone in places) Discontinuities very to extremely closely spaced, dipping 10-20 degrees (bedding parallel), smooth planar, tight, clean or occasional moderately open and filled with a thin clayey rock gouge. Intersecting with similar set dipping 70-80 degrees		
22.20	100	36	0							
23.70	100	34	0							
25.20	100	38	0	Non-Intact			(10.00)			
26.70	100	0	0							
28.20	100	50	0							
29.70										
30.00						4.96	30.00			

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Remarks	Scale (approx)	1:50	Logged By	TR
	Figure No.	05-271.SHR02		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
SHR02

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 20.70m	Ground Level (mOD) 34.96	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318179.9 E 257122.7 N	Dates 10/05/2005-13/05/2005	Engineer RPS-MCOS	Sheet 4/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
30.60	83	20	0					Moderately weak, becoming moderately strong thinly laminated dark grey MUDSTONE with thin bands of weak to very weak, very dark slightly brownish grey fine grained siltstone (siltstone in places)		
	82	0	0					Discontinuities vary to extremely closely spaced, dipping 10-20 degrees (bedding parallel), smooth planar, tight, clean or occasional moderately open and filled with a thin clayey rock gouge.		
32.00	100	10	0					Intersecting with similar set dipping 70-80 degrees		
32.60	72	0	0							
33.50	100	44	18							
35.00	100	46	10	Non-Intact			(10.00)			
36.50	100	46	10		11/05/2005:6.10m 12/05/2005					
38.00	100	38	22							
39.60										
40.00						-5.04	40.00			

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Remarks	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.SHR02	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
SHR02

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 20.70m	Ground Level (mOD) 34.96	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318179.9 E 257122.7 N	Dates 10/05/2005-13/05/2005	Engineer RPS-MCOS	Sheet 5/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
41.10	100	6	0					Moderately weak, becoming moderately strong thinly laminated dark grey MUDSTONE with thin bands of weak to very weak, very dark slightly brownish grey fine grained siltstone (siltstone in places) Discontinuities very to extremely closely spaced, dipping 10-20 degrees (bedding parallel), smooth planar, tight, clean or occasional moderately open and filled with a thin clayey rock gouge. Intersecting with similar set dipping 70-80 degrees	[Hatched Pattern]	
42.65	100	42	0							
43.75	87	0	0							
45.25	100	24	3	Non-Intact		(10.00)				
46.15	94	33	0							
47.25	100	36	0							
48.30	100	68	10							
48.75 48.80	100	16	0	22						
						-15.04	50.00			

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Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.SHR02		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
SHR02

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 20.70m	Ground Level (mOD) 34.96	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318179.9 E 257122.7 N	Dates 10/05/2005-13/05/2005	Engineer RPS-MCOS	Sheet 6/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
50.25	78	0	0		12/05/2005:6.20m 13/05/2005			Moderately weak, becoming moderately strong thinly laminated dark grey MUDSTONE with thin bands of weak to very weak, very dark slightly brownish grey fine grained siltstone (siltstone in places)		
50.70	100	40	0	Non-Intact				Discontinuities very to extremely closely spaced, dipping 10-20 degrees (bedding parallel), smooth planar, tight, clean or occasional moderately open and filled with a thin clayey rock gouge. Intersecting with similar set dipping 70-80 degrees		
52.20	100	23	0				(5.00)			
53.70	0	0	0							
55.00					13/05/2005:6.20m	20.04	55.00	Complete at 55.00m		

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Remarks	Scale (approx)	Logged By
	1:50	TR
Figure No. 05-271.SHR02		

Glover Site Investigations Ltd

Site FINGAL LANDFILL PROJECT	Borehole Number SHR02
Client FINGAL COUNTY COUNCIL	Job Number 05-271
Engineer RPS-MCOS	Sheet 1/1

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 38 mm Diameter of Filter Zone = 100 mm
	Location 318179.9 E 257122.7 N

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
								9.50		Slight Flow						
						Groundwater Observations During Drilling										
						Date	Start of Shift					End of Shift				
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						10/05/05	0800	20.70				1700	20.70		5.95	29.01
						11/05/05	0800	36.50				1700	36.50		6.10	28.86
						12/05/05	0800	36.50				1700	50.25		6.20	28.76
						13/05/05	0800	50.25				1700	55.00		6.20	28.76
						Instrument Groundwater Observations										
						Inst. [A] Type :										
						Date	Instrument [A]			Remarks						
							Time	Depth (m)	Level (mOD)							
						-11.04	46.00									
									Sand Filter							
						-13.04	48.00									
									Gravel Filter							
						-14.14	49.10									
									Slotted Standpipe							
						-20.04	55.00									

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
SHR03

Boring Method SYMMETRIX DRILLING	Casing Diameter 114mm cased to 31.50m	Ground Level (mOD) 49.21	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317394 E 256777.5 N	Dates 31/05/2005- 02/06/2005	Engineer RPS-MCOS	Sheet 1/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					49.01	0.20	TOPSOIL		
						(0.80)	DRILLER'S DESCRIPTION: Brown slightly sandy CLAY		
					48.21	1.00	DRILLER'S DESCRIPTION: Dark grey BOULDER CLAY		
						(8.00)			
					40.21	9.00	DRILLER'S DESCRIPTION: Brown BOULDER CLAY with large cobbles		
						(1.00)			
					39.21	10.00			

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Remarks Descriptions of overburden based on drillers logs. Difficulties advancing casing below 22.00m. Standpipe installed to 30.35m.	Scale (approx) 1:50	Logged By TR
	Figure No. 05-271.SHR03	

Glover Site Investigations Ltd

Site	FINGAL LANDFILL PROJECT	Borehole Number	SHR03
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Boring Method SYMMETRIX DRILLING	Casing Diameter 114mm cased to 31.50m	Ground Level (mOD) 49.21	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317394 E 256777.5 N	Dates 31/05/2005- 02/06/2005	Engineer RPS-MCOS	Sheet 2/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					29.21	(10.00) 20.00	DRILLER'S DESCRIPTION: Brown BOULDER CLAY with large cobbles		

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Remarks	Scale (approx)	1:50	Logged By	TR
	Figure No.	05-271.SHR03		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR03

Boring Method SYMMETRIX DRILLING	Casing Diameter 114mm cased to 31.50m	Ground Level (mOD) 49.21	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317394 E 256777.5 N	Dates 31/05/2005- 02/06/2005	Engineer RPS-MCOS	Sheet 3/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				31/05/2005:16.00m 02/06/2005		(5.50)	DRILLER'S DESCRIPTION: Sandy GRAVEL with traces of clay		
					23.71	25.50	DRILLER'S DESCRIPTION: Slightly sandy fine GRAVEL with some clay		
						(4.50)			
					19.21	30.00			


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Remarks	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.SHR03	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
SHR03

Boring Method SYMMETRIX DRILLING	Casing Diameter 114mm cased to 31.50m	Ground Level (mOD) 49.21	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317394 E 256777.5 N	Dates 31/05/2005- 02/06/2005	Engineer RPS-MCOS	Sheet 4/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				Moderate Flow(1) at 30.00m.		(1.50)	DRILLER'S DESCRIPTION: Coarse sandy GRAVEL		√1
				02/06/2005:17.50m	17.71	31.50	Complete at 31.50m		

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Remarks Borehole collapsed below 30.35m. Virtual refusal met at 31.50m due to casing binding in sands and gravels.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.SHR03	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
SHR03

