


Facility Information Summary	
AER Reporting Year	2013
Licence Register Number	W0022-01
Name of site	East Cork Landfill
Site Location	Rossmore, Carrigtwohill, Co. Cork
NACE Code	3821
Class/Classes of Activity	5(c), 5(d), 50.1
National Grid Reference (6E, 6 N)	8.25588E 51.8851N
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.	<p>East Cork Landfill has been closed since February 2007. Final Capping took place in 2008 and was completed in 2009. The environmental performance of the facility has continued to improve in comparison with previous years. No complaints were registered in 2013. The gas extraction system has continued to perform with the enclosed flare burning off the gas generated. Minor exceedances have again been measured in the perimeter gas wells but are explained by the estuarine conditions and limestone bedrock that account for naturally occurring CO₂ and CH₄. Both Leachate and groundwater results are similar to previous years. The noise survey was compliant for the year as would be expected with no large landfill compacting plant from the site. Overall the site has been compliant with its Licence.</p>

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.

_____	27/03/2014
Signature	Date
 Experienced Deputy	

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Answer all questions and complete all tables where relevant

- 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

Additional information	
Yes	

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

No	
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- 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](#)

Yes	
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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 thereof	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
Flare Stack	Methane (CH4)	Continuous	N/A	SELECT	361334	m3	yes	MAB	566174	Annual mass load refers to difference
Flare Stack	Carbon dioxide (CO2)	Continuous	N/A	SELECT	429737	m3	yes	ISO 12039:2001	1859036	Annual mass load refers to difference
Flare Stack	Carbon monoxide (CO)	Continuous	<50mg/Nm3	No 30min mean can exceed the ELV	41.4	mg/Nm3	yes	ISO 12039:2001		
Flare Stack	Nitrogen oxides (NOx/NO2)	Annual	<150mg/Nm3	No 30min mean can exceed the ELV	25.3	mg/Nm3	yes	EN 14792:2005		
Flare Stack	Sulphur oxides (SOx/SO2)	Annual	N/A	SELECT	12.8	mg/Nm3	yes	EN 14792:2005		
	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? If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV)	Yes	
5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below	Yes	
6 Do you have a proactive service agreement for each piece of continuous monitoring equipment?	Yes	
7 Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	No	

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
Flare Stack	PRTR	N/A	12 month	100 % of values < ELV	m3			281		Have recorded the combined annual downtime of Flare at East Cork Landfill Landfill in this section. The emissions totals have been submitted in the above table.
	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		SELECT						
Table A4: Solvent Management Plan Summary		Solvent regulations Please refer to linked solvent regulations to complete table 5 and 6						
Total VOC Emission limit value								
Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input					
			Total Emission Limit Value (ELV) in licence or any revision thereof					
			SELECT					
			SELECT					
Table A5: Solvent Mass Balance summary								
	(I) Inputs (kg)		(O) Outputs (kg)					
Solvent	(I) Inputs (kg)	Organic solvent emission in waste	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: W0022-01 Year 2013

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 licensed emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections
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

