Facility Information Summary	
AER Reporting Year	2012
Licence Register Number	W0129-02
Name of site	Murphy Environmental Hollywood Ltd.
Site Location	Hollywood Great, Nag's Head, Naul, Co. Dublin
NACE Code	3821
Class/Classes of Activity	As W0129-02: Disposal Classes 1, 5, 13; Recovery Classes 3, 4, 13
National Grid Reference (6E, 6 N)	E315723 N258073

A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year **and an overview of compliance with your licence** listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.	The principal activity carried out on site is the deposition of inert waste into enginered landfill cells. Only inert waste is accepted, and is subject to strict Waste Acceptance Procedures as follows: (i) Level 1 Basic Characterisation Testing, (ii) Level 2 "1 in 100" Compliance Testing , and (iii) Level 3 On-Site Verification Testing. Incoming waste tonnages remained low during the reporting year, in line with the depressed construction/demolition sector in Ireland. The facility maintained certification to ISO14001:2004, the International Standard for Environmental Management Systems. No significant infrastructure/development works were undertaken during the reporting year. In relation to environmental monitoring during the reporting year, there were a number of breaches of trigger levels, as detailed in the 'Complaints-Incidents' tab - all were reported as 'minor incidents' to the EPA.

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

L O'Donnell	22/03/2013
Louise O'Donnell, PATEL TONRA LTD. Environmental Consultant (or nominated, suitably qualified and experienced deputy)	Date

AIR-summary template	Lic No:	W0129-02	Year	2012

Answer all questions and complete all tables where relevant

			Additional information
1	Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licenced emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables	No	Ambient dust monitoring was conducted at 4 monitoring locations twice during the reporting year - there were no breaches of the dust depoistion ELV.

Periodic/Non-Continuous Monitoring

2	Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below		SELECT	
3	Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist?	Basic air monitoring checklist AGN2	SELECT	

Table A1: Licensed Mass Emissions/Ambient data-periodic monitoring (non-continuous)

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision therof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments - reason for change in % mass load from previous year if applicable
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		

Note 1: Volumetric flow shall be included as a reportable parameter

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Continuous Monitoring

4	Does your site carry out continuous air emissions monitoring?	No	
	If yes please review your continuous monitoring data and report the required fields below in Table 3 and compare it to its relevant Emission Limit Value (ELV)		
5	Did continuous monitoring equipment experience downtime? If yes please record downtime in table 3 below	SELECT	
6	Do you have a proactive service agreement for each piece of continuous monitoring equipment?	SELECT	
7	Did your site experience any abatement system bypasses? If yes please detail them in table 4 below	SELECT	

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision therof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
	SELECT			SELECT	SELECT					
	SELECT				SELECT					
	SELECT				SELECT					
	SELECT				SELECT					
	SELECT				SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table A3: Abatement system bypass reporting table

Bypass protocol

Date*	Duration** (hours)	Location	Reason for bypass	Impact magnitude	Corrective action

* this should include all dates that an abatement system bypass occurred

** an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link

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Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5

No

Table A4: Solvent Management Plan Summary
Total VOC Emission limit value

Solvent regulations — Please refer to linked solvent regulations to complete table 5 and 6

Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site	Total VOC emissions as %of solvent	Total Emission Limit Value (ELV) in licence or any revision therof	Compliance
					SELECT
					SELECT

Table A5: Solvent Mass Balance summary

	(I) Inputs (kg)	(O) Outputs (kg)						
Solvent	(I) Inputs (kg)	Organic solvent emission in	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g. by-	Solvents destroyed onsite through	Total emission of Solvent to air (kg)
							Total	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: W0129-02 Year 2012

			Additional information
1	Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If **you do not have** licenced emissions you only need to complete table W1 and or W2 for surface water analysis and visual inspections	Yes	There are 7 No. licensed Surface Water Discharge points: SWD-1 to SWD-7. SWD2 to SWD7 were previously surface water discharge points from surface water pumping associated with quarrying operations. The water pumping activities have been suspended; therefore any water/flow now observed at these locations is sourced from surface water run-off from non-landfill areas. The norm is that these locations are dry; however this is verified during each surface water sampling event.
2	Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections	Yes	

Table W1 Surface water monitoring

Location reference	Location relative to site activities	PRTR Parameter	Licenced Parameter	Monitoring date	ELV or trigger level in licence or any revision thereof*	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Comments
SW-1	upstream	SELECT	Ammoniacal Nitrogen	19/06/12 11/10/12 11/12/12	3.11	N/A	0.09	mg/l NH_4-N	yes	
SW-1	upstream	SELECT	Calcium	19/06/12 11/10/12 11/12/12	N/A	N/A	113.40	mg/l	yes	
SW-1	upstream	SELECT	Chemical Oxygen Demand	19/06/12 11/10/12 11/12/12	40	N/A	31.33	mg/l	yes	EPA results (11/10/12) indicated results in excess of SW Regs
SW-1	upstream	SELECT	Chloride	19/06/12 11/10/12 11/12/12	250	N/A	29.53	mg/l	yes	
SW-1	upstream	SELECT	Conductivity	19/06/12 11/10/12 11/12/12	1	N/A	0.59	mS/cm	yes	
SW-1	upstream	SELECT	Dissolved Oxygen	19/06/12 11/10/12 11/12/12	N/A	N/A	5.58	mg/l	yes	
SW-1	upstream	SELECT	Magnesium	19/06/12 11/10/12 11/12/12	N/A	N/A	11.50	mg/l	yes	
SW-1	upstream	SELECT	Manganese	19/06/12 11/10/12 11/12/12	1	N/A	0.66	mg/l	yes	
SW-1	upstream	SELECT	Orthophosphate	19/06/12 11/10/12 11/12/12	N/A	N/A	0.02	mg/l	yes	
SW-1	upstream	SELECT	pH	19/06/12 11/10/12 11/12/12	5.5 – 9.0	N/A	7.70	mg/l	yes	
SW-1	upstream	SELECT	Sodium	19/06/12 11/10/12 11/12/12	N/A	N/A	21.30	pH	yes	
SW-1	upstream	SELECT	Sulphate	19/06/12 11/10/12 11/12/12	200	N/A	89.62	mg/l	yes	
SW-1	upstream	SELECT	Temperature	19/06/12 11/10/12 11/12/12	25	N/A	10.90	mg/l	yes	
SW-1	upstream	SELECT	Total Alkalinity	19/06/12 11/10/12 11/12/12	N/A	N/A	196.00	°C	yes	

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SW-1	upstream	SELECT	Total Suspended Solids	19/06/12 11/10/12 11/12/12	-	N/A	98.67	mg/l	yes	EPA results (11/10/12) indicated results in excess of Salmonid Water Regs - other 2 rounds indicated results <10mg/l
SW-2	downstream	SELECT	Ammoniacal Nitrogen	19/06/12 11/10/12 11/12/12	3.11	N/A	0.07	mg/l NH_4-N	yes	
SW-2	downstream	SELECT	Calcium	19/06/12 11/10/12 11/12/12	N/A	N/A	143.90	mg/l	yes	
SW-2	downstream	SELECT	Chemical Oxygen Demand	19/06/12 11/10/12 11/12/12	40	N/A	21.33	mg/l	yes	
SW-2	downstream	SELECT	Chloride	19/06/12 11/10/12 11/12/12	250	N/A	35.60	mg/l	yes	
SW-2	downstream	SELECT	Conductivity	19/06/12 11/10/12 11/12/12	1	N/A	0.71	mS/cm	yes	
SW-2	downstream	SELECT	Dissolved Oxygen	19/06/12 11/10/12 11/12/12	N/A	N/A	5.60	mg/l	yes	
SW-2	downstream	SELECT	Magnesium	19/06/12 11/10/12 11/12/12	N/A	N/A	13.10	mg/l	yes	
SW-2	downstream	SELECT	Manganese	19/06/12 11/10/12 11/12/12	1	N/A	0.03	mg/l	yes	
SW-2	downstream	SELECT	Orthophosphate	19/06/12 11/10/12 11/12/12	N/A	N/A	0.02	mg/l	yes	
SW-2	downstream	SELECT	pH	19/06/12 11/10/12 11/12/12	5.5 – 9.0	N/A	7.67	mg/l	yes	
SW-2	downstream	SELECT	Sodium	19/06/12 11/10/12 11/12/12	N/A	N/A	17.90	pH	yes	
SW-2	downstream	SELECT	Sulphate	19/06/12 11/10/12 11/12/12	200	N/A	166.73	mg/l	yes	
SW-2	downstream	SELECT	Temperature	19/06/12 11/10/12 11/12/12	25	N/A	11.10	mg/l	yes	
SW-2	downstream	SELECT	Total Alkalinity	19/06/12 11/10/12 11/12/12	N/A	N/A	188.00	°C	yes	
SW-2	downstream	SELECT	Total Suspended Solids	19/06/12 11/10/12 11/12/12	-	N/A	58.00	mg/l	yes	EPA results (11/10/12) indicated results in excess of Salmonid Water Regs - other 2 rounds indicated results <10mg/l
SWD-1	downstream			19/06/12 11/12/12			DRY			
SWD-2	downstream			19/06/12 11/12/12			DRY			
SWD-3	downstream			19/06/12 11/12/12			DRY			