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 100 mm		Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317394 E 256777.5 N	Ground Level (mOD) 49.21	Engineer RPS-MCOS	Sheet 1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling										
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)	
			48.71	0.50	Concrete			30.00		Moderate Flow						
Groundwater Observations During Drilling																
						Date	Start of Shift				End of Shift					
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
						31/05/05						1700	22.00		16.00	33.21
						02/06/05	0800	22.00				1700	31.50		17.50	31.71
					Cement/Bentonite Grout	Instrument Groundwater Observations										
						Inst. [A] Type :										
						Date	Instrument [A]			Remarks						
						Time	Depth (m)	Level (mOD)								
			22.71	26.50	Gravel Filter											
			21.81	27.40												
					Slotted Standpipe											
			18.86	30.35												

Remarks
Geotextile sock fitted around filter.
Upright cover fitted.
End cap at base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR03A

Machine : HANS ENGLAND	Casing Diameter 115mm cased to 29.00m	Ground Level (mOD) 52.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Flush : AIR-MIST			Engineer RPS-MCOS	Sheet 1/5
Core Dia: 75	Location 317286.7 E 256728.1 N	Dates 30/08/2005- 01/09/2005		
Method : SYMMETRIX & CORING				

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						52.71	0.10	TOPSOIL DRILLER'S DESCRIPTION: Brown BOULDER CLAY		
							(2.90)			
						49.81	3.00	DRILLER'S DESCRIPTION: Grey and brown BOULDER CLAY		
							(7.00)			
						42.81	10.00			

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Remarks Borehole had to be reamed out using 165mm DTHH - 2.5 hours from 0.00m - 21.00m Standpipe installed to 42.15m. Symmetrix drilling from 0.00m - 29.00m. Cored from 29.00m - 43.00m. Descriptions of overburden based on drillers logs.	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR03A	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR03A

Machine : HANS ENGLAND	Casing Diameter 115mm cased to 29.00m	Ground Level (mOD) 52.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
Flush : AIR-MIST	Location 317286.7 E 256728.1 N	Dates 30/08/2005- 01/09/2005	Engineer RPS-MCOS	Sheet 2/5
Core Dia: 75				
Method : SYMMETRIX & CORING				

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								DRILLER'S DESCRIPTION: Grey and brown BOULDER CLAY		
						35.81	17.00	DRILLER'S DESCRIPTION: Brown BOULDER CLAY		
						34.81	18.00	DRILLER'S DESCRIPTION: Dark grey BOULDER CLAY		
						32.81	20.00			

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Remarks	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR03A	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR03A

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 115mm cased to 29.00m	Ground Level (mOD) 52.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317286.7 E 256728.1 N	Dates 30/08/2005-01/09/2005	Engineer RPS-MCOS	Sheet 3/5

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
29.00						31.81	(1.00)	DRILLER'S DESCRIPTION: Dark grey BOULDER CLAY		
							(2.00)	DRILLER'S DESCRIPTION: Weak highly weathered dark grey SILTSTONE and clay		
							(4.00)	DRILLER'S DESCRIPTION: Brown and grey SILTSTONE		
							(2.00)	DRILLER'S DESCRIPTION: Grey SILTSTONE with traces of grey clay		
						23.81	(1.00)	Moderately strong thickly laminated very dark grey fine grained MUDSTONE. (Full description as Sheet 4)		
						22.81	30.00			

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Remarks	Scale (approx)	1:50	Logged By	AM
	Figure No.	05-271.SHR03A		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR03A

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 115mm cased to 29.00m	Ground Level (mOD) 52.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317286.7 E 256728.1 N	Dates 30/08/2005-01/09/2005	Engineer RPS-MCOS	Sheet 4/5

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
31.00	60	0	0	Non-Intact				Moderately strong thickly laminated very dark grey fine grained MUDSTONE, thinly interbedded with mudstone/shale, completely weathered to firm, (thinly laminated where only highly weathered), very dark grey gravelly silt. Gravel is sub-rounded fine, moderately strong, very dark grey fine grained mudstone.		
								Full recovery due to core liner and partially intact rock; fracture very closely spaced dipping 30 degrees, (bedding parallel), smooth planar, tight, clean from 34.00m - 35.85m.		
32.60	59	0	0	Non-Intact				Dark brownish grey due to extremely close, iron stained pale laminae from 35.60m - 35.85m		
34.00										
34.15				18	Non-Intact					
34.50				16						
34.80	100	24	0		Non-Intact		(10.00)			
35.85										
	51	0	0	Non-Intact						
37.80										
	56	0	0	Non-Intact						
38.70										
	77	0	0	Non-Intact						
40.00						12.81	40.00			

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Remarks	Scale (approx)	1:50	Logged By	AM
	Figure No.	05-271.SHR03A		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR03A

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 115mm cased to 29.00m	Ground Level (mOD) 52.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317286.7 E 256728.1 N	Dates 30/08/2005-01/09/2005	Engineer RPS-MCOS	Sheet 5/5

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
41.40	43	0	0	Non-Intact			(3.00)	Moderately strong thickly laminated very dark grey fine grained MUDSTONE, thinly interbedded with mudstone/shale, completely weathered to firm, (thinly laminated where only highly weathered), very dark grey gravelly silt. Gravel is sub-rounded fine, moderately strong, very dark grey fine grained mudstone		
43.00	34	0	0	Non-Intact	01/09/2005	9.81	43.00	Complete at 43.00m		

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Remarks Borehole unstable below 40.00m. Borehole terminated on Enginners instruction.	Scale (approx) 1:50	Logged By AM
	Figure No. 05-271.SHR03A	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR04

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 114mm cased to 17.25m	Ground Level (mOD) 30.71	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317987.6 E 256417 N	Dates 03/06/2005-09/06/2005	Engineer RPS-MCOS	Sheet 1/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						30.41	(0.30) 0.30	TOPSOIL		
								DRILLER'S DESCRIPTION: Yellowish brown gravelly CLAY		
							(3.20)			
						27.21	3.50	DRILLER'S DESCRIPTION: Brown and grey BOULDER CLAY		
							(3.50)			
						23.71	7.00	DRILLER'S DESCRIPTION: GRAVEL with cobbles		
							(3.00)			
				0		20.71	10.00			

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Remarks Descriptions of overburden based on drillers logs. Packer test carried out at 24.50m, 34.50m, 44.70m. Standpipe installed to 51.20m Symmetrix Drilling to 17.25m. Rotary Coring to 51.20m.	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR04	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR04

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 114mm cased to 17.25m	Ground Level (mOD) 30.71	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317987.6 E 256417 N	Dates 03/06/2005-09/06/2005	Engineer RPS-MCOS	Sheet 2/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								DRILLER'S DESCRIPTION: Fine GRAVEL and SAND		
					Moderate Flow(1) at 13.00m.		(6.90)			∇1
					Moderate Flow(2) at 17.00m.	13.81	16.90	Moderately strong medium grey arenaceous LIMESTONE, thinly laminated with moderately weak dark grey calcareous mudstone.		∇2
17.25 17.30				Non-Intact 3						
17.65 17.80 17.85 18.00 18.05 18.15 18.20 18.45 18.60	100	79	47	27 Non-Intact 13 NI 10 Non-Intact			(3.10)	Fractures medium to closely spaced, dipping 25 degrees, smooth planar, tight, clean (very to extremely closely spaced in occasional shaley bands)		
18.90 18.95 19.00 19.25				NI 44	03/06/2005					
19.50 19.60	100	89	71	15 NI	07/06/2005					
						10.71	20.00			

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Remarks	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR04	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR04

