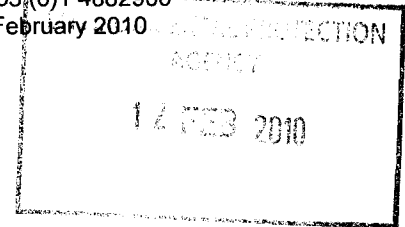




Our Ref: MDR0339Lt0244
 File Ref: 340

E-mail: cora.plant@rpsgroup.com
 Telephone: +353 (0)1 488 2900
 Date: 10th February 2010

Office of Climate, Licensing and Resource Use
 EPA Headquarters PO Box 3000,
 Johnstown Castle Estate,
 County Wexford



Re:- **Proposal to reduce the licence boundary at the Ballyogan Landfill Facility/
 Ballyogan Recycling Park (Waste Licence Reg. No. W0015-01)**

Dear Sir/Madam,

I am writing to you on behalf of Dun Laoghaire Rathdown County Council pursuant to a letter received from the EPA inspector for the Ballyogan Landfill Facility/ Ballyogan Recycling Park (dated 17th November 2009 EPA reference W0015-01/gen13ts). The letter was received with respect to an application that was made by Dun Laoghaire Rathdown County Council to have the licence boundary of the Ballyogan Landfill Facility/ Ballyogan Recycling Park reduced (application made the 8th July 2009 RPS reference mdr0339lt0214 and further information issued 24th August 2009 RPS reference mdr0339lt0227). In the letter the EPA requested that a written request be submitted to the Office of Climate, Licensing and Resource Use in accordance with Section 42B of the *Waste Management Act 1996*, as amended.

Further to this correspondence, on behalf of Dun Laoghaire Rathdown County Council, a request is made to reduce the licence boundary at the Ballyogan Landfill Facility to exclude an area which is currently under development for the provision of a Dun Laoghaire Rathdown environmental and road maintenance services Depot. The area requested to be removed from the licence boundary is located wholly outside the waste body and is not currently used with respect to any licence activity at the site.

To assist you in your consideration of this matter please find enclosed a copy of the correspondence referenced in the first paragraph of this letter.

We trust that the foregoing and attached meets with your satisfaction, however, if you require further information or clarification on any matter please do not hesitate to contact Una Fitzgerald, Senior Scientist, RPS.

Yours sincerely

Cora Plant
Senior Engineer
for RPS

CP/cp

cc. Michael Whelan, Senior Executive Engineer, DLRCC; Brian Cryan, Landfill Manager, DLRCC; Mr Bob Hannon, Architects Department, DLRCC; Thomas Sexton, EPA

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Our Ref: MDR0339L10227
File Ref: 340

E-mail: cora.plant@rpsgroup.com
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Date: 24th August 2009

Mr Tom Sexton
Environmental Protection Agency
McCumiskey House
Richview
Clonskeagh Road
Dublin 14

Re:- **Waste Licence W0015-01, Ballyogan Landfill and Recycling Park
Proposal to amend the license boundary**

Dear Tom,

Further to our submission made on behalf of Dun Laoghaire Rathdown County Council dated the 8th July 2009 (RPS ref MDR0338L10214) and the response received from the agency requesting further information dated the 27th of July 2009 (EPA ref W0045-01/ak42ts) please find attached the detailed borehole records for site investigations that were undertaken within the depot site area in 2006.

The enclosed borehole records for the site investigation conducted on the depot site area confirm that there has been no filling of municipal solid waste within the depot site area (the area proposed for removal from the Ballyogan waste licensed area).

It should be noted that the majority of the depot site area was utilised at one stage by DLRCC as the site offices and compound for the landfill. In order to facilitate this utilisation the area would have been re-graded from its pre-existing levels and hardcore areas were installed to facilitate vehicular access and parking. These re-grading works and hard-standing installations are identified in the borehole logs for the area.

The old site offices that were located within the depot site area have been demolished as part of the stage 2 capping works (detailed in the SEW submitted for the stage 2 capping works, submission dated 25th February 2008 RPS ref MDR0339L1097Dun) and all hardcore areas have been removed as part of the depot site clearance works. In addition, approx 300-500mm of topsoil and subsoil has been stripped from the entire site area, and has been confirmed by the Stage 2 capping RE as being of good quality. In addition to this approximately 10,000m³ of material shall be removed from the East of the site to facilitate the construction of the basement under the depot office buildings.

Also attached is a drawing (ref 3788-01 rev C1) which details the revised location for all monitoring wells that are required to be relocated to facilitate the Depot contract works. Please note that: MW1D&S=MW2D&S, MW2D&S=MW13D&S; GW1=GW12a, GW2=GW11, GW3=GW10a and GW4=GW75a. This difference in well references is purely from a depot contract perspective. For the purposes of the waste license monitoring, once installed, these wells will revert to the existing well references.

The monitoring wells shall be re-installed towards the end of the depot contract. The depot contract has a 15 month programme which commenced in August 2009. Therefore it is expected that the wells will be fully reinstated by December 2010. GW22 has been removed as part of the stage 2 capping works and has been replaced by GW22a (detailed in the SEW

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submitted for the stage 2 capping work, submission dated the 25th February 2008, RPS ref MDR0339Lt097Dun). GW22a has been installed as part of the stage 2 capping works and is awaiting its final capping detail which will be complete by the end of October 2009.

We trust that the enclosed meets with your satisfaction and will facilitate the formal removal of the depot site area from the Ballyogan waste license boundary, resulting in a revised license boundary (refer to drawing MDR0339DG0218A01 for details of the proposed revised boundary). Should you have any further queries please do not hesitate to contact the undersigned.

Yours sincerely

Cora Plant
Senior Engineer
for RPS

CP/cp

cc. Michael Whelan, Senior Executive Engineer, DLRCC; Brian Cryan, Landfill Manager, DLRCC

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GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT	Ballyroon, Dublin	BOREHOLE NO.	1
CO-ORDINATES (E, N)	320,770.00 E 224,226.00 N	SHEET	Sheet 1 of 2
CLIENT	Dun Laoghaire Rathdown County Council	DATE STARTED	13/07/2006
ENGINEER	White Young Green	DATE COMPLETED	17/07/2006
		BORED BY	J. O'Toole
		PROCESSED BY	F. Clancy
		GROUND LEVEL (m)	90.20
		BOREHOLE DIAMETER (mm)	200
		BOREHOLE DEPTH (m)	14.20
		CASING DEPTH (m)	14.20

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Hold Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
0	TOPSOIL		90.10	0.10					
0	MADE GROUND comprising of brown clay with gravel and brick								
1	Stiff to very stiff brown gravelly CLAY with cobbles		88.90	1.30	U8373	U	1.50	N = 30 (4, 7, 9, 8, 6, 7)	
2					U8374	D	2.00	N = 41 (3, 6, 9, 12, 8, 12)	
3	Stiff black sandy gravelly CLAY with cobbles		86.90	3.30	U8375	D	3.00	N = 40 (6, 10, 14, 15, 7, 9)	
4					U8376	U	4.00	N = 64 (3, 7, 18, 15, 15, 15)	
5	Stiff brown gravelly CLAY		85.70	4.50	U8377	U	5.00	N = 41 (4, 7, 9, 9, 11, 12)	
6	Loose brown silty SAND with some gravel		84.20	6.00	U8378	D	6.00	N = 12 (1, 2, 2, 2, 4, 4)	
7	Very stiff to hard brown gravelly CLAY with cobbles		83.50	6.70	U8379	D	7.00	N = 53 (3, 7, 9, 12, 16, 16)	
8					U8380	D	8.00	N = 66 (7, 11, 14, 16, 17, 19)	
9					U8381	D	9.00	N = 50 (4, 6, 9, 11, 14, 16)	

From (m)	To (m)	Time (h)	Comments
1.9	2.2	0.5	
3.1	3.4	0.5	
6.0	7.1	1.25	
11	11.3	0.75	
12.5	12.7	0.5	
14	14.2	2	

Water Strike	Casing Depth	Sealed At	Rise To	Time (h:min)	Comments
6.20	6.20	6.80	No		Seepage

Date	Probe Depth	Casing Depth	Depth to Water	Comments

Date	Tip Depth	RZ Top	RZ Base	Type
17/07/2006	14.20	1.00	14.20	50mm SP

REMARKS Location CA1 scanned and hand pit dug to 1.20m

Sample Legend
 U - Undisturbed 200mm Diameter Sample
 D - Disturbed 200mm Diameter Sample
 N - Standard Penetration Test
 P - Piezometer
 W - Water
 S - Environmental Sample (Soil + Water)

IBSI - 105 - 1124 - SP1 - IBSI.GDT - 3/10/06



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballyogan, Dublin

BOREHOLE NO. 1
SHEET Sheet 2 of 2

CO-ORDINATES (Easting) 320,770.00 E
224,226.00 N

GROUND LEVEL (m) 90.70

DATE STARTED 13/07/2006

BOREHOLE DIAMETER (mm) 200

DATE COMPLETED 17/07/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER Willie Young Green

BOREHOLE DEPTH (m) 14.20

BORED BY J.O'Toole

CASING DEPTH (m) 14.20

PROCESSED BY F.Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Ref. Number	Sampling		Field Test Results	Standard Details
						Sample Type	Depth (m)		
10.00	Very stiff to hard brown greyish CLAY with cobbles (continued)		96.00	10.00	U8382	D	10.00	N = 57 (4, 12, 11, 14, 16, 18)	
11.00				U8383	D	11.00	N = 62 (2, 7, 11, 16, 18, 19)		
12.00				U8384	D	12.00	N = 36 (2, 14, 15, 16, 18, 19)		
13.00				U8385	D	13.00	N = 25 (2, 4, 5, 6, 7, 7)		
14.00				U8390	D	14.00	N = 106 (14, 16, 16, 30, 30, 30)		
14.20	End of Borehole at 14.20 m		96.00	14.20					