Table W1 Storm 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
sw1	upstream		pH	Quarterly	No ELV or trigger levels	N/A	7.99	pH units	yes	Median vaule for 2013
sw1	upstream		Temperature	Quarterly	No ELV or trigger levels	N/A	13	degrees C	yes	Median vaule for 2013
sw1	upstream		Conductivity	Quarterly	No ELV or trigger levels	N/A	35.75	µS/cm @20oC	yes	Median vaule for 2013
sw1	upstream		Dissolved Oxygen	Quarterly	No ELV or trigger levels	N/A	6.85	mg/L	yes	Median vaule for 2013
sw1	upstream	Chlorides (as Cl)		Quarterly	No ELV or trigger levels	N/A	11749.46	mg/L	yes	Median vaule for 2013
sw1	upstream		BOD	Quarterly	No ELV or trigger levels	N/A	18.65	mg/L	yes	Median vaule for 2013
sw1	upstream		COD	Quarterly	No ELV or trigger levels	N/A	887.5	mg/L	yes	Median vaule for 2013
sw1	upstream		Ammonia (as N)	Quarterly	No ELV or trigger levels	N/A	1.05	mg/L	yes	Median vaule for 2013
sw1	upstream		Suspended Solids	Quarterly	No ELV or trigger levels	N/A	269	mg/L	yes	Median vaule for 2013
sw1	upstream	Chromium and compounds (as Cr)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw1	upstream	Copper and compounds (as Cu)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw1	upstream	Cadmium and compounds (as Cd)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
	upstream		CALCIUM			N/A	405.5	mg/L	yes	Annual value for 2013
sw1	upstream		Iron	Annual	No ELV or trigger levels	N/A	40	µg/L	yes	Annual value for 2013
sw1	upstream	Lead and compounds (as Pb)		Annual	No ELV or trigger levels	N/A	<20	mg/L	yes	Annual value for 2013
sw1	upstream		Magnesium	Annual	No ELV or trigger levels	N/A	1089	mg/L	yes	Annual value for 2013. Elevation due to geology of the site
sw1	upstream		Manganese (as Mn)	Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw1	upstream	Mercury and compounds (as Hg)		Annual	No ELV or trigger levels	N/A	<0.10	µg/L	yes	Annual value for 2013
sw1	upstream		Potassium	Annual	No ELV or trigger levels	N/A	353	mg/L	yes	Annual value for 2013
sw1	upstream		Sulphate	Annual	No ELV or trigger levels	N/A	1566	mg/L	yes	Annual value for 2013. Sample site at estuary
sw1	upstream		Total Oxidised Nitrogen (TON)	Annual	No ELV or trigger levels	N/A	0.92	mg/L	yes	Annual value for 2013
sw1	upstream	Zinc and compounds (as Zn)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw1	upstream	Total phosphorus		Annual	No ELV or trigger levels	N/A	0.11	mg/L	yes	Annual value for 2013
sw2	upstream		pH	Quarterly	No ELV or trigger levels	N/A	8.14	pH units	yes	Median vaule for 2013
sw2	upstream		Temperature	Quarterly	No ELV or trigger levels	N/A	13.07	degrees C	yes	Median vaule for 2013
sw2	upstream		Conductivity	Quarterly	No ELV or trigger levels	N/A	35.73	µS/cm @20oC	yes	Median vaule for 2013
sw2	upstream		Dissolved Oxygen	Quarterly	No ELV or trigger levels	N/A	7.14	mg/L	yes	Median vaule for 2013
sw2	upstream	Chlorides (as Cl)		Quarterly	No ELV or trigger levels	N/A	11122	mg/L	yes	Median vaule for 2013
sw2	upstream		BOD	Quarterly	No ELV or trigger levels	N/A	26.54	mg/L	yes	Median vaule for 2013
sw2	upstream		COD	Quarterly	No ELV or trigger levels	N/A	921.25	mg/L	yes	Median vaule for 2013
sw2	upstream		Ammonia (as N)	Quarterly	No ELV or trigger levels	N/A	0.8	mg/L	yes	Median vaule for 2013
sw2	upstream		Suspended Solids	Quarterly	No ELV or trigger levels	N/A	252	mg/L	yes	Median vaule for 2013
	upstream		Total Alkalinity	Annual	No ELV or trigger levels	N/A	80.06	mg/L	yes	Annual value for 2013
sw2	upstream	Chromium and compounds (as Cr)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw2	upstream	Copper and compounds (as Cu)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw2	upstream	Cadmium and compounds (as Cd)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013