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 114mm cased to 17.25m	Ground Level (mOD) 30.71	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317987.6 E 256417 N	Dates 03/06/2005-09/06/2005	Engineer RPS-MCOS	Sheet 3/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.40 20.55				8				Moderately strong medium grey arenaceous LIMESTONE, thinly laminated with moderately weak dark grey calcareous mudstone.	[Brick pattern]	
20.75 20.80				40						
21.35 21.45	100	100	83	5				Fractures medium to closely spaced, dipping 25 degrees, smooth planar, tight, clean (very to extremely closely spaced in occasional shaley bands)	[Brick pattern]	
22.40				20						
23.10 23.20				5					[Brick pattern]	
24.30				20						
25.00				7					[Brick pattern]	
25.40 25.45 25.65	100	97	87	40						
26.10 26.30				9					[Brick pattern]	
26.50				3						
26.85 27.00				8					[Brick pattern]	
27.90	96	98	68	20						
28.40				10					[Brick pattern]	
28.85				2						
29.35				20					[Brick pattern]	
				5						
				26					[Brick pattern]	
				15						
				5					[Brick pattern]	
				9						
				2					[Brick pattern]	
				10						
									[Brick pattern]	
	96	100	78							
						0.71	30.00			

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Remarks	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR04	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
SHR04

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 114mm cased to 17.25m	Ground Level (mOD) 30.71	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317987.6 E 256417 N	Dates 03/06/2005- 09/06/2005	Engineer RPS-MCOS	Sheet 4/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
30.70				5				Moderately strong thinly bedded medium grey fine grained LIMESTONE thinly interbedded with moderately strong to moderately weak dark grey calcite mudstone.		
				9				Fractures medium to closely spaced, dipping 25 degrees, smooth planar, tight, clean (very to extremely closely spaced in occasional shaley bands)		
31.50				4	07/06/2005:3.20m 08/06/2005					
32.05				20						
32.20				10						
32.50	100	99	67	5						
33.30				11						
34.50				10						
34.90				Non-Intact			(9.80)			
35.20	100	66	18	10						
35.70				Non-Intact						
36.00				7				34.90m - 35.20m: Weak to moderately weak dark grey mudstone extremely fractured, non-intact		
36.40				15						
36.60				4						
36.85				8						
37.25				20						
37.35				NI						
37.40	100	80	44	14				35.70m - 36.00m: Weak to moderately weak dark grey mudstone extremely fractured, non-intact (from 35.90m moderately strong and less fractured)		
37.50				18						
38.00				5				37.50m - 38.50m: Rock moderately weak; fractures occur in 10mm thick shatter zones rather than clearly		
39.00				NI						
39.10				4						
39.35	100	90	58	Non-Intact						
39.45				Non-Intact						
39.50				Non-Intact						
39.80				NI						
39.85				NI						
						-9.09	39.80	LIMESTONE (Full description same Sheet 5)		

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Remarks	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR04	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
SHR04

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 114mm cased to 17.25m	Ground Level (mOD) 30.71	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317987.6 E 256417 N	Dates 03/06/2005-09/06/2005	Engineer RPS-MCOS	Sheet 5/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
40.70 40.75 41.05	100	81	35	15				Moderately strong thinly bedded medium grey fine grained LIMESTONE thinly interbedded with moderately strong to moderately weak dark grey calcite mudstone. Fractures close to medium spaced in the medium grey limestone, dipping 10-20 degrees, smooth planar, tight, clean. Fractures very closely to extremely closely spaced in mudstone, dipping 10-20 degrees, smooth planar, tight, clean		
				NI						
				20						
				10						
				NI						
41.55 41.60 41.70				NI						
				7						
42.15 42.20 42.40				NI	08/06/2005:3.30m					
				5	09/06/2005					
42.75				17						
42.95 43.10				5						
				Non-Intact						
43.50	100	92	54	3						
				12						
44.10				15						
44.50				7						
				NI						
45.20 45.25 45.55 45.60				10						
				80						
				4						
46.05				18						
46.60	100	98	69	6						
48.20 48.30				30						
				4						
49.35				5						
49.80	100	74	69							
						-19.29	50.00			

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Remarks	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR04	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR04

Machine : HANS ENGLAND Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 114mm cased to 17.25m	Ground Level (mOD) 30.71	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317987.6 E 256417 N	Dates 03/06/2005-09/06/2005	Engineer RPS-MCOS	Sheet 6/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
50.20				Non-Intact				Moderately strong thinly bedded medium grey fine grained LIMESTONE thinly interbedded with moderately strong to moderately weak dark grey calcite mudstone.		
50.40				5						
50.45				NI			(1.20)	Fractures close to medium spaced in the medium grey limestone, dipping 10-20 degrees, smooth planar, tight, clean.		
50.75				10						
51.20				4	09/06/2005	-20.49	51.20	Fractures very closely to extremely closely spaced in mudstone, dipping 10-20 degrees, smooth planar, tight, clean		
								Complete at 51.20m		

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Remarks Borehole terminated at scheduled depth.	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR04	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR05

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 22.00m	Ground Level (mOD) 34.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317935.3 E 256785.2 N	Dates 17/05/2005-23/05/2005	Engineer RPS-MCOS	Sheet 1/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						34.71	0.10	TOPSOIL DRILLER'S DESCRIPTION: Brown FILL		∇1
					Slight Flow(1) at 1.50m.	33.11	1.70	DRILLER'S DESCRIPTION: Grey to dark grey sandy gravelly BOULDER CLAY		∇2
					Slight Flow(2) at 8.60m.	24.81	10.00			

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Remarks Standpipe installed to 55.55m Packer tests at 24.00m, 39.50m, 48.50m. Falling head test at 15.80m. Descriptions of overburden based on drillers logs. Symmetrix Drilling to 22.00m. Rotary Coring to 56.00m	Scale (approx) 1:50	Logged By AM
	Figure No. 05-271.SHR05	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR05

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 22.00m	Ground Level (mOD) 34.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317935.3 E 256785.2 N	Dates 17/05/2005-23/05/2005	Engineer RPS-MCOS	Sheet 2/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								DRILLER'S DESCRIPTION: Grey to dark grey sandy gravelly BOULDER CLAY		
						21.11	13.70 (3.70)	DRILLER'S DESCRIPTION: Grey sandy GRAVEL		
							(4.60)			
						16.51	18.30 (1.70)	DRILLER'S DESCRIPTION: Grey silty clayey GRAVEL		
						14.81	20.00			

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Remarks	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR05	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR05

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 22.00m	Ground Level (mOD) 34.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317935.3 E 256785.2 N	Dates 17/05/2005-23/05/2005	Engineer RPS-MCOS	Sheet 3/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								DRILLER'S DESCRIPTION: Grey silty clayey GRAVEL		
						13.71	(1.10)			
22.00				15			21.10	Strong medium bedded dark grey fine grained micritic LIMESTONE interbedded with thin bands of moderately strong, moderately weak thinly laminated very dark grey shaley mudstone at wide intervals.		
22.35				Non-Intact				Joint Set 1 closely to very closely spaced, dipping 40-50 degrees, smooth planar, tight, clean, bedding parallel.		
22.45	100	41	30	12				Joint Set 2 closely spaced dipping 70 degrees, smooth planar to rough planar, tight to moderately open, clean or thin quartz mineral coating.		
23.00				Non-Intact				Joint Set 3 medium to widely spaced dipping 60 degrees, smooth planar, tight, clean with patchy quartz mineralisation.		
23.35				6				Medium to widely spaced continuous calcite veins 10-30mm thick, dipping 60 degrees, planar		
23.70				Non-Intact						
23.95	100	81	81							
24.90				2	17/05/2005 19/05/2005					
25.40	100	52	45				(8.90)			
25.90				Non-Intact						
26.10										
26.90	100	60	57	8						
27.00				Non-Intact						
27.40				5						
27.90	100	67	41							
28.70				Non-Intact						
28.95	100	81	60							
29.70				11		4.81	30.00			