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SWD-4	downstream			19/06/12 11/12/12			DRY			
SWD-5	downstream			19/06/12 11/12/12			DRY			
SWD-6	downstream		Ammoniacal Nitrogen	19/06/12 11/12/12	3.11	N/A	0.03	mg/l NH_4-N	yes	
SWD-6	downstream		Calcium	19/06/12 11/12/12	N/A	N/A	669.90	mg/l	yes	
SWD-6	downstream		Chemical Oxygen Demand	19/06/12 11/12/12	40	N/A	7.00	mg/l	yes	
SWD-6	downstream		Chloride	19/06/12 11/12/12	250	N/A	21.50	mg/l	yes	
SWD-6	downstream		Conductivity	19/06/12 11/12/12	1	N/A	1.24	mS/cm	yes	Results exceeded SW Regs
SWD-6	downstream		Dissolved Oxygen	19/06/12 11/12/12	N/A	N/A	4.45	mg/l	yes	
SWD-6	downstream		Magnesium	19/06/12 11/12/12	N/A	N/A	23.80	mg/l	yes	
SWD-6	downstream		Manganese	19/06/12 11/12/12	1	N/A	1.01	mg/l	yes	
SWD-6	downstream		Odour	19/06/12 11/12/12	-	N/A	None	-	yes	
SWD-6	downstream		Orthophosphate	19/06/12 11/12/12	N/A	N/A	0.03	mg/l	yes	
SWD-6	downstream		pH	19/06/12 11/12/12	5.5 – 9.0	N/A	6.75	pH	yes	
SWD-6	downstream		Sodium	19/06/12 11/12/12	N/A	N/A	16.70	mg/l	yes	
SWD-6	downstream		Sulphate	19/06/12 11/12/12	200	N/A	489.74	mg/l	yes	Results exceeded SW Regs
SWD-6	downstream		Suspended Solids	19/06/12 11/12/12	N/A	35	10.00	mg/l	yes	
SWD-6	downstream		Temperature	19/06/12 11/12/12	25	N/A	11.40	°C	yes	
SWD-6	downstream		Total Alkalinity	19/06/12 11/12/12	N/A	N/A	164.00	mg/l	yes	
SWD-6	downstream		Visual	19/06/12 11/12/12	-	N/A	Clear	-	yes	
SWD-7	downstream			19/06/12 11/12/12			DRY			
	SELECT	SELECT	SELECT			SELECT		SELECT	SELECT	

*trigger values may be agreed by the Agency outside of licence conditions

Table W2 Visual inspections-Please only enter details where contamination was observed.

Location Reference	Date of inspection	Description of contamination	Source of contamination	Corrective action	Comments
		NO COMTAMINATION	SELECT		
			SELECT		

Licensed Emissions to water and /or wastewater(sewer)-periodic monitoring (non-continuous)

3	Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below			No	Additional information
4	Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	External /Internal Lab Quality checklist	Assessment of results checklist	Yes	

Table W3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: W0129-02 Year 2012

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision theref[Note 2]	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
	SELECT	SELECT	SELECT		SELECT		SELECT		SELECT	SELECT	SELECT	SELECT			

Note 1: Volumetric flow shall be included as a reportable parameter

Note 2: Where Emission Limit Values (ELV) do not apply to your licence please compare results against EQS for Surface water or relevant receptor quality standards

Continuous monitoring

			Additional Information
5	Does your site carry out continuous emissions to water/sewer monitoring?	No	

If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)

6	Did continuous monitoring equipment experience downtime? **If yes please record downtime in table W4 below**	SELECT	
7	Do you have a proactive service contract for each piece of continuous monitoring equipment on site?	SELECT	
8	Did abatement system bypass occur during the reporting year? **If yes please complete table W5 below**	SELECT	

Table W4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter/ Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment downtime (hours)	Number of ELV exceedences in reporting year	Comments
	SELECT	SELECT		SELECT	SELECT	SELECT					
	SELECT	SELECT		SELECT	SELECT	SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table W5: Abatement system bypass reporting table

Date	Duration (hours)	Location	Resultant emissions	Reason for bypass	Corrective action*	Was a report submitted to the EPA?	When was this report submitted?
						SELECT	

*Measures taken or proposed to reduce or limit bypass frequency

Bund/Pipeline testing template	Lic No:	W0129-02	Year	2012	

Bund testing

dropdown menu click to see options

Additional information

	Are you required by your licence to undertake integrity testing on bunds and containment structures ? if yes please fill out table B1 below listing all **new bunds and containment structures** on site, **in addition to all bunds which failed** the integrity test-**all bunding structures which failed including mobile bunds must be listed in the table below**		Bund testing is stipulated in W0129-02; however fuel is no longer stored in the diesel tanks in the bunded area on site (the plant items which required diesel are no longer on site). Bund testing has, therefore, not been required (diesel tanks are empty). The only diesel currently stored on site is in the self-contained mobile fuel bowser which is stored in the garage building.
1		Yes	
2	Please provide integrity testing frequency period	SELECT	
3	Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)	SELECT	
4	How many bunds are on site?		
5	How many of these bunds have been tested witin the required test schedule?		
6	How many mobile bunds are on site?		
7	Are the mobile bunds included in the bund test schedule?	SELECT	
8	How many of these mobile bunds have been tested witin the required test schedule?		
9	How many sumps on site are included in the integrity test schedule?		
10	How many of these sumps are integrity tested within the test schedule?		
	Please list any sump integrity failures in table B1		
11	Do all sumps and chambers have high level liquid alarms?	SELECT	
12	If yes to Q11 are these failsafe systems included in a maintenance and testing programme?		

Table B1: Summary details of bund /containment structure integrity test

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
	SELECT					SELECT			SELECT	SELECT		SELECT		
	SELECT					SELECT			SELECT	SELECT		SELECT		

* Capacity required should comply with 25% or 110% containment rule as detailed in your licence

			Commentary
	Has integrity testing been carried out in accordance with licence requirements and are all structures tested in		
14	line with BS8007/EPA Guidance?	bunding and storage guidelines	SELECT
15	Are channels/transfer systems to remote containment systems tested?		SELECT
16	Are channels/transfer systems compliant in both integrity and available volume?		SELECT

Pipeline/underground structure testing

	Are you required by your licence to undertake integrity testing on underground structures e.g. pipelines or sumps etc ? if yes please fill out table 2 below listing all		
1	underground structures and pipelines on site **which failed the integrity test**	SELECT	
2	Please provide integrity testing frequency period	SELECT	

Table B2: Summary details of pipeline/underground structures integrity test

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type of secondary containment	Type integrity testing	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT				SELECT

Please use commentary for additional details not answered by tables/ questions above

Groundwater/Soil monitoring template	Lic No:	W0129-02	Year	2012

			Comments
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	yes	
2	Are you required to carry out soil monitoring as part of your licence requirements?	no	
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no	
4	Is there contaminated land and /or groundwater on site? If yes please answer q's 5-12	no	
5	Is the contamination related to operations at the facility (either current and/or historic)	N/A	
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	N/A	
7	Please specify the proposed time frame for the remediation strategy		
8	Is there a licence condition to carry out/update ELRA for the site?	N/A	
9	Has any type of risk assesment been carried out for the site?		
10	Has a Conceptual Site Model been developed for the site?	N/A	
11	Have potential receptors been identified on and off site?		
12	Is there evidence that contamination is migrating offsite?	N/A	

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	% change in average concentration previous year +/-	Upward trend in pollutant concentration over last 5 years of monitoring data
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.13	0.10	mg/l NH4-N	N/A	DWS	43%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Arsenic	Lab analysis	Quarterly	0.0166	0.01	mg/l	N/A	DWS	43%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Barium	Lab analysis	Quarterly	0.014	0.01	mg/l	N/A	DWS	-51%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Calcium	Lab analysis	Quarterly	87.5	80.70	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Chloride	Lab analysis	Quarterly	21	20.40	mg/l	75	DWS	-2%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Colour	Field analysis	Quarterly	Clear	Clear	N/A	N/A	DWS	0%	No

