



***Bottlehill Landfill Site
Burnfort, Mallow, Co. Cork.***

EPA Licence W0161-02

***Annual Environmental Report
1st January 2012 – 31 December 2012***

***Prepared By:
Cork County Council,
Waste & Energy Operations,***

March 2013.

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1.0 INTRODUCTION

1.1 Scope and Purpose of the Report

The Environmental Protection Agency (EPA) issued Cork County Council with a Waste Licence (Waste Licence No. W0161-02) for Bottlehill Landfill site on 6th March 2012. In accordance with the requirement of Condition 11.6.1 of the waste licence,

‘The licensee shall submit to the Agency, by the 31st March of each year, an AER covering the previous calendar year.’

The purpose of the Annual Environmental Report is to summarise the interaction of Bottlehill Landfill facility with the local environment. The report has been prepared in accordance with Waste Licence Register No. W0161-02 and the EPA “Integrated Pollution Control Licensing – Guidance for Annual Environmental Reporting”. This is the ninth Annual Environmental Report to be produced for Bottlehill Landfill. As the facility is still non operational and currently in an interim operational mode, only items which have effectively changed since the last AER have been included.

1.2 Reporting Period

This, being the ninth Annual Environmental Report, is reporting for the period 1st January 2012 to 31st December 2012.

1.3 Site Location

Bottlehill Landfill is situated approximately 10 km from Mallow and 3.3 km south west of Burnfort Village and also 3.65 km east of the N20, the main Cork to Mallow road. The National Grid Reference of the centre of Landfill operations is E163750, N090250.

The facility address is:

Bottlehill Landfill,
Bottlehill,
Burnfort,
Mallow,
Co. Cork.

2.0 SUMMARY REPORT ON EMISSIONS

On the 4th July 2012, Cork County Council was granted a reduction in Environmental Monitoring by the EPA (EPA Reference W0161-02/AK02CN). The following arrangement for Environmental monitoring was granted by the EPA.

1. Under schedule D5. Ground Water will be monitored annually. This includes annual parameters and list I/II organics.
2. Under schedule D5. Surface Water will be monitored annually. This includes quarterly parameters only.
3. Weekly visual inspection of surface water is reduced to annually.
4. Monthly monitoring of perimeter gas wells reduced to annually.
5. Cancellation of annual Dust monitoring until further notice
6. Cancellation of annual noise survey until further notice
7. Annual Ecological monitoring is reduced to bi-annual. This will be carried out in 2013.
8. Quarterly reports are reduced. Annual Environmental Report still applies.

2.1 Baseline Gas

2.1.1 General

Table 1: Landfill Gas results 2012 (15/3/2012)

Site	Temp °C	Mb	CH ₄ %	CO ₂ %	O ₂ %	N ₂ %
LFG1	10.0	1022	0.0	1.4	18.4	80.0
LFG2	10.0	1022	0.0	1.6	15.0	84.1
LFG3	10.0	1022	0.0	3.0	18.6	76.9
LFG4	10.0	1022	0.0	4.7	17.2	79.2
LFG5	10.0	1022	0.0	3.0	16.0	82.0
LFG6	10.0	1022	0.0	0.9	17.6	82.0
LFG7	10.0	1022	0.0	1.2	18.9	81.0
LFG8	10.0	1022	0.0	3.6	16.1	78.9
LFG9	10.0	1022	0.0	2.0	17.4	79.1
LFG10	10.0	1022	0.0	1.8	18.2	79.2
LFG11	10.0	1022	0.0	1.5	18.6	80.4
LFG12	10.0	1022	0.0	0.1	19.1	80.1
LFG13	10.0	1022	0.0	0.2	18.0	80.9
LFGa	10.0	1022	0.0	0.4	17.1	82.2
LFGb	10.0	1022	0.0	0.0	19.4	87.3
LFGc	10.0	1022	0.0	0.1	21.1	79.0
LFGd	10.0	1022	1.2	2.0	3.6	94.0

2.1.2 Interpretation of Results

Baseline Gas monitoring was carried out monthly throughout the year. The results of this monitoring show variable amounts of CO₂ throughout the site. Methane was found in wells **LFG d** at 1.2%.

3.0 INTERPRETATION OF ENVIRONMENTAL MONITORING

3.1 General

The following media have been sampled in accordance with the reduced Environment monitoring licence requirements :

- Annual Groundwater
- Annual Surface water

The facility is not accepting waste so the following media which are by-products of waste degradation, have not been generated.

- Landfill gas
- Leachate

Baseline gas monitoring continues to be carried out, and has been reviewed in section 2.3 of this report.

3.2.0 Surface Water

3.2.1 General

Surface water monitoring was carried out at the 8 no. locations (SW1 and SW1A to SW7) outlined in Table 2.1. The results of the monitoring are presented in table 3.

Table 2: Surface water location sites

Monitoring Point	Northing	Easting	Location
SW1A	162853	089744	Upstream of the site, Leap ford Stream tributary
SW1	163297	089629	Within site boundary, outside proposed landfill footprint, on tributary to Coom
SW2	163766	090482	Within site boundary outside proposed landfill footprint, on tributary to Toor
SW3	164572	089044	Within site boundary, on tributary to Coom
SW4	165056	090479	Upstream of site on tributary to Toor
SW5	165560	089574	Downstream on Toor River
SW6	165481	088811	Downstream on tributary to Coom River it merges with Toor into Coom
SW7	167272	089084	Downstream on Coom River after Toor joins the Coom

Table 3: Surface Water results 2012

Date	27/02/2012								
Location	Temp	DO	pH	Conductivity	Chloride	NH4	BOD	COD	TSS
		mg/l		us/cm	mg/l	mg/lN	mg/l	mg/l	mg/l
SW1A	9.40	10.41	6.8	92.0	14.00	0.05	<2	20.00	4
SW1	9.80	11.38	6.9	85.0	17.99	0.06	<2	16.00	6
SW2	9.30	10.95	6.2	72.0	20.49	0.04	<2	24.00	4
SW3	9.80	11.33	5.5	95.0	17.99	0.24	<2	17.00	8
SW4	9.10	10.11	5.8	132.0	19.99	0.04	<2	24.00	12
SW5	9.50	11.43	5.9	132.0	15.50	0.07	<2	9.00	6
SW6	10.50	10.08	6.2	95.0	16.99	0.08	<2	10.00	3
SW7	9.40	11.58	5.8	120.0	17.99	0.12	<2	9.00	6

3.2.2 Interpretation of Results.

All results are within limits specified by the Waste Licence. As the main construction work of the facility is now complete and the main operation of the facility has not commenced, no disruptive work is being carried out and land disturbed during construction is now more stable. This reduces the risk of heavy rain producing runoff high in suspended solids.

3.2.3 Ecological Assessment.

Ecological monitoring is reduced to bi-annual monitoring. Ecological monitoring will be carried out in 2013

3.3 Groundwater Quality

3.3.1 General

Groundwater monitoring is carried out at 16 locations in and around the site. The locations of these monitoring wells are outlined in Table below.

Table 4: Groundwater gradients

Borehole	Location
MW2D	Up gradient of proposed landfill
MW2S	Up gradient
MW4D	Up gradient
MW4S	Up gradient
MW11D	Down gradient
MW11S	Down gradient
MW12D-A	Down gradient
MW12S-A	Down gradient
MW13S	Down gradient
MW13 D	Down Gradient
MW14D	Down gradient
MW15S	Down gradient
MW15D	Down gradient
MW16S	Down gradient
MW16D	Down gradient

Ground water levels are displayed in table 5.

The quality of ground water in these wells, as sampled on an annual basis, in accordance with W0161-01, is shown in Table 6. The results of the bacteriological analysis of ground water wells are shown in Table 7.