Remarks	Scale (approx)	1:50	Logged By	AM
	Figure No.	05-271.SHR05		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR05

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 22.00m	Ground Level (mOD) 34.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317935.3 E 256785.2 N	Dates 17/05/2005- 23/05/2005	Engineer RPS-MCOS	Sheet 4/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
30.80	95	91	45					Strong medium bedded dark grey fine grained micritic LIMESTONE interbedded with thin bands of moderately strong, moderately weak thinly laminated very dark grey shaley mudstone at wide intervals.		
	100	57	50	11				Joint Set 1 closely to very closely spaced, dipping 40-50 degrees, smooth planar, tight, clean, bedding parallel.		
31.70				3				Joint Set 2 closely spaced dipping 70 degrees, smooth planar to rough planar, tight to moderately open, clean or thin quartz mineral coating.		
32.50				37				Joint Set 3 medium to widely spaced dipping 60 degrees, smooth planar, tight, clean with patchy quartz mineralisation.		
32.80	97	85	73	3				Medium to widely spaced continuous calcite veins 10-30mm thick, dipping 60 degrees, planar		
33.60				10						
34.10				40						
34.20				70						
34.50				3						
34.60										
35.30				6			(10.00) 31.70m: All jointing becomes medium to widely spaced, except in shaley mudstone		
36.10	100	94	75	Non-Intact						
36.30				24						
36.50				8			 34.10m: Incipient fractures dipping sub-vertically, rough, stepped, open, filled with cohesive dark grey gouge		
37.70					19/05/2005:6.00m 20/05/2005		 37.80m: 20mm thick calcite vein dipping 75 degrees, planar		
	100	87	60	10						
39.50				30						
39.60				4						
40.05						-5.19	40.00			

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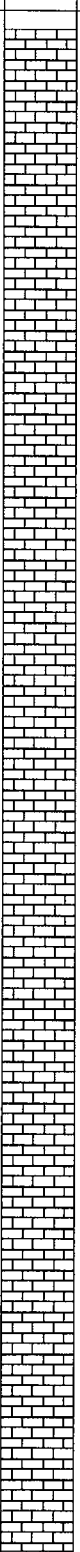
Remarks	Scale (approx)	1:50	Logged By	AM
	Figure No.	05-271.SHR05		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR05

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 22.00m	Ground Level (mOD) 34.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317935.3 E 256785.2 N	Dates 17/05/2005- 23/05/2005	Engineer RPS-MCOS	Sheet 5/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
40.20				Non-Intact				<p>Strong medium bedded dark grey fine grained micritic LIMESTONE interbedded with thin bands of moderately strong, moderately weak thinly laminated very dark grey shaley mudstone at wide intervals.</p> <p>Joint Set 1 closely to very closely spaced, dipping 40-50 degrees, smooth planar, tight, clean, bedding parallel.</p> <p>Joint Set 2 closely spaced dipping 70 degrees, smooth planar to rough planar, tight to moderately open, clean or thin quartz mineral coating.</p> <p>Joint Set 3 medium to widely spaced dipping 60 degrees, smooth planar, tight, clean with patchy quartz mineralisation.</p> <p>Medium to widely spaced continuous calcite veins 10-30mm thick, dipping 60 degrees, planar</p>		
40.30			18							
41.40	100	88	55	5						
42.00				12						
44.35				Non-Intact						
44.60				4						
45.10				12		(10.00)				
46.30	100	98	72	8						
48.20				5						
49.40				24						
49.90	100	95	75			-15.19	50.00			

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Remarks	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR05	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
SHR05

Machine : KNEBEL Flush : AIR-MIST Core Dia: 75 Method : SYMMETRIX & CORING	Casing Diameter 168mm cased to 22.00m	Ground Level (mOD) 34.81	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317935.3 E 256785.2 N	Dates 17/05/2005-23/05/2005	Engineer RPS-MCOS	Sheet 6/6

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
51.30				6				<p>Strong medium bedded dark grey fine grained micritic LIMESTONE interbedded with thin bands of moderately strong, moderately weak thinly laminated very dark grey shaley mudstone at wide intervals.</p> <p>Joint Set 1 closely to very closely spaced, dipping 40-50 degrees, smooth planar, tight, clean, bedding parallel.</p> <p>Joint Set 2 closely spaced dipping 70 degrees, smooth planar to rough planar, tight to moderately open, clean or thin quartz mineral coating.</p> <p>Joint Set 3 medium to widely spaced dipping 60 degrees, smooth planar, tight, clean with patchy quartz mineralisation.</p> <p>Medium to widely spaced continuous calcite veins 10-30mm thick, dipping 60 degrees, planar</p>		
					20/05/2005:6.00m 23/05/2005		(6.00)			
53.80	96	96	72	7						
55.00	100	100	73	3						
56.00					23/05/2005	-21.19	56.00	Complete at 56.00m		

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Remarks Borehole terminated at scheduled depth.	Scale (approx)	Logged By
	1:50	AM
	Figure No. 05-271.SHR05	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Borehole Number
SHR05

Installation Type WATER MONITORING	Dimensions Internal Diameter of Tube [A] = 50 mm Diameter of Filter Zone = 100 mm	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317935.3 E 256785.2 N	Ground Level (mOD) 34.81	Engineer RPS-MCOS
		Sheet 1/1	

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling									
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)
						Groundwater Observations During Drilling									
						Date	Start of Shift				End of Shift				
						Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
		∇1	34.31	0.50	Concrete			1.50 8.60		Slight Flow Slight Flow					
		∇2													
					Cement/Bentonite Grout	17/05/05		24.90				24.90			
						19/05/05		37.70				37.70		6.00	28.81
						20/05/05		51.30				51.30		6.00	28.81
						23/05/05		51.30				56.00			
						Instrument Groundwater Observations									
						Inst. [A] Type :									
						Date	Instrument [A]			Remarks					
						Time	Depth (m)	Level (mOD)							
			-11.14	45.95	Sand Filter										
			-13.14	47.95	Gravel Filter										
			-14.84	49.65	Gravel Filter										
					Slotted Standpipe										
			-20.74	55.55											

Remarks
 Geotextile sock fitted around filter.
 Upright cover fitted.
 End cap at base of standpipe

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW01

Boring Method OPEN HOLE DRILLING TO 21.00m SYMMETRIX DRILLING TO 30.00m OPEN HOLE DRILLING TO 36.40m	Casing Diameter 305mm cased to 21.20m 200mm cased to 30.00m 150mm cased to 36.40m	Ground Level (mOD) 56.32	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317478 E 257409 N	Dates 08/09/2005	Engineer RPS-MCOS	Sheet 1/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					46.32	10.00	DRILLER'S DESCRIPTION: CLAY		

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Remarks
305mm Open Hole Drilling to 21.20m.
200mm Symmetrix Drilling from 21.20m - 30.00m.
150mm Open Hole Drilling from 30.00m - 36.40m.
Descriptions are from driller's logs.
Airlifted for 2 hours.
125mm Standpipe installed to 33.50m.