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From (m)	To (m)	Time (h)	Comments
1.9	2.2	0.5	
3.1	3.4	0.5	
6.8	7.1	1.25	
11	11.3	0.75	
12.5	12.7	0.5	
13	14.2	2	

Water Strike	Casing Depth	Sealed At	Rise To	Time (h:mm)	Comments
12.40	12.40	No	11.00		Seepage

Date	Hoza Depth	Casing Depth	Depth to Water	Comments
14-07-06	14.20	14.20	N8	End of Day
17-07-06	14.20	Nil	11.20	End of Day

Date	Tip Depth	RZ Top	RZ Base	Type
17/07/2006	14.20	1.06	14.20	50mm SP

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend
 D - Standard Penetration
 H - Hand Chiselling
 P - 100mm Push Down
 E - Environmental Sample (u + v + t + s)

U - Undersized (10mm) Domestic Sample
 P - Pushed Down Sample

ISGI SP LOG 11941 SP/ 105_GBT_3/12/06



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballyogen, Dublin

BOREHOLE NO. 1A
SHEET Sheet 1 of 2

CO-ORDINATES() 320,771.00 E
224,229.00 N

GROUND LEVEL (m) 90.24
BOREHOLE DIAMETER (mm) 200
BOREHOLE DEPTH (m) 15.50
CASING DEPTH (m)

DATE STARTED 26/07/2006
DATE COMPLETED 26/07/2006
BORED BY J.O'Toole
PROCESSED BY F.Clancy

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standard Details
					Ref. Number	Sample Type	Depth (m)		
0	TOP SOIL CAT scanned and hand dug inspection pit MADE GROUND consisting of firm to stiff brown clay with stones	[Cross-hatched pattern]	90.14	0.10					
1	MADE GROUND brown clay with some gravel	[Cross-hatched pattern]	89.84	1.40	X7628	D	1.00	N = 26 (4, 5, 6, 6, 7, 7)	
2					X7628	D	2.00	N = 18 (2, 2, 3, 4, 4, 5)	
3	Very stiff to hard black sandy gravelly CLAY with cobbles	[Dotted pattern]	87.14	2.80	X7677	D	3.00	N = 48 (4, 7, 9, 11, 12, 16)	
4					X7628	D	4.00	N = 60 (8, 9, 11, 14, 16, 19)	
5					X7629	D	5.00	N = 43 (4, 7, 9, 9, 12, 13)	
6					X7630	D	6.00	N = 65 (7, 10, 12, 16, 18, 18)	
7					X7631	D	7.00	N = 36 (6, 11, 16, 7, 6, 7)	
8	Dense grey fine to coarse silty sandy GRAVEL with cobbles	[Stippled pattern]	82.74	7.50	X7632	n	8.60	N = 45 (4, 7, 10, 15, 12, 14)	
9	Very stiff brown sandy gravelly CLAY with fragments of granite cobbles	[Stippled pattern]	80.94	9.30	X7633	U	9.00	N = 58 (2, 9, 11, 16, 15, 16)	

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HARD STRATA BORING/CHISELLING

From (m)	To (m)	Time (h)	Comments
3.1	3.4	1.25	
5.7	6.9	0.5	
7.1	7.3	1	
12.6	12.65	1.5	
15.2	15.5	2	

WATER STRIKE DETAILS

Water Strike	Casing Depth	Sealed At	Rise To	Time (hrs:min)	Comments
6.00	6.00	12.20	No		Rapid
7.50	7.50	No	3.00		

GROUNDWATER DETAILS

Date	Hoist Depth	Casing Depth	Depth to Water	Comments
26-07-06	4.20	4.70	Nil	End of Day

INSTALLATION DETAILS

Date	To Depth	RZ Top	RZ Base	Type
20/07/2006	15.50	1.00	15.50	50mm SP

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend

u - Undersaturated
n - Natural
D - Disturbed
U - Undisturbed

SP - Standard Penetration Test
P - Undersaturated Plastic Flow

KESL BML 1941 LOG: KESL GST 31026



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT	BaByogen, Dublin	BOREHOLE NO.	1A
CO-ORDINATES (_)	320,771.00 E 224,220.00 N	GROUND LEVEL (m)	90.24
CLIENT	Dun Laoghaire Rathdown County Council	BOREHOLE DIAMETER (mm)	200
ENGINEER	Walter Young Geos	BOREHOLE DEPTH (m)	15.50
		CASING DEPTH (m)	
		DATE STARTED	26/07/2006
		DATE COMPLETED	28/07/2006
		BORED BY	J.O'Toole
		PROCESSED BY	F.Clancy

Depth (m)	Description	Legend	Elevation (m)	Depth (m)	Samples		Field Test Results	Standpipe Details
					Ref. Number	Sample Type		
10.00	Very stiff brown sandy gravelly CLAY with fragments of granite cobbles (continued)				X7634	D	N = 57 (4, 7, 12, 16, 13, 16)	
11.00					X7635	D	N = 67 (5, 9, 12, 17, 19, 19)	
12.00					X7635	D	N = 55 (6, 9, 11, 12, 16, 16)	
13.00					X7637	D	N = 70 (4, 10, 16, 17, 19, 18)	
14.00					X7638	D	N = 66 (5, 11, 15, 16, 16, 19)	
15.00	Dense granite GRAVEL		75.24	15.00	X7615	D	N = 70/150 mm (10, 16, 20, 50)	
15.50	End of Borehole at 15.50 m		74.74	15.50				

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HARD STRATA BORING/CHISELING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (hrs:min)	Comments
3.1	3.4	1.25							Rapid
5.7	5.9	0.5							
7.1	7.3	1							
12.6	12.95	1.5							
15.2	15.5	2							

INSTALLATION DETAILS					GROUNDWATER DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type	Date	Hole Depth	Casing Depth	Depth to Water	Comments
28/07/2006	15.50	1.00	15.50	50mm SP	27-07-06	11.30	11.30	8.10	End of Day
					28-07-06	15.50	0.00	15.10	End of Day

REMARKS: Location CAT scanned and hand pit dug to 1.26m

Sample Legend:
 D - Standard 150mm (6x) SPT Sample
 N - N-value
 10 - 100gms Proctor
 100 - 100gms Proctor
 100 - 100gms Proctor
 100 - 100gms Proctor

GSI BHL 06 1-901 (SF) 10/06/06



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballyegen, Dublin	BOREHOLE NO. 2 SHEET Sheet 1 of 2
CO-ORDINATES () 320,759.00 E 224,209.00 N	GROUND LEVEL (m) 88.08 BOREHOLE DIAMETER (mm) 200
CLIENT Dun Laoghaire Rathfiuma County Council ENGINEER Whila Young Group	BOREHOLE DEPTH (m) 12.50 CASING DEPTH (m) 12.50
	DATE STARTED 24/07/2006 DATE COMPLETED 25/07/2006 BORED BY J.O'Fada PROCESSED BY F.Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standard Details
					Ref. Number	Sample Type	Depth (m)		
0	TOPSOIL		87.98	0.10					
0.10 - 1.00	MADE GROUND comprising of brown clay with steel, brick and concrete				X7614	D	1.00	N = 40 (2, 4, 9, 12, 10, 9)	
1.00 - 3.00	Stiff to very stiff brown gravelly CLAY with cobbles		86.28	1.80	X7615	D	2.00	N = 19 (1, 2, 4, 4, 5, 6)	
3.00 - 4.00					X7616	D	3.00	N = 39 (2, 7, 9, 9, 10, 11)	
4.00 - 5.00					X7617	D	4.00	N = 33 (4, 6, 7, 9, 6, 9)	
5.00 - 6.00					X7618	D	5.00	N = 50 (4, 9, 11, 11, 12, 16)	
6.00 - 7.00	Very stiff to hard black sandy gravelly CLAY with cobbles and boulders		81.78	6.30	X7619	D	6.00	N = 37 (4, 6, 7, 7, 9, 14)	
7.00 - 8.00					X7620	D	7.00	N = 55 (6, 9, 11, 12, 16, 16)	
8.00 - 9.00					X7621	D	8.00	N = 68 (7, 11, 14, 16, 17, 19)	
9.00 - 9.30	Stiff brown gravelly CLAY		78.78	9.30	X7622	D	9.00	N = 36 (4, 9, 12, 10, 7, 7)	

HAND STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (hh:mm)	Comments
2.8	3.2	0.75							Seepage
7.2	7.6	0.5							
9.4	9.7	0.5							
11.2	12.5	2							

GROUNDWATER DETAILS					INSTALLATION DETAILS				
Date	Hole Depth	Casing Depth	Depth to Water	Comments	Date	Tip Depth	RZ Top	RZ Base	Type
24-07-06									

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend
 1) - Small Disturbed (SD)
 2) - SD Disturbed
 3) - Long Borehole
 4) - Long Borehole
 5) - Long Borehole

ISGL BORE LOG 11941.GPJ, ISGL SGT 3/10/06



GEOTECHNICAL BORING RECORD

REPORT NUMBER
11941

CONTRACT Ballynag, Dublin		BOREHOLE NO. 2	
CO-ORDINATES () 320,759.00 E 224,209.01 N		SHEET Sheet 2 of 2	
GROUND LEVEL (m) 88.08		DATE STARTED 24/07/2006	
BOREHOLE DIAMETER (mm) 200		DATE COMPLETED 25/07/2006	
CLIENT Dun Laoghaire Rathdown County Council		BORED BY J. O'Toole	
ENGINEER White Young Green		PROCESSED BY F. Clancy	
BOREHOLE DEPTH (m) 12.50			
CASING DEPTH (m) 12.50			

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
10	Stiff brown gravelly CLAY (continued)				X7623	n	10.00	N = 46 (4, 6, 7, 11, 14, 14)	
11	Dense fine to coarse SAND with some granite cobbles		76.88	11.20	X7624	D	11.00	N = 51 (2, 9, 9, 11, 11, 20)	
12					X7625	D	12.00	N = 60/150 mm (25, 25)	
12.50	End of Borehole at 12.50 m		75.68	12.50					