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sw2	upstream		CALCIUM			N/A	425.3	mg/L	yes	Annual value for 2013
sw2	upstream		Iron	Annual	No ELV or trigger levels	N/A	27	µg/L	yes	Annual value for 2013
sw2	upstream	Lead and compounds (as Pb)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw2	upstream		Magnesium	Annual	No ELV or trigger levels	N/A	1120	mg/L	yes	Annual value for 2013. Elevation due to geology of the site
sw2	upstream		Manganese (as Mn)	Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw2	upstream	Mercury and compounds (as Hg)		Annual	No ELV or trigger levels	N/A	<0.10	mg/L	yes	Annual value for 2013
sw2	upstream		Potassium	Annual	No ELV or trigger levels	N/A	371	mg/L	yes	Annual value for 2013
sw2	upstream		Sulphate	Annual	No ELV or trigger levels	N/A	1572.98	mg/L	yes	Annual value for 2013
sw2	upstream		Total Oxidised Nitrogen (TON)	Annual	No ELV or trigger levels	N/A	0.67	mg/L	yes	Annual value for 2013
sw2	upstream	Zinc and compounds (as Zn)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw2	upstream	Total phosphorus		Annual	No ELV or trigger levels	N/A	0.08	mg/L	yes	Annual value for 2013
sw3	downstream		pH	Quarterly	No ELV or trigger levels	N/A	8.07	pH units	yes	Median value for 2013
sw3	downstream		Temperature	Quarterly	No ELV or trigger levels	N/A	13.2	degrees C	yes	Median value for 2013
sw3	downstream		Conductivity	Quarterly	No ELV or trigger levels	N/A	31.95	µS/cm @20oC	yes	Median value for 2013
sw3	downstream		Dissolved Oxygen	Quarterly	No ELV or trigger levels	N/A	7.01	mg/L	yes	Median value for 2013
sw3	downstream	Chlorides (as Cl)		Quarterly	No ELV or trigger levels	N/A	8890.21	mg/L	yes	Median value for 2013
sw3	downstream		BOD	Quarterly	No ELV or trigger levels	N/A	3.87	mg/L	yes	Median value for 2013
sw3	downstream		COD	Quarterly	No ELV or trigger levels	N/A	823.75	mg/L	yes	Median value for 2013
sw3	downstream		Ammonia (as N)	Quarterly	No ELV or trigger levels	N/A	0.88	mg/L	yes	Median value for 2013
sw3	downstream		Suspended Solids	Quarterly	No ELV or trigger levels	N/A	234.25	mg/L	yes	Median value for 2013
sw3	downstream		Total Alkalinity	Annual	No ELV or trigger levels	N/A	112.03	mg/L	yes	Annual value for 2013
sw3	downstream	Chromium and compounds (as Cr)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw3	downstream	Copper and compounds (as Cu)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw3	downstream	Cadmium and compounds (as Cd)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw3	downstream		CALCIUM	Annual	No ELV or trigger levels	N/A	360.6	mg/L	yes	Annual value for 2013
sw3	downstream		Iron	Annual	No ELV or trigger levels	N/A	25	µg/L	yes	Annual value for 2013
sw3	downstream	Lead and compounds (as Pb)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw3	downstream		Magnesium	Annual	No ELV or trigger levels	N/A	872	mg/L	yes	Annual value for 2013. Elevation due to geology of the site
sw3	downstream		Manganese (as Mn)	Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw3	downstream	Mercury and compounds (as Hg)		Annual	No ELV or trigger levels	N/A	<0.10	mg/L	yes	Annual value for 2013
sw3	downstream		Potassium	Annual	No ELV or trigger levels	N/A	293	mg/L	yes	Annual value for 2013
sw3	downstream		Sulphate	Annual	No ELV or trigger levels	N/A	1366.9	mg/L	yes	Annual value for 2013. Site located in estuary
sw3	downstream		Total Oxidised Nitrogen (TON)	Annual	No ELV or trigger levels	N/A	1.57	mg/L	yes	Annual value for 2013
sw3	downstream	Zinc and compounds (as Zn)		Annual	No ELV or trigger levels	N/A	<20	µg/L	yes	Annual value for 2013
sw3	downstream	Total phosphorus		Annual	No ELV or trigger levels	N/A	0.05	mg/L	yes	Annual value for 2013
		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
			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