Scale (approx) 1:50	Logged By TR
Figure No. 05-271.PW01	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW01

Boring Method OPEN HOLE DRILLING TO 21.00m SYMMETRIX DRILLING TO 30.00m OPEN HOLE DRILLING TO 36.40m	Casing Diameter 305mm cased to 21.20m 200mm cased to 30.00m 150mm cased to 36.40m	Ground Level (mOD) 56.32	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317478 E 257409 N	Dates 08/09/2005	Engineer RPS-MCOS	Sheet 2/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							DRILLER'S DESCRIPTION: CLAY		
					38.12	18.20	DRILLER'S DESCRIPTION: Very gravelly CLAY		
						(1.80)			
					36.32	20.00			

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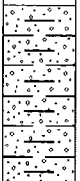
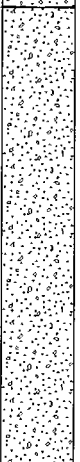
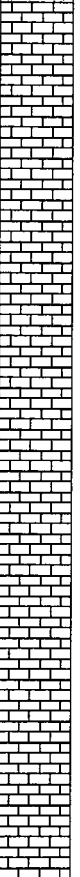
Remarks	Scale (approx)	1:50	Logged By	TR
	Figure No.	05-271.PW01		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW01

Boring Method OPEN HOLE DRILLING TO 21.00m SYMMETRIX DRILLING TO 30.00m OPEN HOLE DRILLING TO 36.40m	Casing Diameter 305mm cased to 21.20m 200mm cased to 30.00m 150mm cased to 36.40m	Ground Level (mOD) 56.32	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317478 E 257409 N	Dates 08/09/2005	Engineer RPS-MCOS	Sheet 3/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(1.20)	DRILLER'S DESCRIPTION: Very gravelly CLAY		
					35.12	21.20	DRILLER'S DESCRIPTION: SAND and GRAVEL		
						(3.00)			
					32.12	24.20	DRILLER'S DESCRIPTION: Black ROCK (LIMESTONE)		
						(5.80)			
					26.32	30.00			

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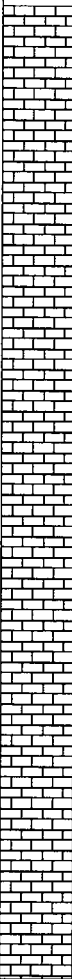
Remarks Borehole collapsed between 22.50m - 36.40m during pumping test.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.PW01	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW01

Boring Method OPEN HOLE DRILLING TO 21.00m SYMMETRIX DRILLING TO 30.00m OPEN HOLE DRILLING TO 36.40m	Casing Diameter 305mm cased to 21.20m 200mm cased to 30.00m 150mm cased to 36.40m	Ground Level (mOD) 56.32	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317478 E 257409 N	Dates 08/09/2005	Engineer RPS-MCOS	Sheet 4/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							DRILLER'S DESCRIPTION: Black ROCK (LIMESTONE)		
				08/09/2005	19.92	36.40	Complete at 36.40m		

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Remarks Borehole terminated at scheduled depth.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.PW01	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW01

Installation Type
PUMPING WELL

Dimensions
Internal Diameter of Tube [A] = 125 mm
Diameter of Filter Zone = 168 mm

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
317478 E 257409 N

Ground Level (mOD)
56.32

Engineer
RPS-MCOS

Sheet
1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling															
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)						
						Groundwater Observations During Drilling															
						Date	Start of Shift					End of Shift									
							Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)					
						08/09/05						36.40									
						Instrument Groundwater Observations															
						Inst. [A] Type :															
						Date	Instrument [A]			Remarks											
							Time	Depth (m)	Level (mOD)												
						23/09/05		3.70	52.62												
						26.82	29.50	Well Screen													
						22.82	33.50	Bottom Fill													
						19.92	36.40														

Remarks
Upright cover fitted.
End cap fitted to base of standpipe.
Borehole collapsed between 33.50m - 36.40m

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW02

Boring Method OPEN HOLE DRILLING TO 15.15m SYMMETRIX DRILLING TO 21.20m OPEN HOLE DRILLING TO 31.50m	Casing Diameter 305mm cased to 15.15m 200mm cased to 21.20m 168mm cased to 31.50m	Ground Level (mOD) 35.90	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318166 E 257185 N	Dates 06/09/2005- 26/09/2005	Engineer RPS-MCOS	Sheet 1/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					25.90	10.00	DRILLER'S DESCRIPTION: Dark brown CLAY with some sand and gravel		

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Remarks
305mm diameter Open Hole Drilling to 15.15m
200mm diameter Symmetrix Drilling to 21.20m.
150mm diameter Open Hole Drilling to 30.30m.
Descriptions from driller's logs.
Airlifted for 2 hours.

Scale (approx)	1:50	Logged By	TR
Figure No.	05-271.PW02		

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW02

Boring Method
OPEN HOLE DRILLING TO 15.15m
SYMMETRIX DRILLING TO 21.20m
OPEN HOLE DRILLING TO 31.50m

Casing Diameter
305mm cased to 15.15m
200mm cased to 21.20m
168mm cased to 31.50m

Location
318166 E 257185 N

Ground Level (mOD)
35.90

Dates
06/09/2005-
26/09/2005

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Engineer
RPS-MCOS

Sheet
2/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				Moderate Flow(1) at 11.20m.		(4.50)	DRILLER'S DESCRIPTION: Dark brown CLAY with some sand and gravel		∇1
					21.40	14.50	DRILLER'S DESCRIPTION: SAND and GRAVEL		
						(3.80)			
					17.60	18.30	DRILLER'S DESCRIPTION: Soft black ROCK		
						(1.70)			
					15.90	20.00			

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Remarks

Scale (approx)
1:50

Logged By
TR

Figure No.
05-271.PW02

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW02

Boring Method
OPEN HOLE DRILLING TO 15.15m
SYMMETRIX DRILLING TO 21.20m
OPEN HOLE DRILLING TO 31.50m

Casing Diameter
305mm cased to 15.15m
200mm cased to 21.20m
168mm cased to 31.50m

Ground Level (mOD)
35.90

Client
FINGAL COUNTY COUNCIL

Job Number
05-271

Location
318166 E 257185 N

Dates
06/09/2005-
26/09/2005

Engineer
RPS-MCOS

Sheet
3/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					5.90	30.00	DRILLER'S DESCRIPTION: Soft black ROCK		

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Remarks
Borehole collapsed between 22.40m - 31.50m. Borehole redrilled on 26/9/05 using 168 diameter Symmetrix.