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HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (hh:mm)	Comments
2.8	3.2	0.75		11.20	11.20	N/A	11.30		Scoopage
7.2	7.6	0.5							
9.4	9.7	0.5							
11.2	12.5	2							

INSTALLATION DETAILS					GROUNDWATER DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type	Date	Hold Depth	Casing Depth	Depth to Water	Comments
25-07-06					25-07-06	12.50	0.00	11.30	End of Day

REMARKS Location CAL scanned and hand pit dug to 1.20m

Sample Legend
 n - Standard (ASTM)
 D - Direct Shear
 LS - Liquid Limit & Plasticity
 CPT - Cone Penetration Test (CPT) (m) (mm)

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P - Not to be used for design

ISL BULL LOG - 11941.GPJ - ISL SPT SHEET



GEOTECHNICAL BORING RECORD

REPORT NUMBER
11941

CONTRACT	Ballyogan, Dublin	BOREHOLE NO.	3
CO-ORDINATES (E, N)	320,748.00 E 224,230.00 N	SHEET	Sheet 1 of 2
CLIENT	Dun Laoghaire Rathdown County Council	DATE STARTED	18/07/2006
ENGINEER	White Young Green	DATE COMPLETED	18/07/2006
		BORED BY	J. O'Toole
		PROCESSED BY	F. Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Stentpipe Details
					Ref. Number	Sample Type	Depth (m)		
0	TOPSOIL MADE GROUND comprised of brown and black clay with brick and rubble	[Cross-hatched pattern]	89.77	0.10					
1					UB387	D	1.00	N = 22 (2, 4, 6, 4, 6, 6)	
2					UB388	U	2.00	N = 26 (2, 4, 4, 6, 7, 9)	
3					UB389	D	3.00	N = 30 (1, 4, 5, 7, 9, 9)	
4					UB390	D	4.00	N = 10 (1, 2, 2, 2, 3, 3)	
4.30	Firm brown sandy CLAY with some gravel	[Horizontal line pattern]	88.57	4.30					
5					UB391	D	5.00	N = 23 (4, 8, 4, 6, 6, 7)	
6					UB392	D	6.00	N = 15 (2, 2, 3, 4, 4, 4)	
7					UB393	D	7.00	N = 13 (4, 7, 9, 9, 11, 14)	
7.00	Very stiff to hard brown sandy gravelly CLAY with oobbles	[Vertical line pattern]	82.87	7.00					
8					UB394	D	8.00	N = 18 (4, 7, 9, 11, 14, 14)	
9					UB395	D	9.00	N = 57 (6, 7, 10, 14, 17, 16)	

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From (m)	To (m)	Time (h)	Comments
0.5	0.6	1.25	
7	7.2	0.5	
9.3	9.6	0.75	
10.8	11	0.5	
13.1	13.2	2	

Water Strike	Casing Depth	Scaled At	Head To	Time (hh:mm)	Comments
6.00	6.00	7.00	5.50		Scopage

Date	Hole Depth	Casing Depth	Depth to Water	Comments

Date	Tip Depth	RZ Top	RZ Base	Type

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend
 D - Standard (6.0)
 U - Bulk (6.0)
 S - Long (6.0) (6.0)
 P - (6.0) (6.0) (6.0)

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GEOTECHNICAL BORING RECORD

REPORT NUMBER
11941

CONTRACT Ballygoon, Dublin		BOREHOLE NO. 3	
		SHEET Sheet 2 of 2	
CO-ORDINATES (<u> </u>) 320,748.00 E 224,230.00 N		GROUND LEVEL (m) 89.87	DATE STARTED 18/07/2006
		BOREHOLE DIAMETER (mm) 200	DATE COMPLETED 18/07/2006
CLIENT Dun Laoghaire Rathdown County Council		BOREHOLE DEPTH (m) 13.20	BORED BY J.C. Toole
ENGINEER White Young Green		CASING DEPTH (m) 13.20	PROCESSED BY F. Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
10	Very stiff to hard brown sandy gravelly CLAY with cobbles (continued)				UR396	D	10.00	N = 103 (3, 10, 16, 17, 20, 50)	
11					UR397	D	11.00		
12	Medium dense to dense fine to coarse (granite) SAND with occasional granite cobbles		78.37	11.50	UR398	D	12.00	N = 27 (2, 4, 6, 7, 7, 7)	
13					UR399	D	12.00		
13.20	End of Borehole at 13.20 m		78.87	13.20				N = 73/225 mm (2, 7, 9, 20, 50)	

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HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (h:min)	Comments
0.5	0.8	1.25		11.80	11.80	No	11.30		Seepage
7	7.2	0.5							
9.3	9.6	0.75							
10.8	11	0.5							
13.1	13.2	2							

GROUNDWATER DETAILS				INSTALLATION DETAILS				
Date	Tide Depth	Casing Depth	Depth to Water	Date	Tide Depth	Casing Depth	Depth to Water	Comments
19-07-06	13.20	0.00	11.20	19-07-06	13.20	0.00	11.20	End of Day

REMARKS Location CA1 scanned and hand pit dug to 1.20m

Sample Legend
 7 - Standard (P.A.)
 8 - Bulk Disturbed
 16 - Large Bulk Disturbed
 17 - Fractured Rock Sample (See Test Log)

ISS. SH. LOS 1154. GFL 1681.50 3-2003



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Rallygen, Dublin

BOREHOLE NO. 4
SHEET Sheet 1 of 2

CO-ORDINATES () 320,698.60 E
224,254.00 N

GROUND LEVEL (m) 92.68
BOREHOLE DIAMETER (mm) 200

DATE STARTED 07/07/2006
DATE COMPLETED 07/07/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

BOREHOLE DEPTH (m) 12.90
CASING DEPTH (m) 12.90

BORED BY P. Thomas
PROCESSED BY F. Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples		Field Test Results	Standpipe Details
					Ref. Number	Sample Type		
0.0 - 1.0	MADE GROUND comprised of brown and black clay, some cobbles, gravel and brick	[Cross-hatched pattern]			X3080	D	N = 17 (2, 3, 3, 4, 5, 5)	
1.0 - 2.0					X3081	U	N = 18 (3, 3, 3, 4, 4, 7)	
2.0 - 3.0					X3082	D	N = 27 (2, 3, 4, 5, 8, 10)	
3.0 - 4.0	Hard black slightly sandy gravelly CLAY with cobbles	[Dotted pattern]	89.58	3.30	X3083	D	N = 58 (6, 9, 11, 18, 15, 15)	
4.0 - 5.0					X3084	D	N = 84 (5, 10, 14, 19, 15, 15)	
5.0 - 6.0					X3085	D	N = 64 (11, 15, 21, 17, 12, 14)	
6.0 - 7.0	Dense grey black fine to coarse clayey GRAVEL	[Stippled pattern]	86.38	6.50	X3086	U	N = 58 (4, 10, 14, 17, 12, 15)	
7.0 - 8.0					X3087	D	N = 45 (5, 9, 10, 12, 13, 10)	
8.0 - 9.0	Very stiff to hard brown gravelly CLAY with cobbles	[Horizontal lines pattern]	85.56	7.30	X3088	D	N = 71 (10, 12, 14, 15, 17, 25)	

HARD STRATA BORING/CHISELLING			
From (m)	To (m)	Time (h)	Comments
4.3	4.6	1.25	
6.6	6.9	1.5	
12.6	12.8	2	

WATER STRIKE DETAILS					
Water Strike	Casing Depth	Sealed At	Rise To	Time (hh:mm)	Comments
6.50	6.50	7.30	3.00		Seepage

GROUNDWATER DETAILS					
Date	Hold Depth	Casing Depth	Depth to Water	Comments	

INSTALLATION DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type
07/07/2006	12.90	1.00	12.90	50mm SP

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend
 U - Small Diameter (50mm)
 D - Small Diameter (50mm)
 LB - Large Diameter (100mm)
 S - Small Diameter (50mm) + MS + TP

ISS. BY: J.C. 11/07/06 SPT. 08/01/06



GEOTECHNICAL BORING RECORD

REPORT NUMBER
11941

CONTRACT Ballyogan, Dublin

BOREHOLE NO. 4
SHEET Sheet 2 of 2

CO-ORDINATES(...) 320,698.00 F
224,254.00 N

GROUND LEVEL (m) 82.88
BOREHOLE DIAMETER (mm) 200

DATE STARTED 07/07/2006
DATE COMPLETED 07/07/2006

CLIENT Dún Laoghaire Rathdown County Council
ENGINEER White Young Green

BOREHOLE DEPTH (m) 12.90
CASING DEPTH (m) 12.80

BORED BY P.Thomas
PROCESSED BY F.Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
10	Very stiff to hard brown gravelly CLAY with cobbles (continued)				X3090	D	10.00	N = 47/150 mm (5, 7, 20, 27)	
11				X3090	D	11.00	(9, 12, 15, 26)		
12				X3091	D	12.00	N = 34 (4, 7, 10, 10, 8, 6)		
12.90				X3092	D	12.90			
13	End of Borehole at 12.90 m		79.98	12.90					

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HARD STRATA BORING/CHISELLING			
From (m)	to (m)	Time (h)	Comments
4.3	4.6	1.25	
6.6	6.9	1.5	
12.0	12.0	2	

WATER STRIKE DETAILS						
Water Strike	Casing Depth	Scoted At	Rise to	Time (thru min)	Comments	
					Seepage	

GROUNDWATER DETAILS						

INSTALLATION DETAILS					Date	Hole Depth	Casing Depth	Depth to Water	Comments
Date	Top Depth	RZ Top	RZ Base	Type					
07/07/2006	12.90	1.00	12.90	50mm SP					

REMARKS Location CA1 scanned and hand pit dug to 1.20m

Sample Legend
 (1) - Sand (Unaltered)
 (2) - BA (Disturbed)
 (3) - Large RA (Disturbed)
 (4) - Large RA (Unaltered)