Table 5: Groundwater Levels (23/5/2012)

Point	Depth (M)
MW2S	3.54
MW2D	2.00
MW4S	1.02
MW4D	2.00
MW11S	2.63
MW11D	0.87
MW12S	1.10
MW12D	21.0
MW13S	DRY
MW13D	18.80
MW14S	DRY
MW14D	10.82
MW15S	4.15
MW15D	0.9
MW16S	DRY
MW16D	18.0

All measurements in metres below ground level

Table 6: Groundwater Results 2012

Dates 23/5/2012							
Parameters	Temp (°C)	Do mg/l	pH	Conductivity uS/cm	Chlorides mg/l	NH4 mg/lN	TOC mg/l
MW2S	11.10	10.22	6	61.90	18.00	<0.05	0
MW2D	11.90	10.35	7.7	134.2	16.5	<0.05	0
MW4S	14.30	11.24	6.8	63.80	21.00	<0.05	2.3
MW4D	9.90	11.58	6.7	102.5	18	<0.05	0.7
MW11S	9.10	11.76	6.7	162.10	15.00	<0.05	1.3
MW11D	11.50	10.14	6.7	106.5	21	<0.05	2.6
MW12SA	10.00	10.64	6.5	102.00	23.00	<0.05	5.8
MW12DA	9.50	10.44	6.5	80.2	23	<0.05	1.8
MW13S	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW13D	11.50	10.31	6.4	66.4	13	<0.05	5.8
MW14S	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW14D	10.00	10.41	6.3	72.6	15	<0.05	1.8
MW15S	10.00	9.71	6.2	98.7	38	<0.05	3.3
MW15D	8.80	10.74	6.3	150.4	18	<0.05	2.9
MW16S	DRY	DRY	DRY	DRY	DRY	DRY	DRY
MW16D	8.90	8.94	5.5	79	15.5	<0.05	2.7

Table 7: Groundwater Bacteria Results

Parameter	Date 4/9/2012	
	Total Coliforms (mpn/ml)	Faecal Coliforms (mpn/ml)
MW2S	<3	<3
MW2D	<3	<3
MW4S	<3	<3
MW4D	<3	<3
MW11S	<3	<3
MW11D	<3	<3
MW12S-A	<3	<3
MW12D-A	<3	<3
MW13S	Dry	
MW13D	<3	<3
MW14S	Dry	
MW14D	<3	<3
MW15S	<3	<3
MW15D	<3	<3
MW16S	<3	<3
MW16D	<3	<3
BWHS01	<3	<3
BWHS02	<3	<3

No Faecal Coliforms were present at private wells BHWS01 and BWHS02.

3.3.2 Interpretation of Results

The groundwater results have been compared with the Interim Guideline Values (IGV) as set out in the EPA report "Towards Setting Guideline Values for the Protection of Groundwater in Ireland, Interim Report.

(1) pH

Many of the pH levels at all sample locations and for each sampling event are low. They are in many cases below the Parametric Value as per Drinking Water Regulations 2000 however it should be noted that these sampling points are not for human consumption. These values are baseline values and are naturally derived, typical of Devonian Sandstone Waters, as reported in the baseline investigations for the EIS.

(2) Conductivity

Conductivity levels measured at a number of monitoring wells inside the landfill perimeter are low. This is a characteristic of the Devonian Sandstone.

(3)Nutrients/ Chlorides

All results for Ammoniacal Nitrogen and Chloride were below their specific IGV limits in the EPA Interim Report.

(4)Metals

The majority of metals (iron, manganese, boron, cadmium, copper, lead, magnesium, mercury, potassium and sodium) were within the limits set down in the EPA interim reports for EQS for Surface Waters. Ground water well 11D result (3.92 mg/l) exceeded the limit of 0.2 mg/l for Iron. No groundwater wells exceeded limits for total cyanide and total chromium at all ground water wells. Exceedance in iron and manganese is attributed to the geology of the area.

(5)Microbiology

The majority of groundwater wells did not exceed the total and faecal coliforms limits of (0/100ml of sample).Groundwater well 15S total coliforms result (21/100ml of sample) exceeded the limit. No faecal coliforms were detected in the sample. Total Coliforms are naturally occurring bacteria. The presence of total Coliforms in a well does not necessarily indicate fouling of a borehole. Total Coliforms can be present due to normal conditions, where a well is not regularly disinfected. The levels of total coliforms are very low in this case.

3.3.3 Interpretation of Annual List I/II Results

No exceedences were detected in Volatile Organic Carbons, Semi Volatile Organic Carbons. All results were below the limit of detection for groundwater wells.

3.3.4 Interpretation of private ground water Results

No exceedences were detected in (iron, manganese, boron, cadmium, copper, lead, magnesium, mercury, potassium and sodium) under the EPA EQS limits. Total and faecal coliforms were below the limit of detection of both wells. The householders were sent results for 2012 monitoring.

4.0 DEVELOPMENT WORKS.

4.1 Construction/Development 2012

No further development works took place during 2012.

5.0 ENVIRONMENTAL INCIDENTS, NON-COMPLIANCES AND COMPLAINTS

5.1 Incidents

No incidents occurred during the reporting period

5.2 Non-Compliances

No non-compliances were issued by the Environmental Protection Agency during the reporting period.

5.3 Complaints

No Complaints were received during the reporting period.

6.0 ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

6.1 Management and Staffing Structure of the Facility.

As the facility is not yet operational, no further operational staffs were allocated to the facility. The Facility Manager, and/or Deputy Facility Manager are periodically present on site during working hours. Managerial staff for the facility is shown in Table 14 below.

Table 8: Managerial Staff

Position	Employee Contact Details
<p>Director of Services, Environment Ms. Sharon Corcoran.</p>	<p>Cork County Council, Environment Dept Inniscarra, Co. Cork. Telephone No: 021-4532600 Fax No: 021-4285118</p>
<p>Senior Engineer , Environment Mr. Liam Singleton.</p>	<p>Cork County Council, Waste & Energy Services Inniscarra, Co. Cork. Telephone No: 021-4285286 Fax No: 021-4285118</p>
<p>A/Senior Executive Engineer, Facility Manager, Mr. Niall O Callaghan.</p>	<p>Cork County Council, Bottlehill Landfill, Burnfort, Mallow, Co. Cork. Tel: 022-58100, Fax: 022-58116 Mobile No. 086-1716043</p>
<p>Environmental Technician, Facility Scientist Marie Mortell.</p>	<p>Cork County Council, Bottlehill Landfill, Burnfort, Mallow, Co. Cork. Tel: 022-58100, Fax: 022-58116 Mobile No. 086-6039755</p>

6.2 Financial Provision

Cork County Council has the ability to meet any financial commitments or liabilities incurred by the carrying out of the disposal activities relating to Bottlehill Landfill. These commitments include compliance with the Waste Management Licence (No.W0161-02) and restoration and aftercare of the site as specified in Condition 4 of the licence.

Under Section 38 of the Waste Management Act, 1996 to 2003, Cork County Council *"shall provide and operate, or arrange for, such facilities as may be necessary for the recovery and disposal of household waste arising within the functional area"*. Compliance with Section 38 and all other relevant sections of the Waste Management Act, 1996 to 2003 is a statutory obligation of Cork County Council. Cork County Council annually, in the preparation of the 'Book of Estimates' and the passing of these estimates, shall make provision for any capital works and maintenance works required to fulfil conditions of the waste licence for Bottlehill Landfill.

6.3 Environmental Monitoring Committee.

The number of Environmental Committee meetings were reduced in 2012, by agreement of all those on the Environmental Committee. A meeting will be held in 2013 to update the committee on any licence changes.

6.4 Annual Fund for Local Environment.

As per condition 12.4 of the Waste Licence, a fund will be provided for local environmental and community initiatives from the date of commencement of waste disposal. The facility is currently non operational so no fund has been made available thus far. The committee is presently preparing a set of application forms and guidelines which will evaluate any proposal which will be received in relation to the environmental fund. The fund is set at the annual amount of €150,000 during each year the facility accepts waste. This fund is index linked from June 2004.

Appendix 1

Table 9: Laboratory Codes for Annual Sampling

Sample Site	Laboratory Code
MW2S	B470/12
MW2D	B471/12
MW4S	B468/12
MW4D	B469/12
MW11S	B472/12
MW11D	B473/12
MW12S-A	B474/12
MW12D-A	B475/12
MW13S	DRY
MW13D	B477/12
MW14S	DRY
MW14D	B479/12
MW15S	B480/12
MW15D	B481/12
MW16S	B482/12
MW16D	B483/12
BWHS01	B478/12
BWHS02	B476/12




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Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/001
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B468/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		0.12	mg/lN	INAB	
	Nitrite (as N)		EW154M	0.013		<-0.013	mg/lN	INAB	
	TON (as N)(Calc)		EW154M	0.138		<-0.138	mg/lN	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<-0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		3.5	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<-0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		50.2	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		22.3	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<-0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		<0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		<1.0	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<-0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		1.2	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		1.1	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		12.0	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		0.03	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		1.5	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		8.6	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		7.0	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		<10.0	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		38	mg/L	INAB	
Total Phosphorus-TP									

Signed :



17/09/2012

Technical Manager (or Deputy):

Brendan Murray

NOTES

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- 3.OOS=Result which is outside specification highlighted as OOS
- 4.LOQ=Limit of Quantification or lowest value that can be reported for the test
- 5.ACCRED=Indicates matrix accreditation for the test,a blank field indicates not accredited

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Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/001
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B468/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.38	mg/l P	INAB	

Signed : _____ 17/09/2012

Technical Manager (or Deputy): **Brendan Murray**

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Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/002
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B469/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

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AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		0.43	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<-0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		0.434	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<-0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		3.5	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<-0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		<-20.0	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		1.2	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<-0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		<-0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		12.0	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<-0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<-0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		2.2	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		0.6	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		8.8	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<-0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		1.6	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		8.2	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		1.2	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<-3	MPN/100ml		
	Faecal coliforms	*	Default	3		<-3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		37.8	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<-10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		63	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.68	mg/l P	INAB	