Groundwater/Soil monitoring template				Lic No:	W0129-02			Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Conductivity	Field analysis	Quarterly	0.56	0.545	mS/cm	1	DWS	-14%	No
23/03/2012	BH-5	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Dissolved Oxygen	Field analysis	Quarterly	2.81	1.79	mg/l	N/A	DWS	-13%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Level, Water	Field analysis	Quarterly	103.52	102.92	mOD	N/A	DWS	1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Manganese	Lab analysis	Quarterly	0.28	0.26	mg/l	N/A	DWS	43%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Odour	Field analysis	Quarterly	None	None	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	pH	Field analysis	Quarterly	7.1	7.025	pH	6<pH<9	DWS	-1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Phenols, Total	Lab analysis	Quarterly	0.1	0.1	mg/l	0.1	DWS	17%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Potassium	Lab analysis	Quarterly	1.3	1.18	mg/l	N/A	DWS	-19%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Sodium	Lab analysis	Quarterly	37.5	22.13	mg/l	80	DWS	-90%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Sulphate	Lab analysis	Quarterly	77.28	69.11	mg/l	150	DWS	-1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Temperature	Field analysis	Quarterly	15.2	12.23	oC	N/A	DWS	23%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Total Organic Carbon	Lab analysis	Quarterly	8	5.5	mg/l	50	DWS	21%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-5	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.2	0.2	mg/l	N/A	DWS	0%	No
23/03/2012	BH-5	Boron	Lab analysis	Annually	0.017	0.017	mg/l	N/A	DWS	-218%	No
23/03/2012	BH-5	Cadmium	Lab analysis	Annually	0.002	0.00125	mg/l	0.004	DWS	60%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012	BH-5	Chromium, Total	Lab analysis	Annually	0.0015	0.0015	mg/l	N/A	DWS	0%	No
23/03/2012	BH-5	Coliforms, Faecal	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	-300%	No
23/03/2012	BH-5	Coliforms, Total	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	-300%	No
23/03/2012	BH-5	Copper	Lab analysis	Annually	0.007	0.007	mg/l	0.5	DWS	0%	No
23/03/2012	BH-5	Fluoride	Lab analysis	Annually	0.3	0.3	mg/l	N/A	DWS	0%	No
23/03/2012	BH-5	Lead	Lab analysis	Annually	0.05	0.026	mg/l	N/A	DWS	81%	No
23/03/2012	BH-5	List I and II Substances	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-5	Magnesium	Lab analysis	Annually	8.1	7.5	mg/l	N/A	DWS	13%	No
23/03/2012	BH-5	Mercury	Lab analysis	Annually	0.001	0.0008	mg/l	N/A	DWS	-33%	No
23/03/2012	BH-5	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	-100%	No
23/03/2012	BH-5	PAHs (Total 17)	Lab analysis	Annually	0.0001	0.0001	mg/l	N/A	DWS	0%	No
23/03/2012	BH-5	Phosphorus, Total	Lab analysis	Annually	0.013	0.013	mg/l	N/A	DWS	-4708%	No
23/03/2012	BH-5	Total Solids	Lab analysis	Annually	346	346	mg/l	N/A	DWS	0%	No
23/03/2012	BH-5	Zinc	Lab analysis	Annually	0.257	0.234	mg/l	N/A	DWS	86%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.3	0.29	mg/l NH4-N	N/A	DWS	-12%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Arsenic	Lab analysis	Quarterly	0.0041	0.002	mg/l	N/A	DWS	-3%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Barium	Lab analysis	Quarterly	0.068	0.049	mg/l	N/A	DWS	-103%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Calcium	Lab analysis	Quarterly	106	81.42	mg/l	N/A	DWS	-12%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Chloride	Lab analysis	Quarterly	20.6	19.9	mg/l	75	DWS	-6%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Colour	Field analysis	Quarterly	Clear	Clear	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Conductivity	Field analysis	Quarterly	0.7	0.659	mS/cm	1	DWS	5%	No
23/03/2012	BH-6	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Dissolved Oxygen	Field analysis	Quarterly	2.12	1.25	mg/l	N/A	DWS	13%	No