U - Undisturbed (60-100g) Sample
 P - Undisturbed (Petro) Sample

S&S B/L 05 1/04/06: GSI/SET SHEET



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Riallogan, Dublin

BOREHOLE NO. 5

SHEET Sheet 1 of 2

CO-ORDINATES() 320,731.00 E
224,217.00 N

GROUND LEVEL (m) 89.69

BOREHOLE DIAMETER (mm) 200

DATE STARTED 20/07/2006

DATE COMPLETED 21/07/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

BOREHOLE DEPTH (m) 12.20

CASING DEPTH (m) 12.20

BORED BY J.O'Toole

PROCESSED BY F.Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Hold Test Results	Standardize Details
					Ref. Number	Sample Type	Depth (m)		
0	TOPSOIL Firm brown gravelly Cl AY (occasional damp zones, possible fill material)		89.69	0.10					
1					X7601	D	1.00	N = 16 (1, 2, 3, 4, 4, 5)	
2					X7602	D	2.00	N = 18 (2, 3, 3, 4, 5, 6)	
3					X7603	D	3.00	N = 17 (1, 3, 4, 4, 5, 4)	
4					X7604	D	4.00	N = 20 (2, 3, 4, 5, 6, 6)	
5	Medium dense fine to coarse clayey GRAVEL		84.99	4.70	X7605	D	5.00	N = 29 (2, 4, 7, 8, 7, 6)	
6	Stiff to very stiff brown gravelly Cl AY with cobbles		83.99	5.80	X7606	D	6.00	N = 50 (4, 7, 9, 11, 14, 16)	
7					X7607	U	7.00	N = 57 (6, 9, 11, 14, 16, 16)	
8					X7608	D	8.00	N = 70/225 mm (5, 7, 12, 16, 50)	
9					X7609	D	9.00	N = 68 (4, 9, 14, 16, 19, 19)	

HARD STRATA BORING/CHISELLING

From (m)	To (m)	Time (hr)	Comments
1.5	1.7	0.75	
5.8	6.2	0.5	
8.8	9	0.5	
11.9	12.1	2	

WATER STRIKE DETAILS

Water Strike	Casing Depth	Sealed At	Rise To	Time (hr:mm)	Comments
6.20					Seepage

GROUNDWATER DETAILS

Date	Hole Depth	Casing Depth	Depth to Water	Comments
20-07-06	6.20	6.20	Nil	End of Day

INSTALLATION DETAILS

Date	To Depth	RZ Top	RZ Base	Type

REMARKS Location CAT scanned and hard pit dug to 1.20m

Sample Legend

- D - Standard Sample
- U - Undisturbed Sample
- 1B - Large Size Sample
- 1C - Small Size Sample
- 1D - Large Size Sample
- 1E - Small Size Sample

IGS 11/06/06 (ISS. 037) 01/06



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballyogen, Dublin

BOREHOLE NO. 5
SHEET Sheet 2 of 2

CO-ORDINATES () 329,731.00 E
224,217.00 N

GROUND LEVEL (m) 89.89
BOREHOLE DIAMETER (mm) 200

DATE STARTED 20/07/2006
DATE COMPLETED 21/07/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

BOREHOLE DEPTH (m) 12.20
CASING DEPTH (m) 12.20

BORED BY J.O'Toole
PROCESSED BY F.Clarry

Depth (m)	Description	Legend	Elevation	Depth (m)	Ref. Number	Samples		Field Test Results	Sample Details
						Sample Type	Depth (m)		
10	Stiff to very stiff brown gravelly CLAY with cobbles (continued)	[Symbol]			X7610	D	10.00	N = 88 (5, 8, 12, 17, 19, 20)	
11	Very stiff to hard grey brown gravelly CLAY with fragments of broken granite	[Symbol]	79.19	10.60	X7611	D	11.00	N = 93 (1, 7, 10, 14, 19, 50)	
12	End of Borehole at 12.20 m	[Symbol]	77.49	12.20	X7612	D	12.00	N = 70/150 mm (10, 16, 20, 50)	

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HARD STRATA BORING/CHISELLING			
From (m)	To (m)	Time (h)	Comments
1.5	1.7	0.75	
5.8	6.2	0.5	
8.6	9	0.5	
11.9	12.1	2	

WATER STRIKE DETAILS					
Water Strike	Casing Depth	Scaled At	Rise To	Time (hr:min)	Comments
11.80	11.80	No	11.50		Seepage

GROUNDWATER DETAILS					
Date	Hole Depth	Casing Depth	Depth In Water	Comments	
21-07-06	12.20	0.00	12.00	End of Day	

INSTALLATION DETAILS				
Date	Tip Depth	RZ Log	IKZ Base	Type

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend
 G - GSI Borehole Log
 B - Borehole Log
 E - Log as collected
 S - Borehole Log (S - 100 mm)

GSI Borehole Log 11941 GEL 055 527 310316



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballyogan, Dublin		BOREHOLE NO. 6	
CO-ORDINATES() 224,866.00 E 224,259.00 N		SHEET Sheet 1 of 2	
CLIENT Dun Laoghaire Rathdown County Council		DATE STARTED 11/07/2006	
ENGINEER White Young Green		DATE COMPLETED 12/07/2006	
GROUND LEVEL (m) 93.00		BORED BY P. Thomas	
BOREHOLE DIAMETER (mm) 200		PROCESSED BY F. Clancy	
BOREHOLE DEPTH (m) 12.60			
CASING DEPTH (m) 12.60			

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples		Field Test Results	Stentpipe Details
					Ref. Number	Sample Type		
0	Brown gravelly CLAY with bands of soft moist clay (possible fill) Hand dug inspection pit				X3090	D	1.00	N = 27 (3, 4, 5, 6, 8, 6)
1					X3091	D	2.00	N = 23 (2, 4, 4, 5, 7, 7)
2					X3095	D	3.00	N = 29 (3, 5, 5, 5, 7, 12)
3	Very stiff to hard black sandy gravelly CLAY with occasional cobbles		89.56	3.50	X3096	D	4.00	N = 58/275 mm (7, 10, 15, 18, 25)
4					X3097	D	5.00	N = 56/150 mm (11, 20, 26, 30)
5					X3098	D	6.00	N = 61/150 mm (8, 18, 31, 30)
6					X3099	D	7.00	N = 56 (4, 6, 11, 18, 17, 10)
7	Dense black clayey GRAVEL with cobbles		85.98	7.50	X3100	D	8.00	N = 76 (6, 15, 19, 16, 15, 26)
8					X3101	D	9.00	N = 40 (5, 7, 7, 8, 11, 14)
9	Very stiff to hard brown to grey brown gravelly CLAY with granitic cobbles		84.76	8.50				

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HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (hr:mm)	Comments
4	8	1.75		5.40	5.40	5.60	2.90		
8.3	8.8	0.75		7.00	7.00	8.30	3.00		Seepage
12.4	12.6	2							

GROUNDWATER DETAILS				
Date	Hoist Depth	Casing Depth	Depth to Water	Comments

INSTALLATION DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type

REMARKS Location CA1 scanned and hand pit dug to 1.20m		Sample Legend D - Standard (200mm) Sample S - Standard (150mm) Sample B - Standard (100mm) Sample L - Large (200mm) Sample E - Fine (100mm) Sample	
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B&S BILLOS 11/04/06 RES. 03/07 21/03/06



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballyogan, Dublin		BOREHOLE NO. 6	
CO-ORDINATES() 320,666.00 E 224,259.00 N		SHEET Sheet 2 of 2	
CLIENT Dun Laoghaire Rathdown County Council		DATE STARTED 11/07/2006	
ENGINEER White Young Green		DATE COMPLETED 12/07/2006	
GROUND LEVEL (m) 93.00		BORED BY P.Thomas	
BOREHOLE DIAMETER (mm) 200		PROCESSED BY F.Clancy	
BOREHOLE DEPTH (m) 12.60			
CASING DEPTH (m) 12.60			

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples		Field Test Results	Standpipe Details
					Ref. Number	Sample Type		
10	Very stiff to hard brown to grey brown gravolly CI AY with granitic cobbles (continued)				X3102	U	N = 60 (1, 8, 10, 14, 17, 19)	
11					X3103	U	N = 50 (3, 5, 11, 12, 12, 15)	
12					X3104	D	N = 60 (4, 9, 10, 11, 21, 27)	
12.60	End of Borehole at 12.60 m		80.46	12.60				

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HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (hrs:min)	Comments
4	6	1.75							Seepage
8.5	8.6	0.75							
12.4	12.6	2							

GROUNDWATER DETAILS				
Date	Flow Depth	Casing Depth	Depth to Water	Comments

INSTALLATION DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type

REMARKS Location CAT scanned and hand pit dug to 1.20m	<p>Sample Legend</p> <ul style="list-style-type: none"> U - Unconsolidated (U) S - Consolidated (S) LS - Large Sample FS - Fine Sample
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ISBL 5th Ed 1997, ISBL 1998, ISBL 2000



GEOTECHNICAL BORING RECORD

REPORT NUMBER
11941

CONTRACT	Ballyogan, Dublin	BOREHOLE NO.	7
CO-ORDINATES (E, N)	320,655.00 E 224,300.00 N	GROUND LEVEL (m)	93.56
CLIENT	Dun Laoghaire Rathdown County Council	BOREHOLE DIAMETER (mm)	200
ENGINEER	White Young Green	BOREHOLE DEPTH (m)	14.10
		CASING DEPTH (m)	14.10
		BORED BY	P. Thomas
		PROCESSED BY	F. Clancy
		DATE STARTED	08/01/2006
		DATE COMPLETED	07/07/2006
		SHEET	Sheet 1 of 2