Scale (approx)
1:50

Logged By
TR


Figure No.
05-271.PW02

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW02

Boring Method OPEN HOLE DRILLING TO 15.15m SYMMETRIX DRILLING TO 21.20m OPEN HOLE DRILLING TO 31.50m	Casing Diameter 305mm cased to 15.15m 200mm cased to 21.20m 168mm cased to 31.50m	Ground Level (mOD) 35.90	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318166 E 257185 N	Dates 06/09/2005-26/09/2005	Engineer RPS-MCOS	Sheet 4/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							DRILLER'S DESCRIPTION: Soft black ROCK		
				26/09/2005	4.40	31.50	Complete at 31.50m		

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Remarks Borehole terminated at scheduled depth. 125mm diameter standpipe installed to 31.50m.	Scale (approx)	Logged By
	1:50	TR
	Figure No. 05-271.PW02	

Glover Site Investigations Ltd

Site FINGAL LANDFILL PROJECT	Borehole Number PW02
Client FINGAL COUNTY COUNCIL	Job Number 05-271
Engineer RPS-MCOS	Sheet 1/1

Installation Type PUMPING WELL	Dimensions Internal Diameter of Tube [A] = 125 mm Diameter of Filter Zone = 168 mm
	Location 318166 E 257185 N

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling																																																							
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)																																														
						Groundwater Observations During Drilling																																																							
						<table border="1"> <thead> <tr> <th rowspan="2">Date</th> <th colspan="5">Start of Shift</th> <th colspan="5">End of Shift</th> </tr> <tr> <th>Time</th> <th>Depth Hole (m)</th> <th>Casing Depth (m)</th> <th>Water Depth (m)</th> <th>Water Level (mOD)</th> <th>Time</th> <th>Depth Hole (m)</th> <th>Casing Depth (m)</th> <th>Water Depth (m)</th> <th>Water Level (mOD)</th> </tr> </thead> <tr> <td>26/09/05</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>31.50</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>														Date	Start of Shift					End of Shift					Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	26/09/05							31.50													
Date	Start of Shift					End of Shift																																																							
	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)																																																			
26/09/05							31.50																																																						
						Instrument Groundwater Observations																																																							
						Inst. [A] Type :																																																							
						<table border="1"> <thead> <tr> <th rowspan="2">Date</th> <th colspan="3">Instrument [A]</th> <th rowspan="2">Remarks</th> </tr> <tr> <th>Time</th> <th>Depth (m)</th> <th>Level (mOD)</th> </tr> </thead> <tr> <td>26/09/05</td> <td></td> <td>6.30</td> <td>29.60</td> <td></td> </tr> </table>														Date	Instrument [A]			Remarks	Time	Depth (m)	Level (mOD)	26/09/05		6.30	29.60																														
Date	Instrument [A]			Remarks																																																									
	Time	Depth (m)	Level (mOD)																																																										
26/09/05		6.30	29.60																																																										
			13.40	22.50	Natural Ground																																																								
			4.40	31.50	Well Screen																																																								

Remarks
 Upright cover fitted.
 End cap fitted to base of standpipe.

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW03

Boring Method OPEN HOLE DRILLING TO 15.15m SYMMETRIX DRILLING TO 24.24m OPEN HOLE DRILLING TO 34.90m	Casing Diameter 305mm cased to 15.15m 200mm cased to 24.24m 168mm cased to 34.90m	Ground Level (mOD) 34.09	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317966 E 256753 N	Dates 07/09/2005-23/09/2005	Engineer RPS-MCOS	Sheet 1/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					24.09	10.00	DRILLER'S DESCRIPTION: Dark brown to black CLAY with some gravels		

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Remarks 305mm diameter open hole drilling to 15.15m. 200mm diameter Symmetrix Drilling to 24.24m. 150mm diameter Open Hole Drilling to 33.30m. Descriptions are from driller's logs. Airlifted for 2 hours.	Scale (approx) 1:50	Logged By TR/HD
	Figure No. 05-271.PW03	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW03

Boring Method OPEN HOLE DRILLING TO 15.15m SYMMETRIX DRILLING TO 24.24m OPEN HOLE DRILLING TO 34.90m	Casing Diameter 305mm cased to 15.15m 200mm cased to 24.24m 168mm cased to 34.90m	Ground Level (mOD) 34.09	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317966 E 256753 N	Dates 07/09/2005- 23/09/2005	Engineer RPS-MCOS	Sheet 2/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							DRILLER'S DESCRIPTION: Dark brown to black CLAY with some gravels		
					21.97	12.12	DRILLER'S DESCRIPTION: SAND and GRAVEL		
				Strong Flow(1) at 15.15m.					∇1
					14.09	20.00			

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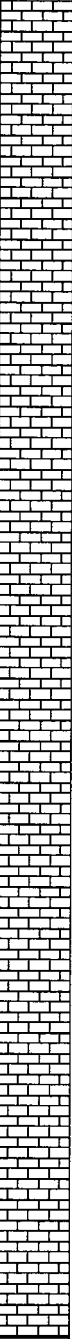
Remarks	Scale (approx)	Logged By
	1:50	TR/HD
	Figure No. 05-271.PW03	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW03

Boring Method OPEN HOLE DRILLING TO 15.15m SYMMETRIX DRILLING TO 24.24m OPEN HOLE DRILLING TO 34.90m	Casing Diameter 305mm cased to 15.15m 200mm cased to 24.24m 168mm cased to 34.90m	Ground Level (mOD) 34.09	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317966 E 256753 N	Dates 07/09/2005-23/09/2005	Engineer RPS-MCOS	Sheet 3/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(1.21)	DRILLER'S DESCRIPTION: SAND and GRAVEL		
					12.88	21.21	DRILLER'S DESCRIPTION: Black Rock (limestone)		
						(8.79)			
					4.09	30.00			

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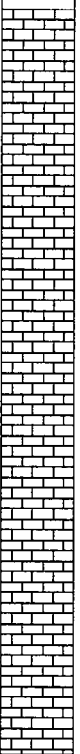
Remarks Borehole collapsed between 24.95m - 34.90m. Redrilled on 23/9/05 from 24.95m to 34.90m using 168mm diameter symmetrix.	Scale (approx) 1:50	Logged By TR/HD
	Figure No. 05-271.PW03	

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Borehole Number
PW03

Boring Method OPEN HOLE DRILLING TO 15.15m SYMMETRIX DRILLING TO 24.24m OPEN HOLE DRILLING TO 34.90m	Casing Diameter 305mm cased to 15.15m 200mm cased to 24.24m 168mm cased to 34.90m	Ground Level (mOD) 34.09	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 317966 E 256753 N	Dates 07/09/2005-23/09/2005	Engineer RPS-MCOS	Sheet 4/4

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(4.90)	DRILLER'S DESCRIPTION: Black Rock (limestone)		
				23/09/2005	34.09	34.90	Complete at 34.90m		

Remarks Borehole terminated at scheduled depth. 125mm diameter standpipe installed to 33.50m.	Scale (approx) 1:50	Logged By TR/HD
	Figure No. 05-271.PW03	

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Glover Site Investigations Ltd

Site	FINGAL LANDFILL PROJECT	Borehole Number	PW03
Installation Type	PUMPING WELL	Client	FINGAL COUNTY COUNCIL
Dimensions	Internal Diameter of Tube [A] = 125 mm Diameter of Filter Zone = 168 mm	Job Number	05-271
Location	317966 E 256753 N	Ground Level (mOD)	34.09
Engineer	RPS-MCOS	Sheet	1/1

Legend	Water	Instr (A)	Level (mOD)	Depth (m)	Description	Groundwater Strikes During Drilling											
						Date	Time	Depth Struck (m)	Casing Depth (m)	Inflow Rate	Readings				Depth Sealed (m)		
						Groundwater Observations During Drilling											
						Start of Shift					End of Shift						
						Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)	Date	Time	Depth Hole (m)	Casing Depth (m)	Water Depth (m)	Water Level (mOD)
								15.15		Strong Flow							
						23/09/05								34.90			
						Instrument Groundwater Observations											
						Inst. [A] Type :											
						Date	Instrument [A]			Remarks							
						Time	Depth (m)	Level (mOD)									
						23/09/05		5.50	28.59								
						8.19	25.90	Well Screen									
						-0.81	34.90										

Remarks
 Upright cover fitted.
 End cap fitted to base of standpipe.