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23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Iron	Lab analysis	Quarterly	1.56	0.35	mg/l	N/A	DWS	94%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Level, Water	Field analysis	Quarterly	117.31	117.31	mOD	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Manganese	Lab analysis	Quarterly	0.242	0.182	mg/l	N/A	DWS	-3%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Odour	Field analysis	Quarterly	None	None	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	pH	Field analysis	Quarterly	7.2	7.12	pH	6<pH<9	DWS	-2%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Phenols, Total	Lab analysis	Quarterly	0.1	0.1	mg/l	0.1	DWS	-10%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Potassium	Lab analysis	Quarterly	6.36	5.99	mg/l	N/A	DWS	6%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Sodium	Lab analysis	Quarterly	675	150.04	mg/l	80	DWS	87%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Sulphate	Lab analysis	Quarterly	64.65	40.76	mg/l	150	DWS	26%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Temperature	Field analysis	Quarterly	18.3	12.45	oC	N/A	DWS	29%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Total Organic Carbon	Lab analysis	Quarterly	7	5	mg/l	50	DWS	4%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-6	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.2	0.18	mg/l	N/A	DWS	-30%	No
23/03/2012	BH-6	Boron	Lab analysis	Annually	0.082	0.0735	mg/l	N/A	DWS	-43%	No
23/03/2012	BH-6	Cadmium	Lab analysis	Annually	0.0005	0.0002	mg/l	0.004	DWS	-134%	No
23/03/2012	BH-6	Chromium, Total	Lab analysis	Annually	0.0024	0.002	mg/l	N/A	DWS	17%	No
23/03/2012	BH-6	Coliforms, Faecal	Lab analysis	Annually	5	5	cfus/100ml	N/A	DWS	100%	No
23/03/2012	BH-6	Coliforms, Total	Lab analysis	Annually	5	5	cfus/100ml	N/A	DWS	100%	No
23/03/2012	BH-6	Copper	Lab analysis	Annually	0.007	0.005	mg/l	0.5	DWS	-45%	No
23/03/2012	BH-6	Fluoride	Lab analysis	Annually	0.3	0.3	mg/l	N/A	DWS	-12%	No
23/03/2012	BH-6	Lead	Lab analysis	Annually	0.005	0.002	mg/l	N/A	DWS	-121%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012	BH-6	List I and II Substances	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-6	Magnesium	Lab analysis	Annually	19.6	12.767	mg/l	N/A	DWS	-41%	No
23/03/2012	BH-6	Mercury	Lab analysis	Annually	0.001	0.001	mg/l	N/A	DWS	-94%	No
23/03/2012	BH-6	Orthophosphates	Lab analysis	Annually	0.03	0.0175	mg/l	N/A	DWS	-214%	No
23/03/2012	BH-6	PAHs (Total 17)	Lab analysis	Annually	0.0001	0.0001	mg/l	N/A	DWS	-200%	No
23/03/2012	BH-6	Phosphorus, Total	Lab analysis	Annually	0.005	0.005	mg/l	N/A	DWS	-300%	No
23/03/2012	BH-6	Total Solids	Lab analysis	Annually	406	406	mg/l	N/A	DWS	12%	No
23/03/2012	BH-6	Zinc	Lab analysis	Annually	0.246	0.161	mg/l	N/A	DWS	91%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Ammoniacal Nitrogen	Lab analysis	Quarterly	6.31	2.79	mg/l NH4-N	N/A	DWS	73%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Arsenic	Lab analysis	Quarterly	0.0032	0.003	mg/l	N/A	DWS	7%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Barium	Lab analysis	Quarterly	0.064	0.058	mg/l	N/A	DWS	-10%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Calcium	Lab analysis	Quarterly	88.8	82.45	mg/l	N/A	DWS	-20%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Chloride	Lab analysis	Quarterly	147.4	83.375	mg/l	75	DWS	33%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Colour	Field analysis	Quarterly	Brown - high sediment	Orange-brown; sediment	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Conductivity	Field analysis	Quarterly	0.84	0.7475	mS/cm	1	DWS	5%	No
40991	BH-8	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Dissolved Oxygen	Field analysis	Quarterly	2.58	1.53	mg/l	N/A	DWS	-24%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Iron	Lab analysis	Quarterly	6.38	3.633	mg/l	N/A	DWS	97%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Level, Water	Field analysis	Quarterly	133.75	133.65	mOD	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Manganese	Lab analysis	Quarterly	3.845	2.328	mg/l	N/A	DWS	47%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Odour	Field analysis	Quarterly	None	None	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	pH	Field analysis	Quarterly	6.9	6.725	pH	6<pH<9	DWS	-3%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Phenols, Total	Lab analysis	Quarterly	0.1	0.1	mg/l	0.1	DWS	-1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Potassium	Lab analysis	Quarterly	7.8	5.25	mg/l	N/A	DWS	27%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Sodium	Lab analysis	Quarterly	62.3	37.73	mg/l	80	DWS	17%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Sulphate	Lab analysis	Quarterly	107.6	95.90	mg/l	150	DWS	-48%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Temperature	Field analysis	Quarterly	14.8	12.33	oC	N/A	DWS	9%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Total Organic Carbon	Lab analysis	Quarterly	70	33	mg/l	50	DWS	42%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-8	Total Oxidized Nitrogen	Lab analysis	Quarterly	1.1	0.525	mg/l	N/A	DWS	-19%	No
23/03/2012	BH-8	Boron	Lab analysis	Annually	0.013	0.013	mg/l	N/A	DWS	-262%	No
23/03/2012	BH-8	Cadmium	Lab analysis	Annually	0.0014	0.001	mg/l	0.004	DWS	37%	No
23/03/2012	BH-8	Chromium, Total	Lab analysis	Annually	0.011	0.006	mg/l	N/A	DWS	76%	No
23/03/2012	BH-8	Coliforms, Faecal	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-8	Coliforms, Total	Lab analysis	Annually	2	2	cfus/100ml	N/A	DWS	100%	No
23/03/2012	BH-8	Copper	Lab analysis	Annually	0.007	0.007	mg/l	0.5	DWS	-14%	No
23/03/2012	BH-8	Fluoride	Lab analysis	Annually	0.3	0.3	mg/l	N/A	DWS	0%	No
23/03/2012	BH-8	Lead	Lab analysis	Annually	0.005	0.003	mg/l	N/A	DWS	-59%	No
23/03/2012	BH-8	List I and II Substances	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-8	Magnesium	Lab analysis	Annually	12.1	10.9	mg/l	N/A	DWS	-5%	No
23/03/2012	BH-8	Mercury	Lab analysis	Annually	0.001	0.001	mg/l	N/A	DWS	-33%	No
23/03/2012	BH-8	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	-100%	No
23/03/2012	BH-8	PAHs (Total 17)	Lab analysis	Annually	0.0001	0.0001	mg/l	N/A	DWS	-200%	No
23/03/2012	BH-8	Phosphorus, Total	Lab analysis	Annually	0.005	0.005	mg/l	N/A	DWS	-39000%	No
23/03/2012	BH-8	Total Solids	Lab analysis	Annually	653	653	mg/l	N/A	DWS	-32%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012	BH-8	Zinc	Lab analysis	Annually	0.007	0.005	mg/l	N/A	DWS	-90%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.12	0.085	mg/l NH4-N	N/A	DWS	-6%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Arsenic	Lab analysis	Quarterly	0.0057	0.004	mg/l	N/A	DWS	17%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Barium	Lab analysis	Quarterly	0.005	0.004	mg/l	N/A	DWS	-93%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Calcium	Lab analysis	Quarterly	91.5	89.675	mg/l	N/A	DWS	1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Chloride	Lab analysis	Quarterly	26.4	25.6	mg/l	75	DWS	6%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Colour	Field analysis	Quarterly	Brown (sediment)	Clear	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Conductivity	Field analysis	Quarterly	0.56	0.523	mS/cm	1	DWS	2%	No
23/03/2012	BH-9	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Dissolved Oxygen	Field analysis	Quarterly	2.45	1.348	mg/l	N/A	DWS	-78%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Iron	Lab analysis	Quarterly	0.038	0.025	mg/l	N/A	DWS	7%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Level, Water	Field analysis	Quarterly	108.09	106.825	mOD	N/A	DWS	1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Manganese	Lab analysis	Quarterly	0.074	0.054	mg/l	N/A	DWS	-19%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Odour	Field analysis	Quarterly	None	None	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	pH	Field analysis	Quarterly	7	6.825	pH	6<pH<9	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Phenols, Total	Lab analysis	Quarterly	0.1	0.1	mg/l	0.1	DWS	-1%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Potassium	Lab analysis	Quarterly	0.6	0.575	mg/l	N/A	DWS	-9%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Sodium	Lab analysis	Quarterly	15.5	14.65	mg/l	80	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Sulphate	Lab analysis	Quarterly	41.22	38.40	mg/l	150	DWS	4%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Temperature	Field analysis	Quarterly	15.4	12.85	oC	N/A	DWS	15%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Total Organic Carbon	Lab analysis	Quarterly	9	8	mg/l	50	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-9	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.2	0.2	mg/l	N/A	DWS	0%	No
23/03/2012	BH-9	Boron	Lab analysis	Annually	0.012	0.012	mg/l	N/A	DWS	-217%	No
23/03/2012	BH-9	Cadmium	Lab analysis	Annually	0.0005	0.0003	mg/l	0.004	DWS	-82%	No
23/03/2012	BH-9	Chromium, Total	Lab analysis	Annually	0.0015	0.0015	mg/l	N/A	DWS	0%	No
23/03/2012	BH-9	Coliforms, Faecal	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-9	Coliforms, Total	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-9	Copper	Lab analysis	Annually	0.007	0.007	mg/l	0.5	DWS	0%	No
23/03/2012	BH-9	Fluoride	Lab analysis	Annually	0.3	0.3	mg/l	N/A	DWS	0%	No
23/03/2012	BH-9	Lead	Lab analysis	Annually	0.005	0.003	mg/l	N/A	DWS	-75%	No
23/03/2012	BH-9	List I and II Substances	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-9	Magnesium	Lab analysis	Annually	4.8	4.65	mg/l	N/A	DWS	8%	No
23/03/2012	BH-9	Mercury	Lab analysis	Annually	0.001	0.0008	mg/l	N/A	DWS	-33%	No
23/03/2012	BH-9	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	-100%	No
23/03/2012	BH-9	PAHs (Total 17)	Lab analysis	Annually	0.0001	0.0001	mg/l	N/A	DWS	-200%	No
23/03/2012	BH-9	Phosphorus, Total	Lab analysis	Annually	0.005	0.005	mg/l	N/A	DWS	-7640%	No
23/03/2012	BH-9	Total Solids	Lab analysis	Annually	309	309	mg/l	N/A	DWS	-13%	No
23/03/2012	BH-9	Zinc	Lab analysis	Annually	0.0058	0.005	mg/l	N/A	DWS	-104%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.24	0.218	mg/l NH4-N	N/A	DWS	-6%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Arsenic	Lab analysis	Quarterly	0.068	0.027	mg/l	N/A	DWS	31%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Barium	Lab analysis	Quarterly	0.0287	0.021	mg/l	N/A	DWS	-17%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Calcium	Lab analysis	Quarterly	106	96.64	mg/l	N/A	DWS	7%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Chloride	Lab analysis	Quarterly	23	22.5	mg/l	75	DWS	-4%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Colour	Field analysis	Quarterly	Cloudy	Clear	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Conductivity	Field analysis	Quarterly	0.64	0.585	mS/cm	1	DWS	17%	No
23/03/2012	BH-11A	Dissolved Oxygen	Field analysis	Quarterly	3.86	2.185	mg/l	N/A	DWS	13%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Iron	Lab analysis	Quarterly	2.09	0.450	mg/l	N/A	DWS	96%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Level, Water	Field analysis	Quarterly	98.44	98.425	mOD	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Manganese	Lab analysis	Quarterly	0.387	0.370	mg/l	N/A	DWS	4%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Odour	Field analysis	Quarterly	None	None	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	pH	Field analysis	Quarterly	7	6.96	pH	6<pH<9	DWS	-5%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Phenols, Total	Lab analysis	Quarterly	0.1	0.1	mg/l	0.1	DWS	-10%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Potassium	Lab analysis	Quarterly	2.2	1.998	mg/l	N/A	DWS	-2%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Sodium	Lab analysis	Quarterly	17.8	16.6	mg/l	80	DWS	2%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Sulphate	Lab analysis	Quarterly	31.3	15.924	mg/l	150	DWS	40%	No

Groundwater/Soil monitoring template				Lic No:	W0129-02			Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Temperature	Field analysis	Quarterly	15.2	12.35	oC	N/A	DWS	10%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Total Organic Carbon	Lab analysis	Quarterly	8	6	mg/l	50	DWS	27%	Yes
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.2	0.18	mg/l	N/A	DWS	-2%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-11A	Boron	Lab analysis	Annually	0.022	0.0205	mg/l	N/A	DWS	-159%	No
23/03/2012	BH-11A	Cadmium	Lab analysis	Annually	0.0005	0.00024	mg/l	0.004	DWS	-108%	No
23/03/2012	BH-11A	Chromium, Total	Lab analysis	Annually	0.0025	0.00187	mg/l	N/A	DWS	20%	No
23/03/2012	BH-11A	Coliforms, Faecal	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-11A	Coliforms, Total	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-11A	Copper	Lab analysis	Annually	0.007	0.0048	mg/l	0.5	DWS	-45%	No
23/03/2012	BH-11A	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-11A	Fluoride	Lab analysis	Annually	0.5	0.5	mg/l	N/A	DWS	4%	No
23/03/2012	BH-11A	Lead	Lab analysis	Annually	0.005	0.0020	mg/l	N/A	DWS	-154%	No
23/03/2012	BH-11A	List I and II Substances	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-11A	Magnesium	Lab analysis	Annually	12.6	12.1	mg/l	N/A	DWS	0%	No
23/03/2012	BH-11A	Mercury	Lab analysis	Annually	0.001	0.0005	mg/l	N/A	DWS	-94%	No
23/03/2012	BH-11A	Orthophosphates	Lab analysis	Annually	0.03	0.0175	mg/l	N/A	DWS	-214%	No
23/03/2012	BH-11A	PAHs (Total 17)	Lab analysis	Annually	0.0001	0.0001	mg/l	N/A	DWS	-200%	No
23/03/2012	BH-11A	Phosphorus, Total	Lab analysis	Annually	0.005	0.005	mg/l	N/A	DWS	-300%	No
23/03/2012	BH-11A	Total Solids	Lab analysis	Annually	233	233	mg/l	N/A	DWS	-49%	No
23/03/2012	BH-11A	Zinc	Lab analysis	Annually	0.019	0.0176	mg/l	N/A	DWS	-2%	No
							SELECT				SELECT
							SELECT				SELECT