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17/09/2012

Technical Manager (or Deputy):

Brendan Murray

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 Web: www.irishwatertesting.com


Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/003
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B470/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		0.41	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<-0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		0.408	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<-0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		7.6	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<-0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		37.6	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		42.8	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<-0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		4.1	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<-0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		0.9	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		0.8	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		10.4	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<-0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		1.7	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		10.4	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		2.7	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<-3	MPN/100ml		
	Faecal coliforms	*	Default	3		<-3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		15.2	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<-10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		57	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.03	mg/l P	INAB	



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Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/004
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B471/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		0.24	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		0.244	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		2.7	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		<20.0	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		5.1	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		<0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		16.4	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		2.9	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		0.6	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		15.1	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		2.0	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		8.3	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		1.2	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		73.3	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		97	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.06	mg/l P	INAB	



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Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/005
		Date of Receipt	05/09/2012
		Date Started	05/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	17/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B472/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		<0.12	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		<0.138	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		0.047	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		4.2	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		134.3	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		557.4	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		10.8	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		6.6	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		6.4	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		8.3	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		2.6	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		11.8	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		1.0	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		53.4	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		128	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		2.92	mg/l P	INAB	

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Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/006
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B473/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		<0.12	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		<0.138	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		8.0	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		3921.4	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		139.2	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		3.1	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		2.3	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		2.1	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		6.9	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		2.1	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		11.4	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		8.1	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		18.6	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		66	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.17	mg/l P	INAB	

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Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/007
		Date of Receipt	05/09/2012
		Date Started	05/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	17/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B474/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		0.13	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		<0.138	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		5.4	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		48.5	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		7.5	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		7.9	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		1.5	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		1.0	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		7.6	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		1.7	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		11.8	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		6.1	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		9	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		23.4	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		99	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.03	mg/l P	INAB	

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Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/008
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B475/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		0.23	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<-0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		0.230	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<-0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		3.1	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<-0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		<-20.0	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		27.4	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<-0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		<1.0	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<-0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<-0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		1.7	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		2.6	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		7.7	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<-0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		1.6	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		11.6	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		2.6	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		13.2	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<-10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		56	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.06	mg/l P	INAB	

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 Web: www.irishwatertesting.com


Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/009
		Date of Receipt	05/09/2012
		Date Started	05/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	17/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B480/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		<0.12	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		<0.138	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		1.6	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		420.3	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		451.4	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.2	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		2.6	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		0.5	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		4.0	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		4.8	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		13.2	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		1.9	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		8.8	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		<1.0	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		21	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		27.2	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		51	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.03	mg/l P	INAB	

Signed :



17/09/2012

 Technical Manager (or Deputy): **Brendan Murray**

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Contact Name	Marie Mortell	Report Number	60211 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60211/010
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B481/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		<0.12	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		<0.138	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		0.027	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		7.4	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		80.6	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		54.4	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		6.0	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		6.1	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		9.2	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		5.8	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		2.9	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		13.9	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		9.8	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		57.3	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		84	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.15	mg/l P	INAB	

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Contact Name	Marie Mortell	Report Number	60251 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60251/001
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B482/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		<0.12	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		<0.138	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		3.8	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		7422.5	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		234.1	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		1.9	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		2.0	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		2.0	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		14.7	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		0.03	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		1.4	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		7.1	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		2.1	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		26.0	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		49	mg/L	INAB	

Total Phosphorus-TP

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Contact Name	Marie Mortell	Report Number	60251 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60251/001
Tel No	022-58102	Date of Receipt	06/09/2012
Fax No		Date Started	06/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B482/12	Date of Report	21/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OO
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.04	mg/l P	INAB	

Signed :



21/09/2012

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Contact Name	Marie Mortell	Report Number	60251 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60251/002
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B483/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		<0.12	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		0.028	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		<0.138	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		0.071	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		11.2	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		6170.2	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		235.7	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		1.9	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		0.5	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		1.4	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		3.0	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		14.5	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		2.3	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		8.0	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		10.5	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		26.3	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		47	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.58	mg/l P	INAB	

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Contact Name	Marie Mortell	Report Number	60251 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60251/003
Tel No	022-58102	Date of Receipt	06/09/2012
Fax No		Date Started	06/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B479/12	Date of Report	21/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		0.74	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		0.742	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		4.4	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		<20.0	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		5.2	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		1.8	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		0.004	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		1.8	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		2.7	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		28.8	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		2.5	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		8.9	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		2.0	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		16.0	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		48	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.06	mg/l P	INAB	

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Contact Name	Marie Mortell	Report Number	60251 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60251/004
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B478/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		4.65	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		4.656	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		0.030	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		5.2	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		<20.0	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		58.5	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		13.7	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		0.016	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		5.5	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		1.3	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		26.6	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		2.1	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		13.0	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		<1.0	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		36.4	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		121	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.05	mg/l P	INAB	

Signed : _____ 21/09/2012

Technical Manager (or Deputy): **Brendan Murray**

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Blackrock,
Cork
Ireland

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Fax: +353 21 453 6149

Web: www.irishwatertesting.com

Contact Name	Marie Mortell	Report Number	60251 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60251/005
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B476/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		0.37	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		0.376	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		0.025	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		2.3	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		<20.0	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		1.7	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		<0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		11.5	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		<0.003	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		<0.3	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		2.2	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		0.8	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		7.2	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		1.6	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		8.2	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		<1.0	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		45.2	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		74	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.43	mg/l P	INAB	

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Contact Name	Marie Mortell	Report Number	60251 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60251/006
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B477/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
AQ2-UP1									
	Nitrate (as N)		EW154M	0.120		0.34	mg/l N	INAB	
	Nitrite (as N)		EW154M	0.013		<0.013	mg/l N	INAB	
	TON (as N)(Calc)		EW154M	0.138		0.345	mg/l N	INAB	
	Phosphate-Ortho(as P)		EW154M	0.009		<0.009	mg/l P	INAB	
AQ2-UP2									
	Sulphate		EW154M-1	1.000		1.1	mg/L	INAB	
Ion Chromatography									
	Fluoride		EW137	0.10		<0.10	mg/L	INAB	
Metals-Dissolved									
	Iron-Dissolved		EM130	20.0		<20.0	ug/L	INAB	
	Manganese-Dissolved		EM130	1.0		7.2	ug/L	INAB	
	Boron-Dissolved		EM130	0.02		<0.02	mg/L	INAB	
	Cadmium-Dissolved		EM130	0.1		0.1	ug/L	INAB	
	Calcium-Dissolved		EM130	1.0		<1.0	mg/L	INAB	
	Copper-Dissolved		EM130	0.003		0.004	mg/L	INAB	
	Lead-Dissolved		EM130	0.3		2.2	ug/L	INAB	
	Magnesium-Dissolved		EM130	0.3		1.3	mg/L	INAB	
	Nickel-Dissolved		EM130	0.5		3.3	ug/L	INAB	
	Zinc-Dissolved		EM130	1.0		21.1	ug/L	INAB	
	Mercury-Dissolved		EM130	0.02		<0.02	ug/L	INAB	
	Potassium-Dissolved		EM130	0.2		1.5	mg/L	INAB	
	Sodium-Dissolved		EM130	0.5		10.0	mg/L	INAB	
Metals-Total									
	Chromium-Total		EM130	1.0		<1.0	ug/L		
Micro -Total & Faecal (Sub 1)									
	Total Coliforms (Coliform Count)	*	Default	3		<3	MPN/100ml		
	Faecal coliforms	*	Default	3		<3	MPN/100ml		
Titralab									
	Alkalinity Total (R2 pH4.5)		EW153	10.000		14.1	mg/L CaCO3	INAB	
Total Cyanide High (Sub)									
	Total Cyanide High	*	Default	10.00		<10.00	ug/L	YES	
Total Dissolved Solids (TDS)									
	Total Dissolved Solids (TDS)		EW046	15		46	mg/L	INAB	
Total Phosphorus-TP									
	Total Phosphorus-TP		EW146	0.01		0.02	mg/l P	INAB	

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Contact Name	Marie Mortell	Report Number	60252 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60252/001
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	ELS
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B482/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	1,2,4-Trichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,2-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,3-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,4-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	2,4,5-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4,6-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dimethylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2,6-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chloronaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylnaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Nitrophenol	*	Default	1.0		<1.0	ug/L	YES	
	3&4-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Bromophenyl Phenyl Ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Chloro-3-methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Chlorophenyl phenyl ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Nitrophenol	*	Default	5.0		<5.0	ug/L	YES	
	Acenaphthene	*	Default	1.0		<1.0	ug/L	YES	
	Acenaphthylene	*	Default	1.0		<1.0	ug/L	YES	
	Anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(b)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(g,h,i)perylene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(k)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzyl Butyl Phthalate	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethoxy)methane	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroisopropyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-ethylhexyl)phthalate	*	Default	5.0		<5.0	ug/L	YES	
	Chrysene	*	Default	1.0		<1.0	ug/L	YES	
	Dibenz(a,h)anthracene	*	Default	1.0		<1.0	ug/L	YES	