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
0	Stiff to very stiff brown very gravelly CLAY with cobbles Hand dug inspection pit								
1.00					X3066	D	1.00	N = 27 (4, 5, 5, 6, 8, 8)	
2.00					X3067	D	2.00	N = 33 (5, 10, 12, 6, 7, 8)	
3.00					X3068	D	3.00	N = 74 (8, 9, 10, 24, 25, 15)	
3.40	Very stiff to hard black sandy gravelly CLAY with cobbles		90.70		X3069	D	4.00	N = 43/150 mm (18, 25)	
4.00					X3070	D	5.00	N = 56/150 mm (11, 16, 26, 30)	
5.00					X3071	D	6.00	N = 68 (4, 5, 9, 14, 16, 29)	
6.50	Coarse black fine to coarse clayey GRAVEL		87.06		X3072	D	7.00	N = 61 (3, 8, 10, 15, 16, 20)	
7.50	Very stiff brown sandy gravelly CLAY with large granite cobbles		86.06		X3073	D	8.00	N = 40/150 mm (4, 8, 15, 25)	
8.00					X3074	D	9.00	N = 26/75 mm (5, 11, 26)	

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HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Seaford At	Rise To	Time (hh:mm)	Comments
3.4	3.8	0.5		6.50	6.50	7.50	3.10		Seepage
7.5	7.8	0.75							
8.5	8.7	1.25							
13.8	14.1	1.75							

GROUNDWATER DETAILS				
Date	Hole Depth	Casing Depth	Depth to Water	Comments

INSTALLATION DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type

REMARKS Location CAT scanned and hand pit dug to 1.20m	Sample Log No D - Soil (meters) F - Sand (meters) H - Hand dug (meters) B - Bottom of Sample (meters)
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GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT **Ballyogan, Dublin**

BOREHOLE NO. **7**

SHEET **Sheet 2 of 2**

CO-ORDINATES (Easting) **320,655.00 E**
 (Northing) **224,300.00 N**

GROUND LEVEL (m) **93.56**

DATE STARTED **08/07/2006**

BOREHOLE DIAMETER (mm) **200**

DATE COMPLETED **07/07/2006**

CLIENT **Dun Laoghaire Rathdown County Council**

BOREHOLE DEPTH (m) **14.10**

BORED BY **P.Thomas**

ENGINEER **White Young Green**

CASING DEPTH (m) **14.10**

PROCESSED BY **F.Clancy**

Depth (E)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
10	Very stiff brown sandy gravelly CLAY with large granite cobbles (continued)		93.56	10.00	X0075	D	10.00	(30)	
11				11.00	X0076	D	11.00	N = 97 (4, 10, 16, 23, 28, 30)	
12				12.00	X0077	D	12.00	N = 58 (5, 7, 9, 14, 15, 20)	
13				13.00	X0078	D	13.00	N = 43 (8, 10, 11, 11, 11, 10)	
14	End of Borehole at 14.10 m		93.46	14.10	X0079	C	14.00		

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HARD STRATA BORING/CHISELLING			
From (m)	To (m)	Time (m)	Comments
3.4	3.6	0.5	
7.5	7.9	0.75	
8.5	8.7	1.25	
13.8	14.1	1.75	

WATER STRIKE DETAILS					
Water Strike	Casing Depth	Sealed At	Risc To	Time (minutes)	Comments
					Seepage

GROUNDWATER DETAILS				
Date	Hole Depth	Casing Depth	Depth to Water	Comments

INSTALLATION DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type

REMARKS: Location CA1 scanned and hand pit dug to 1.20m

Sample Legend
 S - Standardised Soil
 D - Disturbed
 U - Undisturbed
 C - Core
 P - Piezometer
 W - Water

GSI BORING LOG 11941 (BPT) ISS. 03/07/06



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballyogan, Dublin

CO-ORDINATES () 320,604.00 E
224,287.00 N

GROUND LEVEL (m) 93.89
BOREHOLE DIAMETER (mm) 200
BOREHOLE DEPTH (m) 13.00
CASING DEPTH (m) 13.00

BOREHOLE NO. 8
SHEET Sheet 1 of 2
DATE STARTED 12/07/2006
DATE COMPLETED 13/07/2006
BORED BY P.Thomas
PROCESSED BY F.Clancy

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
0	MADE GROUND composed of rubble and concrete Hand dug inspection pit	[Cross-hatched pattern]							
1	Firm to stiff brown gravelly CLAY with cobbles	[Stippled pattern]	92.79	1.10	X3406	D	1.00	N = 15 (2, 3, 3, 4, 4, 4)	
2					X3407	D	2.00	N = 20 (2, 3, 3, 3, 5, 9)	
3					X3408	D	3.00	N = 25 (3, 3, 5, 5, 6, 9)	
4	Black gravelly CLAY with sandy bands	[Dotted pattern]	90.39	3.50	X3409	D	4.00	N = 36 (2, 4, 5, 9, 10, 12)	
5					X3410	D	5.00	N = 29 (3, 5, 5, 6, 8, 10)	
6					X3411	D	6.00	N = 72 (8, 14, 18, 19, 25, 30)	
7					X3412	D	7.00	N = 34 (4, 6, 7, 8, 8, 11)	
8					X3413	D	8.00	N = 115 (12, 22, 25, 30, 30, 30)	
9	Very stiff to hard gravelly CLAY with cobbles and boulders	[Dotted pattern]	85.20	8.60	X3414	D	9.00	N = 61 (7, 10, 12, 14, 16, 19)	

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HARD STRATA BORING/CHISELLING

From (m)	To (m)	Time (h)	Comments
0.0	1	0.75	
6.1	6.6	1	
8.3	8.6	1.25	
12.7	13	2	

WATER STRIKE DETAILS

Water Strike	Casing Depth	Sealed At	Rise To	Time (hrs:min)	Comments
2.00	2.60	2.90	2.20		Seepage
4.00	4.00	4.30	2.00		

GROUNDWATER DETAILS

Date	Hole Depth	Casing Depth	Depth to Water	Comments

INSTALLATION DETAILS

Date	To Depth	RZ Top	RZ Base	Type
13/07/2006	13.00	1.00	13.00	50mm SP

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend
 1 - 210mm dia
 2 - 150mm dia
 3 - 100mm dia
 4 - 75mm dia
 5 - 50mm dia

1 - Unconfined
 2 - Confined
 3 - Unconfined
 4 - Confined



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT **BaByogan, Dublin**

BOREHOLE NO. **8**

SHEET **Sheet 2 of 2**

CO-ORDINATES () **320,604.00 E
224,287.00 N**

GROUND LEVEL (m) **93.89**

DATE STARTED **12/07/2008**

BOREHOLE DIAMETER (mm) **200**

DATE COMPLETED **13/07/2008**

CLIENT **Dun Laoghaire Rathdown County Council**

BOREHOLE DEPTH (m) **13.00**

BORED BY **P.Thomas**

ENGINEER **Walter Young Green**

CASING DEPTH (m) **13.00**

PROCESSED BY **F.Clancy**

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standard Pipe Details
					Ref. Number	Sample Type	Depth (m)		
10	Very stiff to hard gravelly CI AY with cobbles and boulders (continued)				X3415	D	10.00	N = 57 (3, 7, 10, 14, 14, 19)	
X3416					D	11.00	N = 51 (4, 5, 8, 12, 14, 17)		
X3417					D	12.00	N = 70 (3, 6, 12, 15, 16, 27)		
X3418					D	13.00			
13	End of Borehole at 13.00 m		60.89	13.00					

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HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (hrs:min)	Comments
0.8	1	0.75							Seepage
6.1	6.6	1							
8.3	8.6	1.25							
12.7	13	2							

GROUNDWATER DETAILS				
Date	Hole Depth	Casing Depth	Depth to Water	Comments
13/07/2008	13.00	1.00	13.00	50mm SP

REMARKS Location CA1 scanned and hand pit dug to 1.20m

Sample Log Cnd
 0 - Spent (drifted out)
 1 - Not Recovered
 11 - 100g Bag B'd Disturbed
 20 - 200g Bag B'd Disturbed
 200 - 200g Bag B'd Disturbed (100g x 2)
 10 - Unchecked 500.00g Disturbed Sample
 P - Undisturbed Point Sample

IGSL 641 008 - 11941 021 IGSL 001 3/13/08



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballygon, Dublin

BOREHOLE NO. 9
SHEET Sheet 1 of 2

CO-ORDINATES (Easting) 320,645.00 F
271,320.00 N

GROUND LEVEL (m) 94.33
BOREHOLE DIAMETER (mm) 200

DATE STARTED 01/07/2006
DATE COMPLETED 05/07/2006

CLIENT Don Luoghair Rathdown County Council
ENGINEER White Young Green

BOREHOLE DEPTH (m) 16.30
CASING DEPTH (m) 16.30

BORED BY P. Thomas
PROCESSED BY F. Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
0	MADE GROUND comprised of gravelly clay and brick Hand dug inspection pit	[Cross-hatched pattern]							
1					X3050	D	1.00	N = 8 (1, 1, 1, 2, 2, 3)	
2	Firm brown sandy CLAY with occasional gravel	[Horizontal line pattern]	91.93	2.40	X3051	U	2.00	N = 11 (1, 1, 2, 2, 3, 4)	
3	Very stiff black gravelly CLAY with cobbles	[Vertical line pattern]	91.33	3.00	X3052	D	3.00	N = 24 (2, 4, 4, 5, 8, 7)	
4					X3053	D	4.00	N = 36 (3, 5, 8, 8, 9, 12)	
5					X3054	D	5.00	N = 53 (4, 4, 7, 10, 17, 19)	
6					X3055	D	6.00	N = 45 (3, 3, 5, 10, 14, 16)	
7					X3056	U	7.00	N = 50 (4, 6, 9, 12, 15, 20)	
8					X3057	U	8.00	N = 22 (3, 3, 4, 4, 6, 8)	
9	Stiff light brown sandy CLAY with granite cobbles	[Vertical line pattern]	85.73	8.60	X3058	D	9.00	N = 38 (4, 6, 7, 9, 10, 12)	
	Very stiff brown slightly sandy gravelly CLAY with frequent granite cobbles and boulders	[Vertical line pattern]	84.83	9.60					