SELECT

Additional information

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)

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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](#)
 SELECT

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

Emission reference no:	Emission released to	Parameter/ Substance ^{Note 1}	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision therof ^{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
 5 Does your site carry out continuous emissions to water/sewer monitoring? Additional Information

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

7 Do you have a proactive service contract for each piece of continuous monitoring equipment on site?

8 Did abatement system bypass occur during the reporting year? If yes please complete table W5 below

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
	<input type="text" value="SELECT"/>	<input type="text" value="SELECT"/>		<input type="text" value="SELECT"/>	<input type="text" value="SELECT"/>	<input type="text" value="SELECT"/>					
	<input type="text" value="SELECT"/>	<input type="text" value="SELECT"/>		<input type="text" value="SELECT"/>	<input type="text" value="SELECT"/>	<input type="text" value="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?
						<input type="text" value="SELECT"/>	

*Measures taken or proposed to reduce or limit bypass frequency

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, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)

- 1
- 2 Please provide integrity testing frequency period
- Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore")
- 3 type units and mobile bunds)
- 4 How many bunds are on site?
- 5 How many of these bunds have been tested within the required test schedule?
- 6 How many mobile bunds are on site?
- 7 Are the mobile bunds included in the bund test schedule?
- 8 How many of these mobile bunds have been tested within 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?

Yes	
3 years	
No	
3	
3	
0	
No	
0	
0	
0	
N/A	
N/A	
SELECT	

- Please list any sump integrity failures in table B1**
- 11 Do all sumps and chambers have high level liquid alarms?
 - 12 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
 - 13 Is the Fire Water Retention Pond included in your integrity test 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)
Leachate Lagoon	reinforced concrete		leachate	1400	1000	Structural assessment		Nov-08	Yes	Pass		SELECT	2014	
Surfacewater Lagoon	reinforced concrete		surfacewater	10000	7500	Structural assessment		Nov-08	Yes	Pass			2014	
Surfacewater Lagoon	reinforced concrete		surfacewater	2500	2000	Structural assessment		Nov-08	Yes	Pass		SELECT	2014	

- Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance? [bundings and storage guidelines](#)
- 15
 - 16 Are channels/transfer systems to remote containment systems tested?
 - 17 Are channels/transfer systems compliant in both integrity and available volume?

Yes	
SELECT	
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 underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**

- 1
- 2 Please provide integrity testing frequency period

*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

SELECT	
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:	W0022-01	Year	2013
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		Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	yes	Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER
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	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Groundwater monitoring template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	no	The groundwater results at the site are in line with previous years. No upward trend has been observed in 2013 compared with previous years.
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	N/A	
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?	N/A	
10	Has a Conceptual Site Model been developed for the site?	N/A	
11	Have potential receptors been identified on and off site?	N/A	
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**	Upward trend in pollutant concentration over last 5 years of monitoring data
Quarterly	BH3	pH		Quarterly	6.77	6.45	SELECT		9.5	no
	BH3	Temp		Quarterly	5.7	5.7	SELECT			no
	BH3	Elec. Conductivity		Quarterly	7.35	5.05	SELECT		1000	no
	BH3	Chlorides		Quarterly	19493	7204.68			250	no
	BH3	Ammoniacal Nitorgen		Quarterly	16.1	7.59	mg/l		0.02NH3	no
	BH3	Iron		Annual	85		ug/l		1.0mg/l	no
	BH3	TON		Quarterly	1.38	0.56	mg/l			no
	BH3	TOC		Quarterly	32	23.75	mg/l			no
Annual	BH3	Cadmium		Annual	<20	<20	ug/l		0.005mg/l	no
	BH3	Chromium (total)		Annual	<20	<20	ug/l		0.03mg/l	no
	BH3	Copper		Annual	<20	<20	ug/l		0.03mg/l	no
	BH3	Cyanide (Total)		Annual	<0.009	<0.009	ug/l		0.01mg/l	no
	BH3	Lead		Annual	<20	<20	ug/l		0.01mg/l	no
	BH3	Magnesium		Annual	67.4	67.4	mg/l			no