.+ where average indicates arithmetic mean

.++ maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

Table 2: Downgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTV's*	SELECT**	% change in average concentration previous year +/-	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.05	0.035	mg/l NH4-N	N/A	DWS	14%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Arsenic	Lab analysis	Quarterly	0.0025	0.0025	mg/l	N/A	DWS	-40%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Barium	Lab analysis	Quarterly	0.021	0.017	mg/l	N/A	DWS	-59%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Calcium	Lab analysis	Quarterly	105.9	87.9	mg/l	N/A	DWS	-1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Chloride	Lab analysis	Quarterly	23.8	21.1	mg/l	75	DWS	18%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Colour	Field analysis	Quarterly	Clear	Clear	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Conductivity	Field analysis	Quarterly	0.64	0.59	mS/cm	1	DWS	4%	No
23/03/2012	BH-4A	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Dissolved Oxygen	Field analysis	Quarterly	2.75	1.95	mg/l	N/A	DWS	20%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Level, Water	Field analysis	Quarterly	91.96	91.96	mOD	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Manganese	Lab analysis	Quarterly	0.19	0.17375	mg/l	N/A	DWS	-50%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Odour	Field analysis	Quarterly	None	None	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	pH	Field analysis	Quarterly	7.4	7.25	pH	6<pH<9	DWS	-2%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Phenols, Total	Lab analysis	Quarterly	0.1	0.1	mg/l	0.1	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Potassium	Lab analysis	Quarterly	1.6	1.375	mg/l	N/A	DWS	4%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Sodium	Lab analysis	Quarterly	657.3	173.8	mg/l	80	DWS	93%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Sulphate	Lab analysis	Quarterly	48.73	32.39	mg/l	150	DWS	25%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Temperature	Field analysis	Quarterly	13.7	12.15	oC	N/A	DWS	1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Total Organic Carbon	Lab analysis	Quarterly	10	7	mg/l	50	DWS	25%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-4A	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.2	0.2	mg/l	N/A	DWS	0%	No
23/03/2012	BH-4A	Boron	Lab analysis	Annually	0.016	0.016	mg/l	N/A	DWS	-206%	No
23/03/2012	BH-4A	Cadmium	Lab analysis	Annually	0.0005	0.000265	mg/l	0.004	DWS	-89%	No
23/03/2012	BH-4A	Chromium, Total	Lab analysis	Annually	0.0015	0.0015	mg/l	N/A	DWS	0%	No
23/03/2012	BH-4A	Coliforms, Faecal	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-4A	Coliforms, Total	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-4A	Copper	Lab analysis	Annually	0.007	0.007	mg/l	0.5	DWS	0%	No
23/03/2012	BH-4A	Fluoride	Lab analysis	Annually	0.3	0.3	mg/l	N/A	DWS	0%	No
23/03/2012	BH-4A	Lead	Lab analysis	Annually	0.005	0.00325	mg/l	N/A	DWS	-54%	No
23/03/2012	BH-4A	List I and II Substances	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-4A	Magnesium	Lab analysis	Annually	8.9	8.9	mg/l	N/A	DWS	-3%	No
23/03/2012	BH-4A	Mercury	Lab analysis	Annually	0.001	0.00075	mg/l	N/A	DWS	-33%	No
23/03/2012	BH-4A	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	-3000%	No
23/03/2012	BH-4A	PAHs (Total 17)	Lab analysis	Annually	0.0001	0.0001	mg/l	N/A	DWS	-200%	No
23/03/2012	BH-4A	Phosphorus, Total	Lab analysis	Annually	0.005	0.005	mg/l	N/A	DWS	-1280%	No
23/03/2012	BH-4A	Total Solids	Lab analysis	Annually	233	233	mg/l	N/A	DWS	-49%	No
23/03/2012	BH-4A	Zinc	Lab analysis	Annually	0.049	0.02525	mg/l	N/A	DWS	84%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.03	0.03	mg/l NH4-N	N/A	DWS	13%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Arsenic	Lab analysis	Quarterly	0.004	0.003	mg/l	N/A	DWS	13%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Barium	Lab analysis	Quarterly	0.020	0.014	mg/l	N/A	DWS	-1%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Calcium	Lab analysis	Quarterly	225	163.7	mg/l	N/A	DWS	-9%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Chloride	Lab analysis	Quarterly	41.2	39.06	mg/l	75	DWS	10%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Colour	Field analysis	Quarterly	Cloudy	Clear	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Conductivity	Field analysis	Quarterly	0.99	0.85	mS/cm	1	DWS	-10%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Dissolved Oxygen	Field analysis	Quarterly	6.19	3.45	mg/l	N/A	DWS	-129%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Iron	Lab analysis	Quarterly	0.035	0.023	mg/l	N/A	DWS	13%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Level, Water	Field analysis	Quarterly	101.2	100.8	mOD	N/A	DWS	1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Manganese	Lab analysis	Quarterly	0.26	0.05	mg/l	N/A	DWS	96%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Odour	Field analysis	Quarterly	None	None	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	pH	Field analysis	Quarterly	7.6	7.42	pH	6<pH<9	DWS	-2%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Phenols, Total	Lab analysis	Quarterly	0.1	0.1	mg/l	0.1	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Potassium	Lab analysis	Quarterly	3.1	2.7	mg/l	N/A	DWS	-4%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Sodium	Lab analysis	Quarterly	22.2	19.4	mg/l	80	DWS	-5%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Sulphate	Lab analysis	Quarterly	400.8	279.4	mg/l	150	DWS	-15%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Temperature	Field analysis	Quarterly	15.8	12.0	oC	N/A	DWS	4%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Total Organic Carbon	Lab analysis	Quarterly	27	12.3	mg/l	50	DWS	37%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-10A	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.6	0.3	mg/l	N/A	DWS	-120%	No
23/03/2012	BH-10A	Boron	Lab analysis	Annually	0.027	0.0195	mg/l	N/A	DWS	-177%	No
23/03/2012	BH-10A	Cadmium	Lab analysis	Annually	0.0005	0.0004	mg/l	0.004	DWS	-32%	No
23/03/2012	BH-10A	Chromium, Total	Lab analysis	Annually	0.0015	0.0015	mg/l	N/A	DWS	0%	No
23/03/2012	BH-10A	Coliforms, Faecal	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-10A	Coliforms, Total	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-10A	Copper	Lab analysis	Annually	0.007	0.005	mg/l	0.5	DWS	-45%	No
23/03/2012	BH-10A	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-10A	Fluoride	Lab analysis	Annually	0.3	0.3	mg/l	N/A	DWS	37%	No
23/03/2012	BH-10A	Lead	Lab analysis	Annually	0.005	0.002	mg/l	N/A	DWS	-150%	No
23/03/2012	BH-10A	List I and II Substances	Lab analysis	Annually	0	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-10A	Magnesium	Lab analysis	Annually	18.1	12.7	mg/l	N/A	DWS	-15%	No
23/03/2012	BH-10A	Mercury	Lab analysis	Annually	0.001	0.001	mg/l	N/A	DWS	-94%	No
23/03/2012	BH-10A	Orthophosphates	Lab analysis	Annually	0.03	0.02	mg/l	N/A	DWS	-67%	No
23/03/2012	BH-10A	PAHs (Total 17)	Lab analysis	Annually	0.0001	0.0001	mg/l	N/A	DWS	-200%	No
23/03/2012	BH-10A	Phosphorus, Total	Lab analysis	Annually	0.005	0.005	mg/l	N/A	DWS	-2620%	No
23/03/2012	BH-10A	Total Solids	Lab analysis	Annually	642	642	mg/l	N/A	DWS	-60%	No
23/03/2012	BH-10A	Zinc	Lab analysis	Annually	0.0133	0.006	mg/l	N/A	DWS	-44%	No
										0%	
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.05	0.035	mg/l NH4-N	N/A	DWS	-700%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Arsenic	Lab analysis	Quarterly	0.0025	0.0025	mg/l	N/A	DWS	-30%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Barium	Lab analysis	Quarterly	0.015	0.012	mg/l	N/A	DWS	-113%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Calcium	Lab analysis	Quarterly	29.9	20.5	mg/l	N/A	DWS	-12%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Chloride	Lab analysis	Quarterly	3	2.0	mg/l	75	DWS	-218%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Colour	Field analysis	Quarterly	Light brown	Brown sediment	N/A	N/A	DWS	0%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Conductivity	Field analysis	Quarterly	0.15	0.12	mS/cm	1	DWS	-22%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Dissolved Oxygen	Field analysis	Quarterly	5.78	3.38	mg/l	N/A	DWS	-5%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Level, Water	Field analysis	Quarterly	102.13	101.163	mOD	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Manganese	Lab analysis	Quarterly	0.002	0.002	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Odour	Field analysis	Quarterly	None	None	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	pH	Field analysis	Quarterly	7.9	7.5	pH	6<pH<9	DWS	-3%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Phenols, Total	Lab analysis	Quarterly	0.1	0.1	mg/l	0.1	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Potassium	Lab analysis	Quarterly	3.6	2.7	mg/l	N/A	DWS	-10%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Sodium	Lab analysis	Quarterly	4	3.1	mg/l	80	DWS	-127%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Sulphate	Lab analysis	Quarterly	7.28	4.56	mg/l	150	DWS	8%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Temperature	Field analysis	Quarterly	14.1	11.28	oC	N/A	DWS	6%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Total Organic Carbon	Lab analysis	Quarterly	6	5.3	mg/l	50	DWS	-62%	Yes
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-12	Total Oxidized Nitrogen	Lab analysis	Quarterly	0.5	0.3	mg/l	N/A	DWS	-50%	No
23/03/2012	BH-12	Boron	Lab analysis	Annually	0.012	0.012	mg/l	N/A	DWS	-367%	No
23/03/2012	BH-12	Cadmium	Lab analysis	Annually	0.0005	0.0003	mg/l	0.004	DWS	-89%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012	BH-12	Chromium, Total	Lab analysis	Annually	0.0015	0.0015	mg/l	N/A	DWS	0%	No
23/03/2012	BH-12	Coliforms, Faecal	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-12	Coliforms, Total	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-12	Copper	Lab analysis	Annually	0.007	0.007	mg/l	0.5	DWS	0%	No
23/03/2012	BH-12	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-12	Fluoride	Lab analysis	Annually	0.3	0.3	mg/l	N/A	DWS	0%	No
23/03/2012	BH-12	Lead	Lab analysis	Annually	0.005	0.003	mg/l	N/A	DWS	-75%	No
23/03/2012	BH-12	List I and II Substances	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-12	Magnesium	Lab analysis	Annually	5.5	3.1	mg/l	N/A	DWS	77%	No
23/03/2012	BH-12	Mercury	Lab analysis	Annually	0.001	0.0008	mg/l	N/A	DWS	-33%	No
23/03/2012	BH-12	Orthophosphates	Lab analysis	Annually	0.03	0.03	mg/l	N/A	DWS	-100%	No
23/03/2012	BH-12	PAHs (Total 17)	Lab analysis	Annually	0.0001	0.0001	mg/l	N/A	DWS	-200%	No
23/03/2012	BH-12	Phosphorus, Total	Lab analysis	Annually	0.005	0.005	mg/l	N/A	DWS	-10120%	No
23/03/2012	BH-12	Total Solids	Lab analysis	Annually	64	64	mg/l	N/A	DWS	-459%	No
23/03/2012	BH-12	Zinc	Lab analysis	Annually	0.005	0.00325	mg/l	N/A	DWS	-85%	No
										0%	
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.05	0.04	mg/l NH4-N	N/A	DWS	-6%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Arsenic	Lab analysis	Quarterly	0.0025	0.0025	mg/l	N/A	DWS	-55%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Barium	Lab analysis	Quarterly	0.018	0.0105	mg/l	N/A	DWS	10%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Calcium	Lab analysis	Quarterly	55.6	44.75	mg/l	N/A	DWS	-14%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Chloride	Lab analysis	Quarterly	32.9	28.05	mg/l	75	DWS	-30%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Colour	Field analysis	Quarterly	Brown (sediment)	Brown/ sediment	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Conductivity	Field analysis	Quarterly	0.33	0.305	mS/cm	1	DWS	-26%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Dissolved Oxygen	Field analysis	Quarterly	8.32	4.84	mg/l	N/A	DWS	4%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Iron	Lab analysis	Quarterly	0.02	0.02	mg/l	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Level, Water	Field analysis	Quarterly	117.11	114.63	mOD	N/A	DWS	2%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Manganese	Lab analysis	Quarterly	0.018	0.006	mg/l	N/A	DWS	67%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Odour	Field analysis	Quarterly	None	None	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	pH	Field analysis	Quarterly	7.7	7.4	pH	6<pH<9	DWS	-2%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Phenols, Total	Lab analysis	Quarterly	0.1	0.1	mg/l	0.1	DWS	-1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Potassium	Lab analysis	Quarterly	1.6	1.3	mg/l	N/A	DWS	-42%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Sodium	Lab analysis	Quarterly	17	15.2	mg/l	80	DWS	-14%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Sulphate	Lab analysis	Quarterly	43.09	23.67	mg/l	150	DWS	50%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Temperature	Field analysis	Quarterly	13.9	10.75	oC	N/A	DWS	2%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Total Organic Carbon	Lab analysis	Quarterly	9	7.25	mg/l	50	DWS	14%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-13	Total Oxidized Nitrogen	Lab analysis	Quarterly	8.9	5.225	mg/l	N/A	DWS	-76%	No
23/03/2012	BH-13	Boron	Lab analysis	Annually	0.012	0.012	mg/l	N/A	DWS	0%	No
23/03/2012	BH-13	Cadmium	Lab analysis	Annually	0.0005	0.0003	mg/l	0.004	DWS	-89%	No
23/03/2012	BH-13	Chromium, Total	Lab analysis	Annually	0.002	0.002	mg/l	N/A	DWS	14%	No
23/03/2012	BH-13	Coliforms, Faecal	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-13	Coliforms, Total	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	0%	No
23/03/2012	BH-13	Copper	Lab analysis	Annually	0.007	0.007	mg/l	0.5	DWS	0%	No
23/03/2012	BH-13	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-13	Fluoride	Lab analysis	Annually	0.3	0.3	mg/l	N/A	DWS	0%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012	BH-13	Lead	Lab analysis	Annually	0.005	0.003	mg/l	N/A	DWS	-85%	No
23/03/2012	BH-13	List I and II Substances	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-13	Magnesium	Lab analysis	Annually	10.5	7.3	mg/l	N/A	DWS	47%	No
23/03/2012	BH-13	Mercury	Lab analysis	Annually	0.001	0.0008	mg/l	N/A	DWS	-33%	No
23/03/2012	BH-13	Orthophosphates	Lab analysis	Annually	0.13	0.13	mg/l	N/A	DWS	-523%	No
23/03/2012	BH-13	PAHs (Total 17)	Lab analysis	Annually	0.0001	0.0001	mg/l	N/A	DWS	-200%	No
23/03/2012	BH-13	Phosphorus, Total	Lab analysis	Annually	0.194	0.194	mg/l	N/A	DWS	-3207%	No
23/03/2012	BH-13	Total Solids	Lab analysis	Annually	187	187	mg/l	N/A	DWS	-2397%	No
23/03/2012	BH-13	Zinc	Lab analysis	Annually	0.005	0.003	mg/l	N/A	DWS	8%	No
										0%	
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Ammoniacal Nitrogen	Lab analysis	Quarterly	0.03	0.03	mg/l NH4-N	N/A	DWS	-42%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Arsenic	Lab analysis	Quarterly	0.0025	0.0025	mg/l	N/A	DWS	-1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Barium	Lab analysis	Quarterly	0.037	0.033	mg/l	N/A	DWS	31%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Calcium	Lab analysis	Quarterly	24.7	21.3	mg/l	N/A	DWS	-24%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Chloride	Lab analysis	Quarterly	21.8	15.0	mg/l	75	DWS	-43%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Colour	Field analysis	Quarterly	Light brown	Clear	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Conductivity	Field analysis	Quarterly	0.22	0.20	mS/cm	1	DWS	-17%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Dissolved Oxygen	Field analysis	Quarterly	6.36	4.22	mg/l	N/A	DWS	16%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Iron	Lab analysis	Quarterly	0.163	0.06	mg/l	N/A	DWS	64%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Level, Water	Field analysis	Quarterly	100.06	99.58	mOD	N/A	DWS	1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Manganese	Lab analysis	Quarterly	0.021	0.01	mg/l	N/A	DWS	23%	No