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Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60252/001
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	ELS
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B482/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	Dibenzofuran	*	Default	1.0		<1.0	ug/L	YES	
	Diethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Dimethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	di-n-Butylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Di-n-octylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Diphenylamine	*	Default	1.0		<1.0	ug/L	YES	
	Fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Fluorene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobutadiene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachloroethane	*	Default	1.0		<1.0	ug/L	YES	
	Indeno(1,2,3-c,d)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Isophorone	*	Default	1.0		<1.0	ug/L	YES	
	Naphthalene	*	Default	2.0		<2.0	ug/L	YES	
	Nitrobenzene	*	Default	1.0		<1.0	ug/L	YES	
	n-Nitrosodi-n-propylamine	*	Default	1.0		<1.0	ug/L	YES	
	Pentachlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	Phenanthrene	*	Default	1.0		<1.0	ug/L	YES	
	Phenol	*	Default	1.0		<1.0	ug/L	YES	
	Pyrene	*	Default	1.0		<1.0	ug/L	YES	
VOC Full Suite									
	Dichlorodifluoromethane		EO025	10.0		<10.0	ug/L		
	Chloromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Chloride/Chloroethane		EO025	0.5		<0.5	ug/L		
	Vinyl Chloride		EO025	0.5		<0.5	ug/L		
	Bromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Trichloromonofluoromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Ether/Diethyl Ether		EO025	0.500		<0.5	ug/L	INAB	
	1,1 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	Acetone		EO025	2.0		<2.0	ug/L		
	Iodomethane/Methyl Iodide		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Disulphide		EO025	0.500		<0.5	ug/L	INAB	
	Allyl Chloride		EO025	0.500		<0.5	ug/L	INAB	
	Dichloromethane		EO025	5.0		<5.0	ug/L	INAB	
	Chlormethyl Cyanide/Chloroacetonitrile		EO025	0.500		<0.5	ug/L	INAB	
	Nitrobenzene		EO025	0.5		<0.5	ug/L		



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Contact Name	Marie Mortell	Report Number	60252 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60252/001
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	ELS
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B482/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	Propanenitrile		EO025	10.0		<10.0	ug/L		
	Hexachlorobutadiene		EO025	0.500		<0.5	ug/L	INAB	
	Trans-1,2 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	MtBE		EO025	0.500		<0.5	ug/L	INAB	
	1,1-dichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	2,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	cis-12 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	2-Butanone		EO025	5.0		<5.0	ug/L		
	Methyl Acrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromochloromethane		EO025	0.500		<0.5	ug/L	INAB	
	Methacrylonitrile		EO025	5.0		<5.0	ug/L		
	Tetrahydrofuran		EO025	0.500		<0.5	ug/L	INAB	
	Chloroform		EO025	1.000		<1.0	ug/L	INAB	
	1,1,1-trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1-Chlorobutane		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Tetrachloride		EO025	0.500		<0.5	ug/L	INAB	
	11 Dichloropropene		EO025	0.500		<0.5	ug/L	INAB	
	Benzene		EO025	0.100		<0.1	ug/L	INAB	
	1,2 dichloroethane		EO025	0.1		<0.1	ug/L	INAB	
	Trichloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	Dibromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Methyl Methacrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromodichloromethane		EO025	2.000		<2.0	ug/L	INAB	
	13 Dichloropropene.cis		EO025	2.000		<2.0	ug/L	INAB	
	MIBK/4 Methyl 2 Pentanone		EO025	2.000		<2.0	ug/L	INAB	
	Toluene		EO025	0.500		<0.5	ug/L	INAB	
	13 Dichloropropene.trans		EO025	2.000		<2.0	ug/L	INAB	
	Ethyl Methacrylate		EO025	2.000		<2.0	ug/L	INAB	
	112 Trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	Tetrachloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,3-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	2-Hexanone		EO025	1.000		<1.0	ug/L	INAB	
	Dibromochloromethane		EO025	1.000		<1.0	ug/L	INAB	
	1,2-dibromoethane		EO025	0.500		<0.5	ug/L	INAB	
	Chlorobenzene		EO025	0.500		<0.5	ug/L	INAB	

Signed : _____ 21/09/2012

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Contact Name	Marie Mortell	Report Number	60252 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60252/001
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	ELS
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B482/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	1,1,1,2-tetrachloroethane		EO025	2.000		<2.0	ug/L	INAB	
	Ethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Xylene P&M		EO025	0.500		<0.5	ug/L	INAB	
	Xylene -o		EO025	0.500		<0.5	ug/L	INAB	
	Styrene		EO025	2.000		<2.0	ug/L	INAB	
	Bromoform		EO025	1.000		<1.0	ug/L	INAB	
	Isopropylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Bromobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,1,2,2-tetrachloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1,2,3-trichloropropane		EO025	2.000		<2.0	ug/L	INAB	
	Trans 1,4 Dichloro 2 Butene, tran		EO025	2.0		<2.0	ug/L	INAB	
	Propylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	2-chlorotoluene		EO025	0.500		<0.5	ug/L	INAB	
	4-chlorotoluene		EO025	0.500		<0.5	ug/L	INAB	
	1,3,5-trimethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Tert Butyl Benzene		EO025	0.500		<0.5	ug/L	INAB	
	1,2,4-trimethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	sec-butylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,3-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	P Isopropyltoluene		EO025	0.500		<0.5	ug/L	INAB	
	1,4-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,2-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	N Butyl Benzene		EO025	0.500		<0.5	ug/L	INAB	
	Hexachloroethane		EO025	5.000		<5.0	ug/L	INAB	
	1,2-dibromo-3-chloropropane		EO025	2.000		<2.0	ug/L	INAB	
	1,2,4-trichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	Naphthalene		EO025	2.0		<2.0	ug/L	INAB	
	1,2,3-trichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	



Signed : _____ 21/09/2012

Technical Manager (or Deputy): **Brendan Murray**

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ENVIRONMENTAL
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Cork
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Tel: +353 21 453 6141

Fax: +353 21 453 6149

Web: www.irishwatertesting.com

Contact Name	Marie Mortell	Report Number	60252 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60252/002
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	ELS
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B483/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	1,2,4-Trichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,2-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,3-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,4-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	2,4,5-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4,6-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dimethylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2,6-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chloronaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylnaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Nitrophenol	*	Default	1.0		<1.0	ug/L	YES	
	3&4-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Bromophenyl Phenyl Ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Chloro-3-methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Chlorophenyl phenyl ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Nitrophenol	*	Default	5.0		<5.0	ug/L	YES	
	Acenaphthene	*	Default	1.0		<1.0	ug/L	YES	
	Acenaphthylene	*	Default	1.0		<1.0	ug/L	YES	
	Anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(b)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(g,h,i)perylene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(k)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzyl Butyl Phthalate	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethoxy)methane	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroisopropyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-ethylhexyl)phthalate	*	Default	5.0		<5.0	ug/L	YES	
	Chrysene	*	Default	1.0		<1.0	ug/L	YES	
	Dibenz(a,h)anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Dibenzofuran	*	Default	1.0		<1.0	ug/L	YES	

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Technical Manager (or Deputy): **Brendan Murray**

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Web: www.irishwatertesting.com

Contact Name	Marie Mortell	Report Number	60252 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60252/002
Tel No	022-58102	Date of Receipt	06/09/2012
Fax No		Date Started	06/09/2012
Customer PO	1035938	Received or Collected	ELS
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B483/12	Date of Report	21/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	Diethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Dimethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	di-n-Butylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Di-n-octylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Diphenylamine	*	Default	1.0		<1.0	ug/L	YES	
	Fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Fluorene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobutadiene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachloroethane	*	Default	1.0		<1.0	ug/L	YES	
	Indeno(1,2,3-c,d)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Isophorone	*	Default	1.0		<1.0	ug/L	YES	
	Naphthalene	*	Default	2.0		<2.0	ug/L	YES	
	Nitrobenzene	*	Default	1.0		<1.0	ug/L	YES	
	n-Nitrosodi-n-propylamine	*	Default	1.0		<1.0	ug/L	YES	
	Pentachlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	Phenanthrene	*	Default	1.0		<1.0	ug/L	YES	
	Phenol	*	Default	1.0		<1.0	ug/L	YES	
	Pyrene	*	Default	1.0		<1.0	ug/L	YES	
VOC Full Suite									
	Dichlorodifluoromethane		EO025	10.0		<10.0	ug/L		
	Chloromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Chloride/Chloroethane		EO025	0.5		<0.5	ug/L		
	Vinyl Chloride		EO025	0.5		<0.5	ug/L		
	Bromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Trichloromonofluoromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Ether/Diethyl Ether		EO025	0.500		<0.5	ug/L	INAB	
	1,1 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	Acetone		EO025	2.0		<2.0	ug/L		
	Iodomethane/Methyl Iodide		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Disulphide		EO025	0.500		<0.5	ug/L	INAB	
	Allyl Chloride		EO025	0.500		<0.5	ug/L	INAB	
	Dichloromethane		EO025	5.0		<5.0	ug/L	INAB	
	Chlormethyl Cyanide/Chloroacetonitrile		EO025	0.500		<0.5	ug/L	INAB	
	Nitrobenzene		EO025	0.5		<0.5	ug/L		
	Propanenitrile		EO025	10.0		<10.0	ug/L		