Appendix C

Exploratory trial pit logs

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Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Trial Pit Number
TP01

Excavation Method 4 TONNE TRACKED EXCAVATOR	Dimensions	Ground Level (mOD) 37.99	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318065.8 E 256880.6 N	Dates 29/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1			37.99	0.20	TOPSOIL		
1.00	B1					MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY with occasional sub-rounded to sub-angular cobbles, plastic. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse		
1.50	J2				(2.80)			
2.00	B2							
2.50	J3							
3.00	B3			34.99	3.00	MADE GROUND: Soft brown sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub-angular to sub-rounded fine to coarse		
3.50	J4		29/05/2005:DRY	34.49	3.50	Complete at 3.50m		

Plan

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Remarks

Pit sides stable on completion.

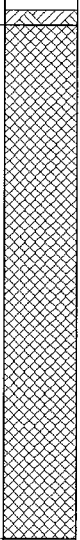
Scale (approx) 1:50	Logged By TR/HD	Figure No. 05-271.TP01
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Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Trial Pit Number
TP02

Excavation Method 4 TONNE TRACKED EXCAVATOR	Dimensions	Ground Level (mOD) 38.19	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318062.4 E 256843.4 N	Dates 29/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1			38.09	0.10	TOPSOIL		
1.00	B1					MADE GROUND: Firm brown and grey sandy gravelly CLAY with occasional cobbles, brick, wood, ash, plastic, metal, boulders, concrete. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse		
1.50	J2							
2.00	B2				(3.40)			
2.50	J3							
3.00	B3							
3.50	J4		29/05/2005: DRY	34.69	3.50	Complete at 3.50m		

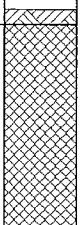
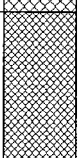
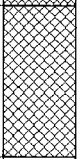
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Plan

Remarks

Pit sides stable on completion.

Scale (approx) 1:50	Logged By TR/HD	Figure No. 05-271.TP02
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Glover Site Investigations Ltd					Site FINGAL LANDFILL PROJECT		Trial Pit Number TP03		
Excavation Method 4 TONNE TRACKED EXCAVATOR		Dimensions		Ground Level (mOD) 37.89		Client FINGAL COUNTY COUNCIL		Job Number 05-271	
		Location 318051.7 E 256817.1 N		Dates 29/05/2005		Engineer RPS-MCOS		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
0.50	J1			37.79	0.10	TOPSOIL MADE GROUND: Firm brown slightly sandy slightly gravelly CLAY with occasional sub-rounded to sub-angular cobbles. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse			
1.00	B1				(1.40)				
1.50	J2			36.39	1.50	MADE GROUND: Firm brown and grey slightly sandy slightly gravelly CLAY with occasional sub-rounded to sub-angular cobbles and boulders, wood, brick and plastic			
2.00	B2				(1.00)				
2.50	J3			35.39	2.50	MADE GROUND: Loose to medium dense brown slightly silty sandy fine to coarse GRAVEL			
3.00	B3				(1.00)				
3.50	J4		29/05/2005:DRY	34.39	3.50	Complete at 3.50m			
Plan					Remarks Pit sides collapsing from 0.50m - 2.00m.				
					Scale (approx)		Logged By		Figure No.
					1:50		TR/HD		05-271.TP03

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Glover Site Investigations Ltd					Site FINGAL LANDFILL PROJECT		Trial Pit Number TP04		
Excavation Method 4 TONNE TRACKED EXCAVATOR		Dimensions		Ground Level (mOD) 37.34		Client FINGAL COUNTY COUNCIL		Job Number 05-271	
		Location 318089.7 E 256788 N		Dates 29/05/2005		Engineer RPS-MCOS		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
0.50	J1			37.24	0.10	TOPSOIL		[Cross-hatched pattern]	
1.00	B1					MADE GROUND: Firm friable brown and grey slightly sandy slightly gravelly CLAY with occasional cobbles, brick, wood, plastic. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse			
1.50	J2				(2.40)				
2.00	B2								
2.50	J3			34.84	2.50	MADE GROUND: Firm brown friable sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to medium		[Cross-hatched pattern]	
3.00	B3				(1.00)				
3.50	J4		29/05/2005: DRY	33.84	3.50	Complete at 3.50m			
Plan						Remarks Pit sides stable on completion.			
						Scale (approx) 1:50		Logged By TR/HD	
						Figure No. 05-271.TP04			

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Trial Pit Number
TP05

Excavation Method 4 TONNE TRACKED EXCAVATOR	Dimensions	Ground Level (mOD) 38.34	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318102 E 256826.6 N	Dates 29/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1			37.84	0.50	TOPSOIL		
1.00	B1					MADE GROUND: Firm grey slightly friable sandy slightly gravelly CLAY with occasional cobbles, concrete, bricks, mortar, plastic and wood		
1.50	J2							
2.00	B2				(3.00)			
2.50	J3							
3.00	B3							
3.50	J4		29/05/2005:DRY	34.84	3.50	Complete at 3.50m		

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Plan .	Remarks Pit sides stable on completion.		
	Scale (approx)	Logged By	Figure No.
	1:50	TR/HD	05-271.TP05

Glover Site Investigations Ltd					Site FINGAL LANDFILL PROJECT		Trial Pit Number TP06		
Excavation Method 4 TONNE TRACKED EXCAVATOR		Dimensions		Ground Level (mOD) 37.90		Client FINGAL COUNTY COUNCIL		Job Number 05-271	
		Location 318116.4 E 256867.7 N		Dates 29/05/2005		Engineer RPS-MCOS		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
0.50	J1			37.80	0.10 (0.70)	TOPSOIL MADE GROUND: Firm brown friable slightly sandy slightly gravelly CLAY with occasional cobbles. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse			
1.00	B1			37.10	0.80	MADE GROUND: Firm grey slightly friable slightly sandy slightly gravelly CLAY with occasional cobbles, plastic, wood, brick. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse			
1.50	J2								
2.00	B2				(2.70)				
2.50	J3								
3.00	B3								
3.50	J4		29/05/2005: DRY	34.40	3.50	Complete at 3.50m			
Plan						Remarks Pit sides stable on completion.			
						Scale (approx)	Logged By	Figure No.	
						1:50	TR/HD	05-271.TP06	

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Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT

Trial Pit Number
TP07

Excavation Method 4 TONNE TRACKED EXCAVATOR	Dimensions	Ground Level (mOD) 38.14	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318140.6 E 256827.7 N	Dates 29/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1			38.04	0.10	TOPSOIL		
1.00	B1				(1.30)	MADE GROUND: Firm brown friable slightly sandy slightly gravelly CLAY with cobbles, brick, metal bar, wood, concrete. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse		
1.50	J2			36.74	1.40	MADE GROUND: Firm grey slightly friable slightly sandy slightly gravelly CLAY with occasional cobbles, wood, plastic		
2.00	B2				(2.10)			
2.50	J3							
3.00	B3							
3.50	J4	29/05/2005:DRY		34.64	3.50	Complete at 3.50m		

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Plan	Remarks Pit sides stable on completion.		
	Scale (approx)	Logged By	Figure No.
	1:50	TR/HD	05-271.TP07

Glover Site Investigations Ltd

Site
FINGAL LANDFILL PROJECT
Trial Pit Number
TP08

Excavation Method 4 TONNE TRACKED EXCAVATOR	Dimensions	Ground Level (mOD) 37.91	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318134.2 E 256798.6 N	Dates 29/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1			37.81	0.10	TOPSOIL MADE GROUND: Firm brown friable sandy gravelly CLAY with occasional cobbles, wire, string, plastic, wood and brick. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse		
1.00	B1			36.91	1.00	MADE GROUND: Firm grey slightly friable slightly sandy slightly gravelly CLAY with occasional cobbles, plastic, wood and brick. Sand is fine to coarse. Gravel is sub-rounded to sub-angular fine to coarse		
1.50	J2							
2.00	B2							
2.50	J3				(2.50)			
3.00	B3							
3.50	J4		29/05/2005: DRY	34.41	3.50	Complete at 3.50m		