Groundwater/Soil monitoring template					Lic No:	W0129-02		Year	2012		
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Odour	Field analysis	Quarterly	None	None	N/A	N/A	DWS	0%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	pH	Field analysis	Quarterly	7.7	7.4	pH	6<pH<9	DWS	5%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Phenols, Total	Lab analysis	Quarterly	0.1	0.1	mg/l	0.1	DWS	-1%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Potassium	Lab analysis	Quarterly	3.6	3.4	mg/l	N/A	DWS	25%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Sodium	Lab analysis	Quarterly	10.5	8.4	mg/l	80	DWS	-25%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Sulphate	Lab analysis	Quarterly	29.9	25.18	mg/l	150	DWS	-14%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Temperature	Field analysis	Quarterly	15.5	12.8	oC	N/A	DWS	17%	No
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Total Organic Carbon	Lab analysis	Quarterly	10	8.5	mg/l	50	DWS	0%	Yes
23/03/2012; 19/06/2012; 09/08/2012; 11/12/2012	BH-14	Total Oxidized Nitrogen	Lab analysis	Quarterly	7.5	4.65	mg/l	N/A	DWS	-40%	No
23/03/2012	BH-14	Boron	Lab analysis	Annually	0.028	0.028	mg/l	N/A	DWS	-146%	Yes
23/03/2012	BH-14	Cadmium	Lab analysis	Annually	0.0015	0.00137	mg/l	0.004	DWS	56%	No
23/03/2012	BH-14	Chromium, Total	Lab analysis	Annually	0.0015	0.0015	mg/l	N/A	DWS	-20%	No
23/03/2012	BH-14	Coliforms, Faecal	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	-100%	No
23/03/2012	BH-14	Coliforms, Total	Lab analysis	Annually	0	0	cfus/100ml	N/A	DWS	-4700%	No
23/03/2012	BH-14	Copper	Lab analysis	Annually	0.012	0.0105	mg/l	0.5	DWS	-5%	No
23/03/2012	BH-14	Cyanide	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-14	Fluoride	Lab analysis	Annually	0.3	0.3	mg/l	N/A	DWS	0%	No
23/03/2012	BH-14	Lead	Lab analysis	Annually	0.005	0.0028	mg/l	N/A	DWS	-79%	No
23/03/2012	BH-14	List I and II Substances	Lab analysis	Annually	0.01	0.01	mg/l	N/A	DWS	0%	No
23/03/2012	BH-14	Magnesium	Lab analysis	Annually	3	2.5	mg/l	N/A	DWS	28%	No
23/03/2012	BH-14	Mercury	Lab analysis	Annually	0.001	0.00075	mg/l	N/A	DWS	-33%	No
23/03/2012	BH-14	Orthophosphates	Lab analysis	Annually	0.1	0.1	mg/l	N/A	DWS	-270%	No
23/03/2012	BH-14	PAHs (Total 17)	Lab analysis	Annually	0.0001	0.0001	mg/l	N/A	DWS	-200%	No
23/03/2012	BH-14	Phosphorus, Total	Lab analysis	Annually	0.073	0.073	mg/l	N/A	DWS	-70%	No