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21/09/2012

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Web: www.irishwatertesting.com

Contact Name	Marie Mortell	Report Number	60252 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60252/002
Tel No	022-58102	Date of Receipt	06/09/2012
Fax No		Date Started	06/09/2012
Customer PO	1035938	Received or Collected	ELS
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B483/12	Date of Report	21/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	Hexachlorobutadiene		EO025	0.500		<0.5	ug/L	INAB	
	Trans-1,2 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	MtBE		EO025	0.500		<0.5	ug/L	INAB	
	1,1-dichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	2,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	cis-12 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	2-Butanone		EO025	5.0		<5.0	ug/L		
	Methyl Acrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromochloromethane		EO025	0.500		<0.5	ug/L	INAB	
	Methacrylonitrile		EO025	5.0		<5.0	ug/L		
	Tetrahydrofuran		EO025	0.500		<0.5	ug/L	INAB	
	Chloroform		EO025	1.000		<1.0	ug/L	INAB	
	1,1,1-trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1-Chlorobutane		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Tetrachloride		EO025	0.500		<0.5	ug/L	INAB	
	11 Dichloropropene		EO025	0.500		<0.5	ug/L	INAB	
	Benzene		EO025	0.100		<0.1	ug/L	INAB	
	1,2 dichloroethane		EO025	0.1		<0.1	ug/L	INAB	
	Trichloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	Dibromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Methyl Methacrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromodichloromethane		EO025	2.000		<2.0	ug/L	INAB	
	13 Dichloropropene.cis		EO025	2.000		<2.0	ug/L	INAB	
	MIBK/4 Methyl 2 Pentanone		EO025	2.000		<2.0	ug/L	INAB	
	Toluene		EO025	0.500		<0.5	ug/L	INAB	
	13 Dichloropropene.trans		EO025	2.000		<2.0	ug/L	INAB	
	Ethyl Methacrylate		EO025	2.000		<2.0	ug/L	INAB	
	112 Trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	Tetrachloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,3-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	2-Hexanone		EO025	1.000		<1.0	ug/L	INAB	
	Dibromochloromethane		EO025	1.000		<1.0	ug/L	INAB	
	1,2-dibromoethane		EO025	0.500		<0.5	ug/L	INAB	
	Chlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,1,1,2-tetrachloroethane		EO025	2.000		<2.0	ug/L	INAB	

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21/09/2012

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Brendan Murray

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Contact Name	Marie Mortell	Report Number	60252 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60252/002
		Date of Receipt	06/09/2012
		Date Started	06/09/2012
Tel No	022-58102	Received or Collected	ELS
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	21/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B483/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	Ethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Xylene P&M		EO025	0.500		<0.5	ug/L	INAB	
	Xylene -o		EO025	0.500		<0.5	ug/L	INAB	
	Styrene		EO025	2.000		<2.0	ug/L	INAB	
	Bromoform		EO025	1.000		<1.0	ug/L	INAB	
	Isopropylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Bromobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,1,2,2-tetrachloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1,2,3-trichloropropane		EO025	2.000		<2.0	ug/L	INAB	
	Trans 1,4 Dichloro 2 Butene, tran		EO025	2.0		<2.0	ug/L	INAB	
	Propylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	2-chlorotoluene		EO025	0.500		<0.5	ug/L	INAB	
	4-chlorotoluene		EO025	0.500		<0.5	ug/L	INAB	
	1,3,5-trimethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Tert Butyl Benzene		EO025	0.500		<0.5	ug/L	INAB	
	1,2,4-trimethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	sec-butylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,3-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	P Isopropyltoluene		EO025	0.500		<0.5	ug/L	INAB	
	1,4-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,2-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	N Butyl Benzene		EO025	0.500		<0.5	ug/L	INAB	
	Hexachloroethane		EO025	5.000		<5.0	ug/L	INAB	
	1,2-dibromo-3-chloropropane		EO025	2.000		<2.0	ug/L	INAB	
	1,2,4-trichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	Naphthalene		EO025	2.0		<2.0	ug/L	INAB	
	1,2,3-trichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	



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Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/001
		Date of Receipt	05/09/2012
		Date Started	05/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	17/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B468/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	1,2,4-Trichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,2-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,3-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,4-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	2,4,5-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4,6-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dimethylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2,6-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chloronaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylnaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Nitrophenol	*	Default	1.0		<1.0	ug/L	YES	
	3&4-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Bromophenyl Phenyl Ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Chloro-3-methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Chlorophenyl phenyl ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Nitrophenol	*	Default	5.0		<5.0	ug/L	YES	
	Acenaphthene	*	Default	1.0		<1.0	ug/L	YES	
	Acenaphthylene	*	Default	1.0		<1.0	ug/L	YES	
	Anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(b)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(g,h,i)perylene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(k)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzyl Butyl Phthalate	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethoxy)methane	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroisopropyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-ethylhexyl)phthalate	*	Default	5.0		<5.0	ug/L	YES	
	Chrysene	*	Default	1.0		<1.0	ug/L	YES	
	Dibenz(a,h)anthracene	*	Default	1.0		<1.0	ug/L	YES	

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Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/001
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B468/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	Dibenzofuran	*	Default	1.0		<1.0	ug/L	YES	
	Diethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Dimethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	di-n-Butylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Di-n-octylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Diphenylamine	*	Default	1.0		<1.0	ug/L	YES	
	Fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Fluorene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobutadiene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachloroethane	*	Default	1.0		<1.0	ug/L	YES	
	Indeno(1,2,3-c,d)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Isophorone	*	Default	1.0		<1.0	ug/L	YES	
	Naphthalene	*	Default	2.0		<2.0	ug/L	YES	
	Nitrobenzene	*	Default	1.0		<1.0	ug/L	YES	
	n-Nitrosodi-n-propylamine	*	Default	1.0		<1.0	ug/L	YES	
	Pentachlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	Phenanthrene	*	Default	1.0		<1.0	ug/L	YES	
	Phenol	*	Default	1.0		<1.0	ug/L	YES	
	Pyrene	*	Default	1.0		<1.0	ug/L	YES	
VOC Full Suite									
	Dichlorodifluoromethane		EO025	10.0		<10.0	ug/L		
	Chloromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Chloride/Chloroethane		EO025	0.5		<0.5	ug/L		
	Vinyl Chloride		EO025	0.5		<0.5	ug/L		
	Bromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Trichloromonofluoromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Ether/Diethyl Ether		EO025	0.500		<0.5	ug/L	INAB	
	1,1 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	Acetone		EO025	2.0		<2.0	ug/L		
	Iodomethane/Methyl Iodide		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Disulphide		EO025	0.500		<0.5	ug/L	INAB	
	Allyl Chloride		EO025	0.500		<0.5	ug/L	INAB	
	Dichloromethane		EO025	5.0		<5.0	ug/L	INAB	
	Chloromethyl Cyanide/Chloroacetonitrile		EO025	0.500		<0.5	ug/L	INAB	
	Nitrobenzene		EO025	0.5		<0.5	ug/L		