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Plan	

Remarks Pit sides stable on completion.		
Scale (approx) 1:50	Logged By TR/HD	Figure No. 05-271.TP08

Glover Site Investigations Ltd					Site FINGAL LANDFILL PROJECT		Trial Pit Number TP09			
Excavation Method 4 TONNE TRACKED EXCAVATOR		Dimensions		Ground Level (mOD) 37.44		Client FINGAL COUNTY COUNCIL		Job Number 05-271		
		Location 318129.6 E 256772.8 N		Dates 30/05/2005		Engineer RPS-MCOS		Sheet 1/1		
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water	
0.50	J1			37.04	(0.40) 0.40	MADE GROUND: Firm orange brown sandy gravelly CLAY containing occasional smooth angular cobbles				
1.00	B1					MADE GROUND: Firm to stiff greyish brown gravelly sandy CLAY containing occasional plastic, wood, brick, concrete, cobbles, concrete blocks, wire, rubber pipes				
1.50	J2									
2.00	B2				(3.10)					
2.50	J3									
3.00	B3									
3.50	J4		30/05/2005: DRY	33.94	3.50	Complete at 3.50m				
Plan					Remarks					
					Pit sides stable on completion.					
					Scale (approx)		Logged By		Figure No.	
					1:50		TR/HD		05-271.TP09	

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<h1 style="margin: 0;">Glover Site Investigations Ltd</h1>	Site FINGAL LANDFILL PROJECT	Trial Pit Number TP10
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Excavation Method 4 TONNE TRACKED EXCAVATOR	Dimensions	Ground Level (mOD) 36.06	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318195.1 E 256743.8 N	Dates 30/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1			35.96	0.10	TOPSOIL		
1.00	B1					MADE GROUND: Building rubble fill containing wood, brick, gas canister, plastic piping, metal, wood, wire, concrete blocks, tin can, carpet		
1.50	J2				(2.90)			
2.00	B2							
2.50	J3							
3.00	B3		30/05/2005:DRY	33.06	3.00	Completed at 3.00m		

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Plan	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">.</div> <div style="width: 45%;">.</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">.</div> <div style="width: 45%;">.</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">.</div> <div style="width: 45%;">.</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">.</div> <div style="width: 45%;">.</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">.</div> <div style="width: 45%;">.</div> </div>
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Remarks Trial pit continually collapsing below 2.80m.		
Scale (approx) 1:50	Logged By TR/HD	Figure No. 05-271.TP10

Glover Site Investigations Ltd					Site FINGAL LANDFILL PROJECT		Trial Pit Number TP11	
Excavation Method 4 TONNE TRACKED EXCAVATOR		Dimensions		Ground Level (mOD) 36.38		Client FINGAL COUNTY COUNCIL		Job Number 05-271
		Location 318209.3 E 256792.1 N		Dates 30/05/2005		Engineer RPS-MCOS		Sheet 1/1
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1			36.33	0.05	TOPSOIL		
				36.18	0.20 (0.15)	MADE GROUND: Firm brown gravelly sandy CLAY		
1.00	B1					MADE GROUND: Loose black sandy clayey fine to medium GRAVEL containing cinders, plastic bags, wood, metal, decaying organic, concrete blocks, newspaper		
1.50	J2				(2.30)			
2.00	B2							
2.50	J3			33.88	2.50	MADE GROUND: Firm grey brown gravelly sandy CLAY containing occasional smooth sub-rounded cobbles		
3.00	B3				(1.00)			
3.50	J4		30/05/2005:DRY	32.88	3.50	Complete at 3.50m		
Plan						Remarks Pit sides stable on completion.		
						Scale (approx) 1:50	Logged By TR/HD	Figure No. 05-271.TP11

Glover Site Investigations Ltd					Site FINGAL LANDFILL PROJECT		Trial Pit Number TP13	
Excavation Method 4 TONNE TRACKED EXCAVATOR		Dimensions		Ground Level (mOD) 33.39		Client FINGAL COUNTY COUNCIL		Job Number 05-271
		Location 318284.1 E 256781.5 N		Dates 30/05/2005		Engineer RPS-MCOS		Sheet 1/1
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1			33.29	0.10	TOPSOIL		
1.00	B1				(2.10)	MADE GROUND: Soft to firm orange brown to black sandy gravelly CLAY containing occasional smooth, sub-rounded cobbles. Gravel is sub-rounded fine to medium		
1.50	J2							
2.00	B2			31.19	2.20 (0.30)	Firm greyish brown sandy CLAY containing occasional fine sub-rounded gravel		
2.50	J3			30.89	2.50 (0.80)	Firm orange brown sandy slightly gravelly CLAY. Gravel is sub-rounded fine to medium		
3.00	B3							
3.30	J4		30/05/2005:DRY	30.09	3.30	Complete at 3.30m		
Plan						Remarks Pit sides stable on completion.		
						Scale (approx) 1:50	Logged By TR/HD	Figure No. 05-271.TP13

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Site
FINGAL LANDFILL PROJECT

Trial Pit Number
TP14

Excavation Method 4 TONNE TRACKED EXCAVATOR	Dimensions	Ground Level (mOD) 32.35	Client FINGAL COUNTY COUNCIL	Job Number 05-271
	Location 318267.2 E 256746.5 N	Dates 30/05/2005	Engineer RPS-MCOS	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	J1			32.15	0.20	TOPSOIL		
1.00	B1				(2.20)	MADE GROUND: Soft reddish brown to greyish brown gravelly sandy CLAY containing occasional smooth sub-rounded cobbles		
1.50	J2							
2.00	B2							
2.50	J3			29.95 29.85	2.40 2.50	TOPSOIL		
3.00	B3				(1.00)	Firm greyish brown sandy gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-rounded fine to medium		
3.50	J4		30/05/2005: DRY	28.85	3.50	Complete at 3.50m		

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Plan 	Remarks Pit sides stable on completion.		
	Scale (approx) 1:50	Logged By TR/HD	Figure No. 05-271.TP14

Glover Site Investigations Ltd					Site FINGAL LANDFILL PROJECT		Trial Pit Number TP15		
Excavation Method 4 TONNE TRACKED EXCAVATOR		Dimensions		Ground Level (mOD) 31.71		Client FINGAL COUNTY COUNCIL		Job Number 05-271	
		Location 318260.8 E 256697.8 N		Dates 30/05/2005		Engineer RPS-MCOS		Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
0.50	J1			31.51	0.20	TOPSOIL			
1.00	B1				(2.10)	MADE GROUND: Firm dark brown slightly gravelly sandy CLAY containing occasional smooth sub-angular cobbles			
1.50	J2								
2.00	B2								
2.50	J3			29.41	2.30	Firm to stiff greyish brown gravelly CLAY containing occasional smooth sub-rounded cobbles. Gravel is sub-rounded fine to medium			
3.00	B3				(1.20)				
3.50	J4		30/05/2005:DRY	28.21	3.50	Complete at 3.50m			
Plan					Remarks				
.					Pit sides stable on completion.				
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					Scale (approx)		Logged By		Figure No.
					1:50		TR/HD		05-271.TP15