Groundwater/Soil monitoring template				Lic No:	W0129-02			Year	2012		
23/03/2012	BH-14	Total Solids	Lab analysis	Annually	187	187	mg/l	N/A	DWS	-68%	No
23/03/2012	BH-14	Zinc	Lab analysis	Annually	0.026	0.0183	mg/l	N/A	DWS	-48%	No
							SELECT				SELECT
							SELECT				SELECT

* please note exceedance of a relevant Groundwater threshold value (GTV) at a representative monitoring point does not indicate non compliance, an exceedance triggers further investigation to confirm whether the criteria for poor groundwater chemical status are being met.

**Depending on location of the site and proximity to other sensitive receptors alternative Receptor based Water Quality standards should be used in addition to the GTV e.g. if the site is close to surface water compare to Surface Water Environmental Quality Standards (SWEQS), If the site is close to a drinking water supply compare results to the Drinking Water Standards (DWS)

Surface water EQS | Groundwater regulations GTV's | Drinking water (private supply) standards | Drinking water (public supply) standards

Table 3: Soil results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit
							SELECT
							SELECT

Where additional detail is required please enter it here in 200 words or less

Environmental Liabilities template	Lic No:	W0129-02	Year	2012

Click here to access EPA guidance on Environmental Liabilities and Financial provision

			Commentary
1	ELRA initial agreement status	Submitted and not agreed by EPA;	
2	ELRA review status	SELECT	Review not required
3	Amount of Financial Provision cover required as determined by the latest ELRA		
4	Financial Provision for ELRA status	Submitted and not agreed by EPA;	
5	Financial Provision for ELRA - amount of cover	Specify	
6	Financial Provision for ELRA - type	SELECT	
7	Financial provision for ELRA expiry date	Enter expiry date	
8	Closure plan initial agreement status	sure plan submitted and not agreed by EPA	
9	Closure plan review status	SELECT	
10	Financial Provision for Closure status	Submitted and not agreed by EPA;	
11	Financial Provision for Closure - amount of cover	Specify	
12	Financial Provision for Closure - type	SELECT	
13	Financial provision for Closure expiry date	Enter expiry date	

Environmental Management Programme/Continuous Improvement Programme template

Lic No: W0129-02 Year 2012

Highlighted cells contain dropdown menu click to view

			Additional Information
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	EMS is independently certified to ISO14001:2004.
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes	
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes	
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	Yes	

Environmental Management Programme (EMP) report

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Groundwater protection	Ongoing monitoring and measurement - water	100	Monitoring completed	Individual	Improved Environmental Management Practices
Noise reduction	Ongoing monitoring and measurement - noise	100	Monitoring completed	Individual	Improved Environmental Management Practices
Reduction of emissions to Air	Ongoing monitoring and measurement - dust	100	Monitoring completed	Individual	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Ongoing monitoring and measurement - energy	100	Monitoring completed	Individual	Improved Environmental Management Practices

Noise monitoring summary report	Lic No:	W0129-02	Year	2012

1	Was noise monitoring a licence requirement for the AER period? If yes please fill in table N1 noise summary below	Yes
2	Was noise monitoring carried out using the EPA Guidance note including completion of the "Checklist for noise measurement report" included in the guidance note as table 6? (Noise Guidance note NG4)	Yes
3	Does your site have a noise reduction plan	No
4	When was the noise reduction plan last updated?	
5	Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?	No

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA_{eq}	LA_{90}	LA_{10}	LA_{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is site compliant with noise limits (day/evening/night)?
19/06/2012	11:45 – 12:15		N4	54	37	48	79.5	No	SELECT	At locations N5, N6, N7 and N8 the measured daytime levels were in the range of 57dB to 69dB $L_{Aeq\ (30\ Minutes)}$. These levels exceed the daytime noise criterion (of 55dB $_{LAeq\ (30\ Minutes)}$), however the dominant noise sources during the measurements were passing traffic on the local road network and intermittent aircraft noise. At location N4 the measured daytime level ranged from 52-56 dB which is mainly in compliance with the daytime noise criterion of 55dB $_{LAeq\ (30\ Minutes)}$.	Yes
19/06/2012	14:55 – 15:25		N4	52	38	49	74.9	No			Yes
19/06/2012	17:47 – 18:17		N4	56	37	53	83.3	No			Yes
19/06/2012	11:08 – 11:38		N5	62	31	54	87.5	No			Yes
19/06/2012	14:21 – 14:51		N5	66	39	61	89.4	No			Yes
19/06/2012	17:12 – 17:42		N5	65	36	60	87.7	No			Yes
19/06/2012	10:32 – 11:02		N6	57	31	50	80.8	No			Yes
19/06/2012	12:55 – 13:25		N6	58	30	50	81.7	No			Yes
19/06/2012	16:38 – 17:08		N6	58	31	52	81.7	No			Yes
19/06/2012	09:58 – 10:28		N7	67	30	55	92.7	No			Yes
19/06/2012	13:44 – 14:14		N7	68	36	61	91.9	Yes	Yes		Yes
19/06/2012	16:05 – 16:35		N7	69	37	63	93.4	No			Yes
19/06/2012	09:24 – 09:54		N8	68	34	61	92.2	No			Yes
19/06/2012	12:21 – 12:51		N8	65	33	57	88.4	No			Yes
19/06/2012	15:32 – 16:02		N8	68	41	62	92	No			Yes

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options? SELECT

** please explain the reason for not taking action/resolution of noise issues?

Any additional comments? (less than 200 words)

Resource Usage/Energy efficiency summary	Lic No:	W0129-02	Year	2012

			Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below		No formal audit completed; ongoing monitoring and management of energy use by licensee.
2	Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information	SEAI - Large Industry Energy Network (LIEN)	
3	Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information	SELECT	NOT APPLICABLE

Table R1 Energy usage on site

Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	
Total Energy Used (MWHrs)	195.331	237.327		17.70%	
Total Energy Generated (MWHrs)					
Total Renewable Energy Generated (MWHrs)					
Electricity Consumption (MWHrs)	33.42	40.14		16.74%	
Fossil Fuels Consumption:					
Heavy Fuel Oil (m3)	15.922	19.391		17.89%	SEAI: 10.169kWh/litre of diesel
Light Fuel Oil (m3)					
Natural gas (CMN)					
Coal/Solid fuel (metric tonnes)					
Peat (metric tonnes)					
Renewable Biomass					
Renewable energy generated on site					

* where consumption of energy can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Table R2 Water usage on site

					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m^3yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply	1338	1762		24.06%			
Recycled water							
Total							

* where consumption of water can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Resource Usage/Energy efficiency summary

Lic No: W0129-02 Year 2012

Table R3 Waste Stream Summary

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)					
Non-Hazardous (Tonnes)	0.81				

Table R4: Energy Audit finding recommendations

Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
			SELECT					
			SELECT					
			SELECT					

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry)please complete the following information

	Unit ID	Unit ID	Unit ID	Unit ID	Station Total
Technology					
Primary Fuel					
Thermal Efficiency					
Unit Date of Commission					
Total Starts for year					
Total Running Time					
Total Electricity Generated (GWH)					
House Load (GWH)					
KWH per Litre of Process Water					
KWH per Litre of Total Water used on Site					

Complaints and Incidents summary template Lic No: W0129-02 Year 2012

Complaints

Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	No	Additional information

Table 1 Complaints summary

Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		

Total complaints open at start of reporting year	
Total new complaints received during reporting year	
Total complaints closed during reporting year	
Balance of complaints end of reporting year	