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HARD STRATA BORING/CHISELING				WATER STRIKE DETAILS				Comments
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Time To	
3.5	3.7	0.75		2.10	2.10	2.40	1.50	Seepage
8.5	8.7	0.5		3.20	3.20	4.10	3.00	
16.1	16.3	2						

GROUNDWATER DETAILS				
Date	Bole Depth	Casing Depth	Depth to Water	Comments

INSTALLATION DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type
05/07/2006	16.30	1.00	16.30	Stream SP

REMARKS	Location CAT scanned and hand pit dug to 1.20m	Sample Legend	U - Undisturbed Undersize Sample D - Disturbed Undersize Sample F - Undisturbed Full Size Sample P - Disturbed Full Size Sample
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IGS, BH, CG - 1941 (37) - GSLGD - 3/06/06



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Rallygen, Dublin

BOREHOLE NO. 9

CO-ORDINATES () 320,645.00 E
224,320.00 N

GROUND LEVEL (m) 94.33

SHEET Sheet 2 of 2

BOREHOLE DIAMETER (mm) 200

DATE STARTED 04/07/2006

DATE COMPLETED 05/07/2006

CLIENT Dun Laoghaire Rathdown County Council

BOREHOLE DEPTH (m) 16.30

BORED BY P.Thomas

ENGINEER White Young Green

CASING DEPTH (m) 16.30

PROCESSED BY F.Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
10	Very stiff brown slightly sandy gravelly CLAY with frequent granite cobbles and boulders (continued)		78.03	16.30	X3058	D	10.00	N = 52 (4, 5, 10, 11, 15, 16)	
11					X3060	D	11.00	N = 50 (6, 8, 9, 12, 14, 15)	
12					X3061	D	12.00	N = 39 (3, 6, 7, 8, 10, 14)	
13					X3062	D	13.00	N = 45 (4, 6, 8, 10, 12, 15)	
14					X3063	D	14.00	N = 47 (3, 5, 7, 11, 14, 15)	
15					X3064	D	15.00	N = 37 (5, 8, 8, 8, 9, 12)	
16	End of Borehole at 16.30 m		78.03	16.30	X3065	D	16.00		

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HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (hh:mm)	Comments
3.5	3.7	0.75							
8.5	8.7	0.5							
16.1	16.3	2							Seepage

INSTALLATION DETAILS					GROUNDWATER DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type	Date	Hoist Depth	Casing Depth	Depth to Water	Comments
05/07/2006	16.30	1.00	16.30	50mm SP					

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend
 0 - Fine material pit
 1 - Sub-surface
 2 - Large Soil Sample
 3 - Undisturbed Sample (see Note 1.1)

0 - Disturbed 100mm diameter Sample
 1 - Disturbed 50mm Sample

IGSL BH LOGS 11941 SPJ IGSL-GOT-301206



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballyogan, Dublin

BOREHOLE NO. 10
SHEET Sheet 2 of 2

CO-ORDINATES () 220,537.00 E
224,303.00 N

GROUND LEVEL (m) 93.78
BOREHOLE DIAMETER (mm) 200

DATE STARTED 31/07/2006
DATE COMPLETED 02/08/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

BOREHOLE DEPTH (m) 15.50
CASING DEPTH (m) 15.50

BORED BY J.O'Loole
PROCESSED BY F.Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples		Field Test Results	Standpipe Details
					Ref. Number	Sample Type		
10.00	Stiff, very to hard brown gravelly CLAY with cobbles and boulders (continued)				X7649	n	N = 25/25 mm (25)	
11.00					X7650	u	N = 58 (10, 12, 9, 11, 15, 23)	
12.00					X7651	o	N = 63 (12, 11, 15, 20, 13, 15)	
13.00					X7652	n	N = 55/150 mm (25, 30)	
14.00					X7653	o	N = 78 (12, 14, 20, 15, 18, 25)	
14.60	Dense granitic SAND with fragments of granite		79.18	14.60	X7654	u		
15.50	End of Borehole at 15.50 m		78.28	15.50				

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HARD STRATA BORING/CHISELING

From (m)	To (m)	Time (h)	Comments
4	4.3	1.25	
6.8	7.2	0.5	
8.9	9.3	0.75	
14.8	15.1	0.5	
15.3	15.5	2	

WATER STRIKE DETAILS

Water Strike	Casing Depth	Soaked At	Rise To	Time (h:min)	Comments
10.80	10.80	11.60	No		Slow
13.00	13.50	No	10.20		

GROUNDWATER DETAILS

Date	Static Depth	Casing Depth	Depth to Water	Comments
01-08-06	12.20	12.20	Nil	End of Day
02-08-06	15.50	0.00	R.20	End of Day

INSTALLATION DETAILS

Date	Tip Depth	RZ Top	RZ Base	Type

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend

- - Field (Disturbed) Sample
- - Lab (Disturbed) Sample
- - Lab (Undisturbed) Sample
- - Large Size (Disturbed) Sample
- - Large Size (Undisturbed) Sample

SSL BHL 06 11941.064 ISSI-GCT 21/02/05



GEOTECHNICAL BORING RECORD

REPORT NUMBER
11941

CONTRACT Ballyrogen, Dublin

BOREHOLE NO. 11B
SHEET Sheet 1 of 2

CO-ORDINATES () 320,552.00 E
224,355.00 N

GROUND LEVEL (m) 94.46
BOREHOLE DIAMETER (mm) 200

DATE STARTED 26/07/2006
DATE COMPLETED 28/07/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

BOREHOLE DEPTH (m) 15.50
CASING DEPTH (m) 15.50

BORED BY J.O'Toole
PROCESSED BY F.Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
0	TOPSOIL Pit abandoned MADE GROUND comprising of firm to stiff brown clay with stones	[Cross-hatch pattern]	94.36	0.10					
1	MADE GROUND brown clay with some gravel	[Cross-hatch pattern]	93.06	1.40	X7625	D	1.00	N = 26 (4, 5, 6, 6, 7, 7)	
2		[Cross-hatch pattern]			X7626	D	2.00	N = 16 (2, 2, 3, 4, 4, 5)	
3	Very stiff to hard black sandy gravelly CLAY with cobbles	[Dotted pattern]	91.66	2.80	X7627	D	3.00	N = 48 (1, 7, 9, 11, 12, 18)	
4		[Dotted pattern]			X7628	D	4.00	N = 60 (6, 9, 11, 14, 16, 19)	
5		[Dotted pattern]			X7629	D	5.00	N = 43 (4, 7, 9, 9, 12, 13)	
6		[Dotted pattern]			X7630	D	6.00	N = 65 (7, 10, 12, 16, 19, 18)	
7		[Dotted pattern]			X7631	D	7.00	N = 36 (6, 11, 16, 7, 8, 7)	
a	Dense grey fine to coarse silty sandy GRAVEL with cobbles	[Stippled pattern]	88.98	7.50	X7632	D	8.00	N = 46 (4, 7, 10, 10, 12, 14)	
e	Very stiff brown sandy gravelly CLAY with fragments of granite cobbles	[Stippled pattern]	85.16	9.30	X7933	D	9.00	N = 58 (2, 8, 11, 16, 15, 16)	

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HARD STRATA BORING/CHISELLING			
From (m)	To (m)	Fissure (ft)	Comments
3.1	3.4	1.25	
5.7	5.9	0.5	
7.1	7.3	1	
12.6	12.95	1.5	
15.2	15.5	2	

WATER STRIKE DETAILS					
Water Strike	Casing Depth	Sealed At	Rise To	Time (hr:min)	Comments
8.00	6.00	12.20	No		Rapid
7.00	7.50	No	3.00		

GROUNDWATER DETAILS					
Date	Hour	Casing Depth	Depth to Water	Comments	
26-07-06	4.20	4.20	Nil	End of Day	

INSTALLATION DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type
28/07/2006	15.50	1.00	15.50	50mm SP

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend
 D - Standard (200mm)
 U - Test (200mm)
 N - Standard (100mm)
 E - Embedded Sample (100mm x 100mm)

11 - Standard (100mm) Sample
 P - Unstandard (100mm) Sample

S&L 11941 11B 108-0501 31/03/06



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballyegan, Dublin

BOREHOLE NO. 11B

CO-ORDINATES () 320,552.00 E
224,355.00 N

GROUND LEVEL (m) 94.46

SHEET Sheet 2 of 2

BOREHOLE DIAMETER (mm) 200

DATE STARTED 26/07/2006

DATE COMPLETED 28/07/2006

CLIENT Dún Laoghaire (Rathdown County Council)

BOREHOLE DEPTH (m) 15.50

BORED BY J.O'Toole

ENGINEER White Young Green

CASING DEPTH (m) 15.50

PROCESSED BY F.Clancy

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples		Field Test Results	Standpipe Details
					Ref. Number	Sample Type		
10	Very stiff brown sandy gravelly CLAY with fragments of granite cobbles (continued)				X7634	Ø	10.00	N - 57 (4, 7, 12, 16, 13, 18)
11					X7635	D	11.50	N - 67 (5, 9, 12, 17, 19, 19)
12					X7636	D	12.00	N - 55 (6, 9, 11, 12, 16, 16)
13					X7637	D	13.00	N - 70 (4, 10, 16, 17, 19, 18)
14					X7638	D	14.00	N - 66 (5, 11, 15, 16, 16, 19)
15	Dense granite GRAVEL		79.46	15.00	X7613	D	15.00	N - 70/150 mm (10, 16, 20, 20)
15.50	End of Borehole at 15.50 m		78.96	15.50				

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HARD STRATA BORING/CHISELLING			
From (m)	To (m)	Time (h)	Comments
3.3	3.4	1.25	
5.7	5.9	0.5	
7.1	7.3	1	
12.6	12.95	1.5	
15.2	15.5	2	

WATER STRIKE DETAILS						
Water Strike	Casing Depth	Sealed At	Time To	Time (min)	Comments	
					Rapid	