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Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/001
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B468/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	Propanenitrile		EO025	10.0		<10.0	ug/L		
	Hexachlorobutadiene		EO025	0.500		<0.5	ug/L	INAB	
	Trans-1,2 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	MtBE		EO025	0.500		<0.5	ug/L	INAB	
	1,1-dichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	2,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	cis-1,2 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	2-Butanone		EO025	5.0		<5.0	ug/L		
	Methyl Acrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromochloromethane		EO025	0.500		<0.5	ug/L	INAB	
	Methacrylonitrile		EO025	5.0		<5.0	ug/L		
	Tetrahydrofuran		EO025	0.500		<0.5	ug/L	INAB	
	Chloroform		EO025	1.000		1.3	ug/L	INAB	
	1,1,1-trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1-Chlorobutane		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Tetrachloride		EO025	0.500		<0.5	ug/L	INAB	
	1,1 Dichloropropene		EO025	0.500		<0.5	ug/L	INAB	
	Benzene		EO025	0.100		<0.1	ug/L	INAB	
	1,2 dichloroethane		EO025	0.1		<0.1	ug/L	INAB	
	Trichloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	Dibromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Methyl Methacrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromodichloromethane		EO025	2.000		<2.0	ug/L	INAB	
	1,3 Dichloropropene,cis		EO025	2.000		<2.0	ug/L	INAB	
	MIBK/4 Methyl 2 Pentanone		EO025	2.000		<2.0	ug/L	INAB	
	Toluene		EO025	0.500		<0.5	ug/L	INAB	
	1,3 Dichloropropene,trans		EO025	2.000		<2.0	ug/L	INAB	
	Ethyl Methacrylate		EO025	2.000		<2.0	ug/L	INAB	
	1,1,2 Trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	Tetrachloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,3-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	2-Hexanone		EO025	1.000		<1.0	ug/L	INAB	
	Dibromochloromethane		EO025	1.000		<1.0	ug/L	INAB	
	1,2-dibromoethane		EO025	0.500		<0.5	ug/L	INAB	
	Chlorobenzene		EO025	0.500		<0.5	ug/L	INAB	

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Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/001
		Date of Receipt	05/09/2012
		Date Started	05/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	17/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B468/12		

CERTIFICATE OF ANALYSIS

EST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
OC Full Suite									
	1,1,1,2-tetrachloroethane		EO025	2.000		<2.0	ug/L	INAB	
	Ethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Xylene P&M		EO025	0.500		<0.5	ug/L	INAB	
	Xylene -o		EO025	0.500		<0.5	ug/L	INAB	
	Styrene		EO025	2.000		<2.0	ug/L	INAB	
	Bromoform		EO025	1.000		<1.0	ug/L	INAB	
	Isopropylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Bromobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,1,2,2-tetrachloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1,2,3-trichloropropane		EO025	2.000		<2.0	ug/L	INAB	
	Trans 1,4 Dichloro 2 Butene, tran		EO025	2.0		<2.0	ug/L	INAB	
	Propylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	2-chlorotoluene		EO025	0.500		<0.5	ug/L	INAB	
	4-chlorotoluene		EO025	0.500		<0.5	ug/L	INAB	
	1,3,5-trimethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Tert Butyl Benzene		EO025	0.500		<0.5	ug/L	INAB	
	1,2,4-trimethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	sec-butylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,3-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	P Isopropyltoluene		EO025	0.500		<0.5	ug/L	INAB	
	1,4-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,2-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	N Butyl Benzene		EO025	0.500		<0.5	ug/L	INAB	
	Hexachloroethane		EO025	5.000		<5.0	ug/L	INAB	
	1,2-dibromo-3-chloropropane		EO025	2.000		<2.0	ug/L	INAB	
	1,2,4-trichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	Naphthalene		EO025	2.0		<2.0	ug/L	INAB	
	1,2,3-trichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	

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 Web: www.irishwatertesting.com


Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/002
		Date of Receipt	05/09/2012
		Date Started	05/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	17/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B469/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	1,2,4-Trichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,2-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,3-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,4-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	2,4,5-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4,6-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dimethylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2,6-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chloronaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylnaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Nitrophenol	*	Default	1.0		<1.0	ug/L	YES	
	3&4-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Bromophenyl Phenyl Ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Chloro-3-methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Chlorophenyl phenyl ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Nitrophenol	*	Default	5.0		<5.0	ug/L	YES	
	Acenaphthene	*	Default	1.0		<1.0	ug/L	YES	
	Acenaphthylene	*	Default	1.0		<1.0	ug/L	YES	
	Anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(b)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(g,h,i)perylene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(k)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzyl Butyl Phthalate	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethoxy)methane	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroisopropyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-ethylhexyl)phthalate	*	Default	5.0		<5.0	ug/L	YES	
	Chrysene	*	Default	1.0		<1.0	ug/L	YES	
	Dibenz(a,h)anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Dibenzofuran	*	Default	1.0		<1.0	ug/L	YES	

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Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/002
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B469/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	Diethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Dimethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	di-n-Butylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Di-n-octylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Diphenylamine	*	Default	1.0		<1.0	ug/L	YES	
	Fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Fluorene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobutadiene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachloroethane	*	Default	1.0		<1.0	ug/L	YES	
	Indeno(1,2,3-c,d)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Isophorone	*	Default	1.0		<1.0	ug/L	YES	
	Naphthalene	*	Default	2.0		<2.0	ug/L	YES	
	Nitrobenzene	*	Default	1.0		<1.0	ug/L	YES	
	n-Nitrosodi-n-propylamine	*	Default	1.0		<1.0	ug/L	YES	
	Pentachlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	Phenanthrene	*	Default	1.0		<1.0	ug/L	YES	
	Phenol	*	Default	1.0		<1.0	ug/L	YES	
	Pyrene	*	Default	1.0		<1.0	ug/L	YES	
VOC Full Suite									
	Dichlorodifluoromethane		EO025	10.0		<10.0	ug/L		
	Chloromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Chloride/Chloroethane		EO025	0.5		<0.5	ug/L		
	Vinyl Chloride		EO025	0.5		<0.5	ug/L		
	Bromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Trichloromonofluoromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Ether/Diethyl Ether		EO025	0.500		<0.5	ug/L	INAB	
	1,1 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	Acetone		EO025	2.0		<2.0	ug/L		
	Iodomethane/Methyl Iodide		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Disulphide		EO025	0.500		<0.5	ug/L	INAB	
	Allyl Chloride		EO025	0.500		<0.5	ug/L	INAB	
	Dichloromethane		EO025	5.0		<5.0	ug/L	INAB	
	Chloromethyl Cyanide/Chloroacetonitrile		EO025	0.500		<0.5	ug/L	INAB	
	Nitrobenzene		EO025	0.5		<0.5	ug/L		
	Propanenitrile		EO025	10.0		<10.0	ug/L		

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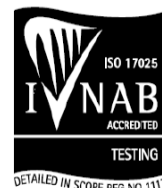
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Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/002
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B469/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	Hexachlorobutadiene		EO025	0.500		<0.5	ug/L	INAB	
	Trans-1,2 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	MtBE		EO025	0.500		<0.5	ug/L	INAB	
	1,1-dichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	2,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	cis-1,2 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	2-Butanone		EO025	5.0		<5.0	ug/L	INAB	
	Methyl Acrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromochloromethane		EO025	0.500		<0.5	ug/L	INAB	
	Methacrylonitrile		EO025	5.0		<5.0	ug/L	INAB	
	Tetrahydrofuran		EO025	0.500		<0.5	ug/L	INAB	
	Chloroform		EO025	1.000		<1.0	ug/L	INAB	
	1,1,1-trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1-Chlorobutane		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Tetrachloride		EO025	0.500		<0.5	ug/L	INAB	
	1,1 Dichloropropene		EO025	0.500		<0.5	ug/L	INAB	
	Benzene		EO025	0.100		<0.1	ug/L	INAB	
	1,2 dichloroethane		EO025	0.1		<0.1	ug/L	INAB	
	Trichloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	Dibromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Methyl Methacrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromodichloromethane		EO025	2.000		<2.0	ug/L	INAB	
	13 Dichloropropene,cis		EO025	2.000		<2.0	ug/L	INAB	
	MIBK/4 Methyl 2 Pentanone		EO025	2.000		<2.0	ug/L	INAB	
	Toluene		EO025	0.500		<0.5	ug/L	INAB	
	13 Dichloropropene,trans		EO025	2.000		<2.0	ug/L	INAB	
	Ethyl Methacrylate		EO025	2.000		<2.0	ug/L	INAB	
	112 Trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	Tetrachloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,3-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	2-Hexanone		EO025	1.000		<1.0	ug/L	INAB	
	Dibromochloromethane		EO025	1.000		<1.0	ug/L	INAB	
	1,2-dibromoethane		EO025	0.500		<0.5	ug/L	INAB	
	Chlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,1,1,2-tetrachloroethane		EO025	2.000		<2.0	ug/L	INAB	

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Fax: +353 21 453 6149Web: www.irishwatertesting.com

Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/002
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B469/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	Ethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Xylene P&M		EO025	0.500		<0.5	ug/L	INAB	
	Xylene -o		EO025	0.500		<0.5	ug/L	INAB	
	Styrene		EO025	2.000		<2.0	ug/L	INAB	
	Bromoform		EO025	1.000		<1.0	ug/L	INAB	
	Isopropylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Bromobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,1,2,2-tetrachloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1,2,3-trichloropropane		EO025	2.000		<2.0	ug/L	INAB	
	Trans 14 Dichloro 2 Butene, tran		EO025	2.0		<2.0	ug/L	INAB	
	Propylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	2-chlorotoluene		EO025	0.500		<0.5	ug/L	INAB	
	4-chlorotoluene		EO025	0.500		<0.5	ug/L	INAB	
	1,3,5-trimethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Tert Butyl Benzene		EO025	0.500		<0.5	ug/L	INAB	
	1,2,4-trimethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	sec-butylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,3-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	P Isopropyltoluene		EO025	0.500		<0.5	ug/L	INAB	
	1,4-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,2-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	N Butyl Benzene		EO025	0.500		<0.5	ug/L	INAB	
	Hexachloroethane		EO025	5.000		<5.0	ug/L	INAB	
	1,2-dibromo-3-chloropropane		EO025	2.000		<2.0	ug/L	INAB	
	1,2,4-trichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	Naphthalene		EO025	2.0		<2.0	ug/L	INAB	
	1,2,3-trichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	

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Web: www.irishwatertesting.com

Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/003
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B480/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	1,2,4-Trichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,2-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,3-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,4-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	2,4,5-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4,6-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dimethylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2,6-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chloronaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylnaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Nitrophenol	*	Default	1.0		<1.0	ug/L	YES	
	3&4-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Bromophenyl Phenyl Ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Chloro-3-methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Chlorophenyl phenyl ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Nitrophenol	*	Default	5.0		<5.0	ug/L	YES	
	Acenaphthene	*	Default	1.0		<1.0	ug/L	YES	
	Acenaphthylene	*	Default	1.0		<1.0	ug/L	YES	
	Anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(b)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(g,h,i)perylene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(k)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzyl Butyl Phthalate	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethoxy)methane	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroisopropyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-ethylhexyl)phthalate	*	Default	5.0		<5.0	ug/L	YES	
	Chrysene	*	Default	1.0		<1.0	ug/L	YES	
	Dibenz(a,h)anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Dibenzofuran	*	Default	1.0		<1.0	ug/L	YES	

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Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/003
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B480/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	Diethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Dimethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	di-n-Butylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Di-n-octylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Diphenylamine	*	Default	1.0		<1.0	ug/L	YES	
	Fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Fluorene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobutadiene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachloroethane	*	Default	1.0		<1.0	ug/L	YES	
	Indeno(1,2,3-c,d)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Isophorone	*	Default	1.0		<1.0	ug/L	YES	
	Naphthalene	*	Default	2.0		<2.0	ug/L	YES	
	Nitrobenzene	*	Default	1.0		<1.0	ug/L	YES	
	n-Nitrosodi-n-propylamine	*	Default	1.0		<1.0	ug/L	YES	
	Pentachlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	Phenanthrene	*	Default	1.0		<1.0	ug/L	YES	
	Phenol	*	Default	1.0		<1.0	ug/L	YES	
	Pyrene	*	Default	1.0		<1.0	ug/L	YES	
VOC Full Suite									
	Dichlorodifluoromethane		EO025	10.0		<10.0	ug/L		
	Chloromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Chloride/Chloroethane		EO025	0.5		<0.5	ug/L		
	Vinyl Chloride		EO025	0.5		<0.5	ug/L		
	Bromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Trichloromonofluoromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Ether/Diethyl Ether		EO025	0.500		<0.5	ug/L	INAB	
	1,1 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	Acetone		EO025	2.0		<2.0	ug/L		
	Iodomethane/Methyl Iodide		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Disulphide		EO025	0.500		<0.5	ug/L	INAB	
	Allyl Chloride		EO025	0.500		<0.5	ug/L	INAB	
	Dichloromethane		EO025	5.0		<5.0	ug/L	INAB	
	Chlormethyl Cyanide/Chloroacetonitrile		EO025	0.500		<0.5	ug/L	INAB	
	Nitrobenzene		EO025	0.5		<0.5	ug/L		
	Propanenitrile		EO025	10.0		<10.0	ug/L		

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Web: www.irishwatertesting.com

Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/003
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B480/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	Hexachlorobutadiene		EO025	0.500		<0.5	ug/L	INAB	
	Trans-1,2 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	MtBE		EO025	0.500		<0.5	ug/L	INAB	
	1,1-dichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	2,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	cis-1,2 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	2-Butanone		EO025	5.0		<5.0	ug/L	INAB	
	Methyl Acrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromochloromethane		EO025	0.500		<0.5	ug/L	INAB	
	Methacrylonitrile		EO025	5.0		<5.0	ug/L	INAB	
	Tetrahydrofuran		EO025	0.500		<0.5	ug/L	INAB	
	Chloroform		EO025	1.000		<1.0	ug/L	INAB	
	1,1,1-trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1-Chlorobutane		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Tetrachloride		EO025	0.500		<0.5	ug/L	INAB	
	1,1 Dichloropropene		EO025	0.500		<0.5	ug/L	INAB	
	Benzene		EO025	0.100		<0.1	ug/L	INAB	
	1,2 dichloroethane		EO025	0.1		<0.1	ug/L	INAB	
	Trichloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	Dibromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Methyl Methacrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromodichloromethane		EO025	2.000		<2.0	ug/L	INAB	
	13 Dichloropropene,cis		EO025	2.000		<2.0	ug/L	INAB	
	MIBK/4 Methyl 2 Pentanone		EO025	2.000		<2.0	ug/L	INAB	
	Toluene		EO025	0.500		<0.5	ug/L	INAB	
	13 Dichloropropene,trans		EO025	2.000		<2.0	ug/L	INAB	
	Ethyl Methacrylate		EO025	2.000		<2.0	ug/L	INAB	
	112 Trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	Tetrachloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,3-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	2-Hexanone		EO025	1.000		<1.0	ug/L	INAB	
	Dibromochloromethane		EO025	1.000		<1.0	ug/L	INAB	
	1,2-dibromoethane		EO025	0.500		<0.5	ug/L	INAB	
	Chlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,1,1,2-tetrachloroethane		EO025	2.000		<2.0	ug/L	INAB	

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Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/003
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B480/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	Ethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Xylene P&M		EO025	0.500		<0.5	ug/L	INAB	
	Xylene -o		EO025	0.500		<0.5	ug/L	INAB	
	Styrene		EO025	2.000		<2.0	ug/L	INAB	
	Bromoform		EO025	1.000		<1.0	ug/L	INAB	
	Isopropylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Bromobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,1,2,2-tetrachloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1,2,3-trichloropropane		EO025	2.000		<2.0	ug/L	INAB	
	Trans 1,4 Dichloro 2 Butene, tran		EO025	2.0		<2.0	ug/L	INAB	
	Propylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	2-chlorotoluene		EO025	0.500		<0.5	ug/L	INAB	
	4-chlorotoluene		EO025	0.500		<0.5	ug/L	INAB	
	1,3,5-trimethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	Tert Butyl Benzene		EO025	0.500		<0.5	ug/L	INAB	
	1,2,4-trimethylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	sec-butylbenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,3-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	P Isopropyltoluene		EO025	0.500		<0.5	ug/L	INAB	
	1,4-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,2-dichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	N Butyl Benzene		EO025	0.500		<0.5	ug/L	INAB	
	Hexachloroethane		EO025	5.000		<5.0	ug/L	INAB	
	1,2-dibromo-3-chloropropane		EO025	2.000		<2.0	ug/L	INAB	
	1,2,4-trichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	Naphthalene		EO025	2.0		<2.0	ug/L	INAB	
	1,2,3-trichlorobenzene		EO025	0.500		<0.5	ug/L	INAB	

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Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/004
		Date of Receipt	05/09/2012
		Date Started	05/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	17/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B481/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	1,2,4-Trichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,2-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,3-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	1,4-Dichlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	2,4,5-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4,6-Trichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dichlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dimethylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2,4-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2,6-Dinitrotoluene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chloronaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Chlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylnaphthalene	*	Default	1.0		<1.0	ug/L	YES	
	2-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	2-Nitrophenol	*	Default	1.0		<1.0	ug/L	YES	
	3&4-Methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Bromophenyl Phenyl Ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Chloro-3-methylphenol	*	Default	1.0		<1.0	ug/L	YES	
	4-Chlorophenyl phenyl ether	*	Default	1.0		<1.0	ug/L	YES	
	4-Nitrophenol	*	Default	5.0		<5.0	ug/L	YES	
	Acenaphthene	*	Default	1.0		<1.0	ug/L	YES	
	Acenaphthylene	*	Default	1.0		<1.0	ug/L	YES	
	Anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(a)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(b)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(g,h,i)perylene	*	Default	1.0		<1.0	ug/L	YES	
	Benzo(k)fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Benzyl Butyl Phthalate	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethoxy)methane	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroethyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-chloroisopropyl)ether	*	Default	1.0		<1.0	ug/L	YES	
	Bis(2-ethylhexyl)phthalate	*	Default	5.0		<5.0	ug/L	YES	
	Chrysene	*	Default	1.0		<1.0	ug/L	YES	
	Dibenz(a,h)anthracene	*	Default	1.0		<1.0	ug/L	YES	
	Dibenzofuran	*	Default	1.0		<1.0	ug/L	YES	