Incidents

Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below	Yes	Additional information

*For information on how to report and what constitutes an incident	What is an incident

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Liklihood of reoccurence
26/06/2012	Trigger level reached	Monitoring locations BH-4A, BH-6, BH-8 and BH-10A	1. Minor	No Uncontrolled release	Not related to site activities		Normal activities	EPA	Recurring	Not required	Not required	Complete	26/06/2012	Medium
13/08/2012	Trigger level reached	Monitoring locations BH-8, BH-10A and SWD-6	1. Minor	No Uncontrolled release	Not related to site activities		Normal activities	EPA	Recurring	Not required	Not required	Complete	13/08/2012	Medium
01/10/2012	Trigger level reached	Monitoring locations BH-8 and BH-10A	1. Minor	No Uncontrolled release	Not related to site activities		Normal activities	EPA	Recurring	Not required	Not required	Complete	28/06/2012	Medium
06/03/2013	Trigger level reached	Monitoring locations BH-8, BH-10A and SWD-6	1. Minor	No Uncontrolled release	Not related to site activities		Normal activities	EPA	Recurring	Not required	Not required	Complete	06/03/2013	Medium
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT

Total number of incidents current year	4
Total number of incidents previous year	4
% reduction/ increase	0%

WASTE SUMMARY Lic No: W0129-02 Year 2012

SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES PRTR facility logon dropdown list click to see options

SECTION B- WASTE ACCEPTED ONTO SITE-TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

			Additional Information
1	Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting) If yes please enter details in table 1 below	Yes	
2	Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information	No	
3	Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information	No	

Table 1 Details of waste accepted onto your site for recovery, disposal or treatment (do not include wastes generated at your site, as these will have been reported in your PRTR workbook)

Licenced annual tonnage limit for your site (total tonnes/annum)	EWC code European Waste Catalogue EWC codes	Source of waste accepted	Description of waste accepted **Please enter an accurate and detailed description - which** European Waste Catalogue EWC codes	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/Increase over previous year +/ - %	Reason for reduction/increase from previous reporting year	Packaging Content (%)- only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -
	16 01 20	*16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST*	Glass from ELV's	37.64	0	100%	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	
	17 01 01	*17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)*	Concrete	55.94	72.48	-30%	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	
	17 03 02	*17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)*	Bituminous mixture	20.96	572.50	-2631%	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	
	17 05 04	*17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)*	Soil & Stones	33,753.34	24,496.00	27%	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	
	17 06 04	*17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)*	Insulation	28.52	13.70	52%	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	
	19 09 02	*19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE*	WTP Alum Sludge	7,370.76	1,029.66	86%	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	
	19 12 05	*19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE*	Glass	43.12	412.10	-856%	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	

WASTE SUMMARY					Lic No:		W0129-02		Year	2012		
	20 01 02	*20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS*	Glass	253.50	0	100%	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	
	120117	*12-WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS*	Waste blasting material other than those mentioned in 12 01 16	-	738.14	#DIV/0!	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	
	170107	*17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)*	Mixture of concrete, bricks, tiles and ceramics	-	16.70	#DIV/0!	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	
	170202	*17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)*	Glass	-	26.94	#DIV/0!	*Market demand*	*0%*	*D5- Specially engineered landfill*	*0*	

SECTION C-TO BE COMPLETED BY ALL WASTE FACILITIES (waste transfer stations, Composters, Material recovery facilities etc) EXCEPT LANDFILL SITES

4 Is all waste processing infrastructure as required by your licence and approved by the Agency in place? If no please list waste processing infrastructure required onsite	SELECT	
5 Is all waste storage infrastructure as required by your licence and approved by the Agency in place? If no please list waste storage infrastructure required on site	SELECT	
6 Does your facility have relevant nuisance controls in place?	SELECT	
7 Do you have an odour management system in place for your facility? If no why?	SELECT	
8 Do you maintain a sludge register on site?	SELECT	

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

Waste types permitted for disposal	Authorised/licenced annual intake for disposal (tpa)	Actual intake for disposal in reporting year (tpa)	Remaining licensed capacity at end of reporting year (m3)	Comments
Inert waste	500,000	41,565		
			4,019,867	

Table 3 General information-Landfill only

Area ID	Date landfilling commenced	Date landfilling ceased	Currently landfilling	Private or Public Operated	Inert or non-hazardous	Predicted date to cease landfilling	Licence permits asbestos	Is there a separate cell for asbestos?	Accepted asbestos in reporting year	Total disposal area occupied by waste	Lined disposal area occupied by waste	Unlined area	Comments on liner type
										SELECT UNIT	SELECT UNIT	SELECT UNIT	
W0129-02	2003	Ongoing	Yes	Private	Inert	Dependent on input + planning requirements	No	No	No	30,650m^2	30,650m^2	0 (further areas of quarry to be developed as lined cells in line with phased restoration of the site).	Inert landfill liner in accordance with Landfill Directive 1999

WASTE SUMMARY Lic No: W0129-02 Year 2012

Table 4 Environmental monitoring-landfill onl Landfill Manual-Monitoring Standards

Was meterological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under S53(A)(5) of WMA been submitted in reporting year	Comments
Yes	Yes	No	Yes	Yes	Yes	Yes	No	Submission of S53(A) statement is imminent

.+ please refer to Landfill Manual linked above for relevant Landfill Directive monitoring standards

Table 5 Capping-Landfill only

Area uncapped*	Area with temporary cap	Area with final cap to LD Standard m2 ha, a	Area capped other	Area with waste that should be permanently capped to date under licence	What materials are used in the cap	Comments
SELECT UNIT	SELECT UNIT					
	0	3600m2	Not applicable	Not applicable	Subsoil and topsoil	

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9	Is leachate from your site treated in a Waste Water Treatment Plant?	No
10	Is leachate released to surface water? If yes please complete leachate mass load information below	No

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.15

REFERENCE YEAR	2012

1. FACILITY IDENTIFICATION

Parent Company Name	Murphy Environmental Hollywood Limited
Facility Name	Murphy Environmental Hollywood Limited
PRTR Identification Number	W0129
Licence Number	W0129-02

Waste or IPPC Classes of Activity

No.	class_name
3.5	Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.
3.1	Deposit on, in or under land (including landfill).
3.13	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.
4.3	Recycling or reclamation of metals and metal compounds.
4.4	Recycling or reclamation of other inorganic materials.

Address 1	Hollywood Great
Address 2	Nags Head
Address 3	The Naul
Address 4	County Dublin
	Dublin
Country	Ireland
Coordinates of Location	-9.09708 52.6126
River Basin District	IEEA
NACE Code	3900
Main Economic Activity	Remediation activities and other waste management services
AER Returns Contact Name	Ken Rooney
AER Returns Contact Email Address	ken@mehl.ie
AER Returns Contact Position	Facility Manager
AER Returns Contact Telephone Number	01 8433744
AER Returns Contact Mobile Phone Number	087 9824322
AER Returns Contact Fax Number	01 8433747
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	5
User Feedback/Comments	Licensed activity class 4.13 missing from above list.
Web Address	www.mehl.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(d)	Landfills
5(d) 50.1	Landfills General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	No
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

Guidance on waste imported/accepted onto site

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	Yes

This question is only applicable if you are an IPPC or Quarry site

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD				QUANTITY		
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD				QUANTITY		
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD				QUANTITY		
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Murphy Environmental Hollywood Limited

Please enter summary data on the quantities of methane flared and / or utilised	**T (Total) kg/Year**	**M/C/E**	**Method Used**		**Facility Total Capacity m3 per hour**	
			Method Code	**Designation or Description**		
Total estimated methane generation (as per site model)	0.0				N/A	
Methane flared	0.0				0.0	(Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0	(Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A	

4.2 RELEASES TO WATERS

Link to previous years emissions data

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this onl

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
			Method Used				
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
			Method Used				
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Please enter all quantities on this sheet in Tonnes

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	12 01 17	No	0.0	waste blasting material other than those mentioned in 12 01 16	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	17 01 01	No	55.94	concrete	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	17 01 07	No	0.0	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	17 02 02	No	0.0	glass	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	17 03 02	No	20.96	bituminous mixtures containing other than those mentioned in 17 03 01	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	17 05 04	No	33,753.34	soil and stones other than those mentioned in 17 05 03	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	17 05 04	No	0.0	soil and stones other than those mentioned in 17 05 03	R5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	17 06 04	No	28.52	insulation materials other than those mentioned in 17 06 01 and 17 06 03	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	19 09 02	No	7,370.76	sludges from water clarification	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	19 12 05	No	43.12	glass	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	16 01 20	No	37.64	glass	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		
Within the Country	20 01 02	No	253.50	glass	D5	M	Weighed	Offsite in Ireland	MEHL,W0129-02	Hollywood Great,Nag's Head,Naul,Co. Dublin,Ireland		

* Select a row by double-clicking the Description of Waste then click the delete button

Link to previous years waste data
Link to previous years waste summary data & percentage change