GROUNDWATER DETAILS					
Date	Hole Depth	Casing Depth	Depth to Water	Comments	
27-07-06	11.30	11.30	8.10	End of Day	
28-07-06	15.50	0.00	15.10	End of Day	

INSTALLATION DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type
28/07/2006	15.50	1.00	15.50	50mm SP

REMARKS Location CAI scanned and hand pit dug to 1.20m

Sample Legend
 Ø - Sealed
 D - Open
 W - Water
 G - Gas
 S - Soil
 E - End of Day
 T - Test

1: Scale 1:100 (1:100) (1:100) (1:100)



GEOTECHNICAL BORING RECORD

REPORT NUMBER
11941

CONTRACT Ballyogen, Dublin

BOREHOLE NO. 12
SHEET Sheet 1 of 2

CO-ORDINATES (E, N) 320,524.00 E
274,324.00 N

GROUND LEVEL (m) 94.27
BOREHOLE DIAMETER (mm) 200
BOREHOLE DEPTH (m) 14.40
CASING DEPTH (m) 14.40

DATE STARTED 14/07/2006
DATE COMPLETED 17/07/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

BORED BY P. Thomas
PROCESSED BY F. Clancy

Depth (m)	Description	Legend	Elevation (m)	Depth (m)	Ref. Number	Samples		Field Test Results	Standard Details
						Sample Type	Depth (m)		
0	MADE GROUND composed of rubble and concrete Hand dug inspection pit	[Cross-hatched pattern]							
1	MADE GROUND composed of grey sandy clay with some gravel	[Cross-hatched pattern]	93.22	1.00	X3410	D	1.00	N = 11 (2, 2, 2, 2, 3, 4)	
2	Loose sandy gravel (Passive fill)	[Dotted pattern]	92.02	2.20	X3420	U	2.00	N = 10 (1, 1, 2, 2, 2, 4)	
3	Very stiff black sandy gravelly CLAY with cobbles	[Horizontal lines]	90.82	3.00	X3421	D	3.00	N = 31 (3, 3, 3, 5, 8, 15)	
4		[Horizontal lines]		4.00	X3422	D	4.00	N = 59 (7, 14, 18, 16, 15, 10)	
5		[Horizontal lines]		5.00	X3423	D	5.00	N = 52 (4, 5, 8, 11, 16, 17)	
6	Grey black clayey GRAVEL	[Dotted pattern]	87.82	6.30	X3424	D	6.00	N = 72 (8, 10, 12, 15, 10, 27)	
7	Very stiff to hard grey/brown gravelly CLAY with cobbles	[Horizontal lines]	87.62	6.60	X3425	D	7.00	N = 80 (7, 9, 11, 14, 25, 30)	
8		[Horizontal lines]		8.00	X3426	U	8.00	N = 57 (5, 7, 10, 12, 16, 19)	
9		[Horizontal lines]		9.00	X3427	D	9.00	N = 70 (4, 9, 14, 15, 17, 24)	

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HARD STRATA BORING/CHISELLING			
From (m)	To (m)	Time (h)	Comments
4.5	4.65	0.75	
6.4	6.7	0.75	
12.3	12.7	1	
14.2	14.4	2	

WATER STRIKE DETAILS					
Water Strike	Casing Depth	Soiled At	Rise To	Time (hours)	Comments
2.50	2.50	3.40	1.80		Seepage
6.30	6.30	6.60	1.50		

GROUNDWATER DETAILS					
Date	Hole Depth	Casing Depth	Depth to Water	Comments	

INSTALLATION DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend
 (D) - Standard 100mm Diameter Sample
 (U) - Undisturbed 100mm Diameter Sample
 (S) - Split Spoon Sample
 (L) - Large Port Sample
 (T) - Test Sample

GSI 314 LOG 11547 SPT 109 58



GEOTECHNICAL BORING RECORD

REPORT NUMBER

11941

CONTRACT Ballynegan, Dublin		BOREHOLE NO. 12	
		SHEET Sheet 2 of 2	
CO-ORDINATES () 320,524.00 E 224,324.00 N	GROUND LEVEL (m) 94.22	DATE STARTED 14/07/2006	DATE COMPLETED 17/07/2006
	BOREHOLE DIAMETER (mm) 200	BORED BY P.Thomas	
CLIENT Dun Laoghaire Rathdown County Council	BOREHOLE DEPTH (m) 14.40	PROCESSED BY F.Clarity	
ENGINEER White Young Green	CASING DEPTH (m) 14.40		

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples			Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)		
10	Very stiff to hard grey/brown gravelly CLAY with cobbles (continued)		79.62	14.40	X3428	U	10.00	N = 60 (8, 10, 11, 12, 18, 19)	
X3429					U	11.00	N = 62 (4, 8, 10, 15, 16, 21)		
X3430					U	12.00	N = 101 (5, 9, 15, 26, 30, 30)		
X3431					U	13.00	N = 67 (3, 10, 14, 15, 18, 20)		
X3432					U	14.00	N = 115 (10, 17, 25, 30, 30, 30)		
14	End of Borehole at 14.40 m		79.62	14.40					

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HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealer At	Rise To	Loss (liters/mm)	Comments
4.5	4.65	0.75							Seepage
6.4	6.7	0.75							
12.3	12.7	1							
14.2	14.4	2							

INSTALLATION DETAILS					GROUNDWATER DETAILS				
Date	Tip Depth	RZ Top	RZ Base	Type	Date	File Depth	Casing Depth	Depth to Water	Comments

REMARKS Location CAT scanned and hand pit dug to 1.20m

Sample Legend
 U - Undisturbed (U) Sample
 S - Soil Sample
 C - Core Sample
 T - Test Sample
 S - Subsequent Sample (for UTS - full)

IGS: Bx LOG 11941.GPJ 035L B01 31.06.06

Appendix II - Trial Pit Records

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TRIAL PIT RECORD

REPORT NUMBER

11941

CONTRACT Ballyogan, Dublin

TRIAL PIT NO. TP1

SHEET Sheet 1 of 1

CO-ORDINATES() 320,781.00 E
124,234.00 N

GROUND LEVEL (m) 89.89

DATE STARTED 29/08/2008

DATE COMPLETED 29/08/2008

CLIENT Dún Laoghaire Rathdown County Council

EXCAVATION METHOD Mini digger

ENGINEER White Young Green

Depth (m)	Elevation	Water Strike	Samples			Vane Tes. (KPa)	Hand Penetrometer (KPa)
			Sample Ref	Type	Depth		
0.0							
0.30	89.59		V9458 V9459	U U	0.50-0.60 0.50-0.60	68	
1.00	88.89		V9460	U	0.90-1.00		

Geotechnical Description

Firm to stiff grey slightly sandy gravelly SIL' with some angular rubble

End of Trial Pit at 1.00m

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Groundwater Conditions Dry

Stability Stable

General Remarks

IBSL TP LOG - 10941.CPJ - IBSL GDT 21/01/08



TRIAL PIT RECORD

REPORT NUMBER

11941

CONTRACT Ballyogan, Dublin

TRIAL PIT NO. **TP2**
SHEET Sheet 1 of 1

CO-ORDINATES() 320,747.00 E
124,231.00 N

GROUND LEVEL (m) 90.06

DATE STARTED 29/08/2006
DATE COMPLETED 29/08/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

EXCAVATION METHOD Mini digger

Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (kPa)	Hand Penetrometer (kPa)
					Sample Ref.	Type	Depth		
TOPSOIL		0.00							
Firm to stiff brown gravelly SILT		0.30	89.76		V9451 V9452	B D	0.50-0.80 0.50-0.80	80	
Firm to stiff brown sandy slightly gravelly SILT		1.30	88.76		V9453	D	1.00-1.30	54	
Firm to stiff grey SILT/CLAY		2.30	87.76		V9454 V9455	B D	1.50-1.80 1.50-1.80		
End of Trial Pit at 2.80m		2.80	87.26		V9456 V9457	B D	2.50-2.80 2.50-2.80		

Groundwater Conditions
Dry

Stability
Stable

General Remarks

BSI TP LOG 11941.DWG, IGS, GET 21/05/06

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TRIAL PIT RECORD

REPORT NUMBER

11941

CONTRACT Ballyegan, Dublin

TRIAL PIT NO. TP3
SHEET Sheet 1 of 1

CO-ORDINATES (E, N) 320,710.00 E
124,273.00 N

GROUND LEVEL (m) 93.18

DATE STARTED 30/08/2006

DATE COMPLETED 30/09/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

EXCAVATION METHOD Mini digger

Depth (m)	Elevation	Water: Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
			Sample Ref	Type	Depth		
0.0							
0.0 - 1.0			V9489 V9490	R D	0.60-0.70 0.60-0.70	38	
1.0 - 1.20	91.98		V9491	D	1.10-1.20	44	
1.20 - 1.60			V9492 V9493	R D	1.60-1.70 1.60-1.70		
1.60 - 2.60			V9494 V9495	R D	2.60-2.70 2.60-2.70		
2.60	90.38						
2.80							
3.0							
4.0							