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Technical Manager (or Deputy): **Brendan Murray**

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LABORATORY SERVICESAcorn Business Campus
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Blackrock,
Cork
IrelandTel: +353 21 453 6141
Fax: +353 21 453 6149Web: www.irishwatertesting.com

Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/004
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B481/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
SVOC (sub)									
	Diethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Dimethylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	di-n-Butylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Di-n-octylphthalate	*	Default	1.0		<1.0	ug/L	YES	
	Diphenylamine	*	Default	1.0		<1.0	ug/L	YES	
	Fluoranthene	*	Default	1.0		<1.0	ug/L	YES	
	Fluorene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobenzene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachlorobutadiene	*	Default	1.0		<1.0	ug/L	YES	
	Hexachloroethane	*	Default	1.0		<1.0	ug/L	YES	
	Indeno(1,2,3-c,d)pyrene	*	Default	1.0		<1.0	ug/L	YES	
	Isophorone	*	Default	1.0		<1.0	ug/L	YES	
	Naphthalene	*	Default	2.0		<2.0	ug/L	YES	
	Nitrobenzene	*	Default	1.0		<1.0	ug/L	YES	
	n-Nitrosodi-n-propylamine	*	Default	1.0		<1.0	ug/L	YES	
	Pentachlorophenol	*	Default	1.0		<1.0	ug/L	YES	
	Phenanthrene	*	Default	1.0		<1.0	ug/L	YES	
	Phenol	*	Default	1.0		<1.0	ug/L	YES	
	Pyrene	*	Default	1.0		<1.0	ug/L	YES	
VOC Full Suite									
	Dichlorodifluoromethane		EO025	10.0		<10.0	ug/L		
	Chloromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Chloride/Chloroethane		EO025	0.5		<0.5	ug/L		
	Vinyl Chloride		EO025	0.5		<0.5	ug/L		
	Bromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Trichloromonofluoromethane		EO025	0.5		<0.5	ug/L		
	Ethyl Ether/Diethyl Ether		EO025	0.500		<0.5	ug/L	INAB	
	11 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	Acetone		EO025	2.0		<2.0	ug/L		
	Iodomethane/Methyl Iodide		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Disulphide		EO025	0.500		0.9	ug/L	INAB	
	Allyl Chloride		EO025	0.500		<0.5	ug/L	INAB	
	Dichloromethane		EO025	5.0		<5.0	ug/L	INAB	
	Chlormethyl Cyanide/Chloroacetonitrile		EO025	0.500		<0.5	ug/L	INAB	
	Nitrobenzene		EO025	0.5		<0.5	ug/L		
	Propanenitrile		EO025	10.0		<10.0	ug/L		

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17/09/2012

Technical Manager (or Deputy):

Brendan Murray

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LABORATORY SERVICESAcorn Business Campus
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Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/004
		Date of Receipt	05/09/2012
		Date Started	05/09/2012
Tel No	022-58102	Received or Collected	Hand
Fax No		Condition on Receipt	Good
Customer PO	1035938	Date of Report	17/09/2012
Quotation No	QN001139	Sample Type	Ground Waters
Customer Ref	B481/12		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	Hexachlorobutadiene		EO025	0.500		<0.5	ug/L	INAB	
	Trans-1,2 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	MtBE		EO025	0.500		<0.5	ug/L	INAB	
	1,1-dichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	2,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	cis-1,2 Dichloroethene		EO025	0.500		<0.5	ug/L	INAB	
	2-Butanone		EO025	5.0		<5.0	ug/L	INAB	
	Methyl Acrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromochloromethane		EO025	0.500		<0.5	ug/L	INAB	
	Methacrylonitrile		EO025	5.0		<5.0	ug/L	INAB	
	Tetrahydrofuran		EO025	0.500		<0.5	ug/L	INAB	
	Chloroform		EO025	1.000		<1.0	ug/L	INAB	
	1,1,1-trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	1-Chlorobutane		EO025	0.500		<0.5	ug/L	INAB	
	Carbon Tetrachloride		EO025	0.500		<0.5	ug/L	INAB	
	11 Dichloropropene		EO025	0.500		<0.5	ug/L	INAB	
	Benzene		EO025	0.100		<0.1	ug/L	INAB	
	1,2 dichloroethane		EO025	0.1		<0.1	ug/L	INAB	
	Trichloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,2-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	Dibromomethane		EO025	0.500		<0.5	ug/L	INAB	
	Methyl Methacrylate		EO025	0.500		<0.5	ug/L	INAB	
	Bromodichloromethane		EO025	2.000		<2.0	ug/L	INAB	
	13 Dichloropropene.cis		EO025	2.000		<2.0	ug/L	INAB	
	MIBK/4 Methyl 2 Pentanone		EO025	2.000		<2.0	ug/L	INAB	
	Toluene		EO025	0.500		<0.5	ug/L	INAB	
	13 Dichloropropene.trans		EO025	2.000		<2.0	ug/L	INAB	
	Ethyl Methacrylate		EO025	2.000		<2.0	ug/L	INAB	
	112 Trichloroethane		EO025	0.500		<0.5	ug/L	INAB	
	Tetrachloroethene		EO025	0.100		<0.1	ug/L	INAB	
	1,3-dichloropropane		EO025	0.500		<0.5	ug/L	INAB	
	2-Hexanone		EO025	1.000		<1.0	ug/L	INAB	
	Dibromochloromethane		EO025	1.000		<1.0	ug/L	INAB	
	1,2-dibromoethane		EO025	0.500		<0.5	ug/L	INAB	
	Chlorobenzene		EO025	0.500		<0.5	ug/L	INAB	
	1,1,1,2-tetrachloroethane		EO025	2.000		<2.0	ug/L	INAB	

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Contact Name	Marie Mortell	Report Number	60213 - 1
Address	Cork CC(Landfill Bottle Hill) Bottlehill Landfill, Bottlehill,	Sample Number	60213/004
Tel No	022-58102	Date of Receipt	05/09/2012
Fax No		Date Started	05/09/2012
Customer PO	1035938	Received or Collected	Hand
Quotation No	QN001139	Condition on Receipt	Good
Customer Ref	B481/12	Date of Report	17/09/2012
		Sample Type	Ground Waters

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
VOC Full Suite									
	Ethylbenzene		E0025	0.500		22.5	ug/L	INAB	
	Xylene P&M		E0025	0.500		20.7	ug/L	INAB	
	Xylene -o		E0025	0.500		<0.5	ug/L	INAB	
	Styrene		E0025	2.000		2.4	ug/L	INAB	
	Bromoform		E0025	1.000		<1.0	ug/L	INAB	
	Isopropylbenzene		E0025	0.500		0.9	ug/L	INAB	
	Bromobenzene		E0025	0.500		<0.5	ug/L	INAB	
	1,1,2,2-tetrachloroethane		E0025	0.500		<0.5	ug/L	INAB	
	1,2,3-trichloropropane		E0025	2.000		<2.0	ug/L	INAB	
	Trans 1,4 Dichloro 2 Butene, tran		E0025	2.0		<2.0	ug/L	INAB	
	Propylbenzene		E0025	0.500		<0.5	ug/L	INAB	
	2-chlorotoluene		E0025	0.500		<0.5	ug/L	INAB	
	4-chlorotoluene		E0025	0.500		<0.5	ug/L	INAB	
	1,3,5-trimethylbenzene		E0025	0.500		<0.5	ug/L	INAB	
	Tert Butyl Benzene		E0025	0.500		<0.5	ug/L	INAB	
	1,2,4-trimethylbenzene		E0025	0.500		<0.5	ug/L	INAB	
	sec-butylbenzene		E0025	0.500		<0.5	ug/L	INAB	
	1,3-dichlorobenzene		E0025	0.500		<0.5	ug/L	INAB	
	P Isopropyltoluene		E0025	0.500		<0.5	ug/L	INAB	
	1,4-dichlorobenzene		E0025	0.500		<0.5	ug/L	INAB	
	1,2-dichlorobenzene		E0025	0.500		<0.5	ug/L	INAB	
	N Butyl Benzene		E0025	0.500		<0.5	ug/L	INAB	
	Hexachloroethane		E0025	5.000		<5.0	ug/L	INAB	
	1,2-dibromo-3-chloropropane		E0025	2.000		<2.0	ug/L	INAB	
	1,2,4-trichlorobenzene		E0025	0.500		<0.5	ug/L	INAB	
	Naphthalene		E0025	2.0		<2.0	ug/L	INAB	
	1,2,3-trichlorobenzene		E0025	0.500		<0.5	ug/L	INAB	

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