Groundwater Conditions
Dry

Stability
Stable

General Remarks

SHEET LOG 11941.DWG - ISL - 13/10/06

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TRIAL PIT RECORD

REPORT NUMBER

11941

CONTRACT Ballyogan, Dublin

TRIAL PIT NO. TP4
SHEET Sheet 1 of 1

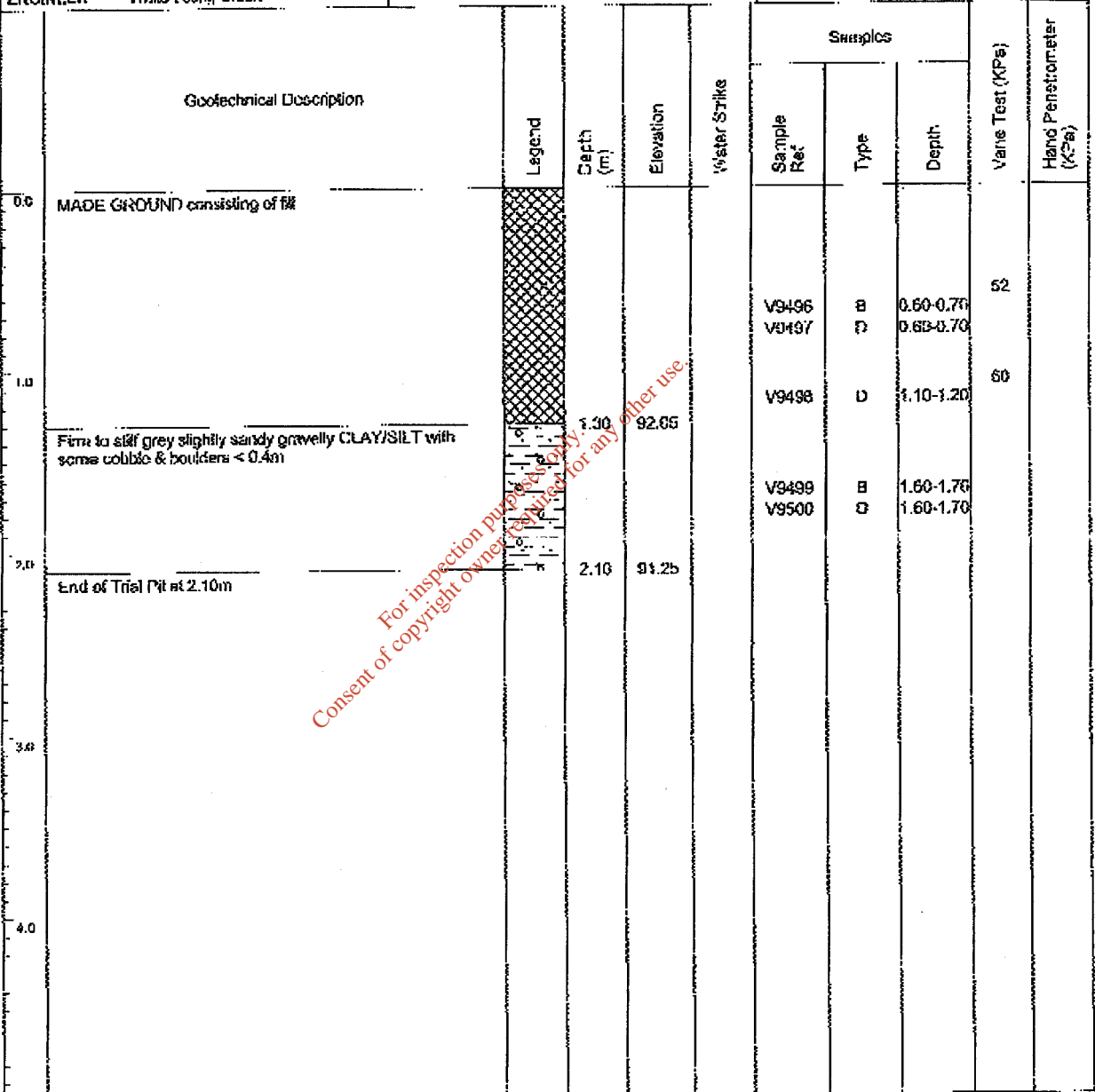
CO-ORDINATES () 320,815.00 E
124,267.00 N

GROUND LEVEL (m) 93.35

DATE STARTED 30/08/2006
DATE COMPLETED 30/08/2006

CLIENT Dun & boghaire Rathdown County Council
ENGINEER White Young Green

EXCAVATION METHOD Mini digger



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Groundwater Conditions
Groundwater @ 1.5m. Slow

Stability
Stable

General Remarks

ISS: TP LCS 1154; GRI 105; 00" 2/10/06



TRIAL PIT RECORD

REPORT NUMBER
11941

CONTRACT Ballyogan, Dublin

TRIAL PIT NO. TP5
SHEET Sheet 1 of 1

CO-ORDINATES() 320,711.00 E
124,230.00 N

GROUND LEVEL (m) 93.78

DATE STARTED 30/08/2006
DATE COMPLETED 30/08/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

EXCAVATION METHOD Mini digger

Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (kPa)	Hand Penetrometer (kPa)
					Sample Ref.	Type	Depth		
MADE GROUND consisting of fill	[Cross-hatched pattern]	0.0							
								Impenetrable	
					V7701	B	0.70-0.80		
					V7702	D	0.70-0.80		
					V7703	D	1.10-1.20		Impenetrable
Stiff slightly sandy gravelly SILT/CLAY with some sub-angular cobble & boulders <0.3m	[Horizontal line pattern]	1.40	92.38		V7704	B	1.50-1.60		
					V7705	G	1.50-1.60		
End of Trial Pit at 2.10m		2.10	91.68						

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Groundwater Conditions
Dry

Stability
Stable

General Remarks

IGSL TP 06 - 1941 (2) J 0581.001 21-006



TRIAL PIT RECORD

REPORT NUMBER

11941

CONTRACT Sellynger, Dublin

TRIAL PIT NO. **TP7**
SHEET **Sheet 1 of 1**

CO-ORDINATES(...) 320,583.00 E
124,320.00 N

GROUND LEVEL (m) 94.36

DATE STARTED 30/08/2006
DATE COMPLETED 30/08/2006

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER White Young Green

EXCAVATION METHOD Mini digger

Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Permeometer (KPa)
					Sample Ref	Type	Depth		
MADE GROUND consisting of fill	[Cross-hatch pattern]								
Firm to stiff grey very slightly gravelly SILT with occasional cobble	[Silt pattern]	1.30	93.06		V9468 V9469 V9170 V9471 V9472	B D D R D	0.80-0.90 0.80-0.90 1.20-1.30 1.50-1.60 1.50-1.60	72 64	
Firm to stiff grey very slightly sandy gravelly SILT with some sub-rounded cobble & boulder <0.5m	[Silt pattern]	2.20	92.16						
End of Trial Pit at 2.70m		2.70	91.66		V9473 V9474	B D	2.50-2.60 2.50-2.60		

Groundwater Conditions
Groundwater @ 2.7m. Seepage

Stability
Stable

General Remarks

JGBL TP LOG 11941 JGBL 05-027-111941

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TRIAL PIT RECORD

REPORT NUMBER

11941

CONTRACT Ballyogan, Dublin

TRIAL PIT NO. TP8

SHEET Sheet 1 of 1

CO-ORDINATES() 320,532.00 E
124,306.00 N

GROUND LEVEL (m) 93.46

DATE STARTED 30/08/2008

DATE COMPLETED 30/08/2008

CLIENT Dun Laoghaire Rathdown County Council

EXCAVATION METHOD Mini digger

ENGINEER White Young Green

Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples				
					Sample Ref	Type	Depth	Vane Test (kPa)	Hand Penetrometer (kPa)
MADE GROUND consisting of fill		0.0							
Stiff to very stiff grey slightly sandy SILT with some sub-angular cobble & boulders <0.3m		0.60	92.86		V7701 V7708	B D	0.60-0.70 0.60-0.70	111	
		1.0			V7709	D	1.10-1.20	114	
		2.0			V7710 V7711	B D	1.60-1.70 1.60-1.70		
Stiff grey very sandy gravelly SILT with some cobble		2.20	91.26						
End of Trial Pit at 2.60m		2.60	90.86		V7712 V7713	B D	2.50-2.60 2.50-2.60		

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Groundwater Conditions
Groundwater @ 2.6m. Slow

Stability
Stable

General Remarks

SSL TP LOG 1-341.GPJ ISSL SPT 21/08/08



TRIAL PIT RECORD

REPORT NUMBER

11941

CONTRACT	Ballyogan, Dublin	TRIAL PIT NO.	TP9
CO-ORDINATES(_)	320,572.00 E 124,337.00 N	SHEET	Sheet 1 of 1
CLIENT	Dun Laoghaire Rathdown County Council	DATE STARTED	30/08/2006
ENGINEER	White Young Green	DATE COMPLETED	30/08/2006
		EXCAVATION METHOD	Mini digger

Depth (m)	Elevation	Water Strike	Samples					
			Sample Ref	Type	Depth	Vane Test (KPa)	Hand Penetrometer (KPa)	
0.0								
0.80	91.32		V9461	B	0.80-0.90			
			V9462	D	0.80-0.90	65		
			V9463	D	1.10-1.20	50		
			V9464	B	1.50-1.60			
			V9465	D	1.50-1.60			
2.00	93.12							
2.60	92.52		V9466	B	2.50-2.60			
			V9467	D	2.50-2.60			

Groundwater Conditions
Groundwater @ 2.6m. Seepage

Stability
Stable

General Remarks

ISS: TP L05-1152-3PJ (GSL) GD- 2/10/06

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TRIAL PIT RECORD

REPORT NUMBER
11941

CONTRACT Rallyogen, Dublin

CO-ORDINATES () 320,569.00 F
124,369.00 N

CLIENT Dun Laoghaire Rathdown County Council
ENGINEER Willie Young Green

TRIAL PIT NO. TP10
SHEET Sheet 1 of 1

DATE STARTED 30/08/2006
DATE COMPLETED 03/09/2006

EXCAVATION METHOD Mini digger

GROUND LEVEL (m) 94.30

Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
					Sample Ref	Type	Depth		
MADE GROUND consisting of fill									
Stiff grey gravelly CLAY with some sub-angular cobbles		1.10	83.20		V9475 V9476	B D	0.70-0.80 0.70-0.80	110	
					V9477	D	1.20-1.30	72	
					V9478 V9479	B D	1.60-1.70 1.60-1.70		
End of Trial Pit at 2.60m		2.60	91.70		V9480 V9481	B D	2.50-2.60 2.50-2.60		

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Groundwater Conditions
Groundwater @ 2.6m, Seepage

Stability
Stable

General Remarks

991.TP.L00 11941.GP.IGS.DET 21/07/06

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