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BH3	Manganese	Annual	979	979	ug/l	0.3mg/l	no
BH3	Mercury	Annual	<0.1	<0.1	ug/l	0.001mg/l	no
BH3	Potassium	Quarterly	87.4	49.35	mg/l	5mg/l	no
BH3	Sodium	Quarterly	728	520.07			no
BH3	Sulphate	Annual	<2.5	<2.5	mg/l		no
BH3	Total Alkalinity	Annual	66.41	66.41	mg/l		no
BH3	Total Phosphorus	Annual	0.02	0.02	mg/l		no
BH3	Phenols	Annual	<1.0	<1.1	ug/l	0.5ug/l	no
BH3	Acenaphthylene	Annual	<1.0	<1.0	ug/l		no
BH3	Acenaphthylene	Annual	<1.0	<1.0	ug/l		no
BH3	Anthracene	Annual	<1.0	<1.0	ug/l		no
BH3	Benzene	Annual	<1.0	<1.0	ug/l	10ug/l	no
BH3	Bromodichloromethane	Annual	<1.0	<1.0	ug/l		no
BH3	Bromoform	Annual	<1.0	<1.0	ug/l		no
BH3	Chloroform	Annual	<1.0	<1.0	ug/l	12ug/l	no
BH3	Chrysene	Annual	<1.0	<1.0	ug/l		no
BH3	Dibromochloromethane	Annual	<1.0	<1.0	ug/l		no
BH3	Fluoranthene	Annual	<1.0	<1.0	ug/l		no
BH3	Fluorene	Annual	<1.0	<1.0	ug/l		no
BH3	Naphthalene	Annual	<2.0	<2.0	ug/l		no
BH3	Dibromochloromethane	Annual	<1.0	<1.0	ug/l		no
BH3	Pentachlorophenol	Annual	<1.0	<1.0	ug/l	2.0ug/l	no
BH3	Phenanthrene	Annual	<1.0	<1.0	ug/l		no
BH3	Pyrene	Annual	<1.0	<1.0	ug/l		no
BH3	Tetrachloroethene	Annual	<0.1	<0.1	ug/l		no
BH3	Trichloroethene	Annual	<1.0	<1.0	ug/l		no
BH3	Hexachlorobenzene	Annual	<1.0	<1.0	ug/l	0.03ug/l	no
BH3	Hexachlorobutadiene	Annual	<0.1	<0.1	ug/l	0.10ug/l	no
BH3	2,4,6-Trichlorophenol	Annual	<1.0	<1.0	ug/l		no
BH3	2,4-Dichlorophenol	Annual	<1.0	<1.0	ug/l		no
BH3	2,4-Dimethylphenol	Annual	<1.0	<1.0	ug/l		no
BH3	2-Chlorophenol	Annual	<1.0	<1.0	ug/l		no
BH3	1,2,4-trichlorobenzene	Annual	<1.0	<1.0	ug/l	0.40ug/l	no
BH3	1,2-dichlorobenzene	Annual	<1.0	<1.0	ug/l		no
BH3	1,3-dichlorobenzene	Annual	<1.0	<1.0	ug/l		no
BH3	1,4-dichlorobenzene	Annual	<1.0	<1.0	ug/l		no

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BH3	2,4,5-Trichlorophenol	Annual	<1.0	<1.0	ug/l	no
BH3	2,4-Dinitrotoluene	Annual	<1.0	<1.0	ug/l	no
BH3	2,6-Dinitrotoluene	Annual	<1.0	<1.0	ug/l	no
BH3	2-Chloronaphthalene	Annual	<1.0	<1.0	ug/l	no
BH3	2-Methylnaphthalene	Annual	<1.0	<1.0	ug/l	no
BH3	2-Methylphenol	Annual	<1.0	<1.0	ug/l	no
BH3	2-Nitrophenol	Annual	<1.0	<1.0	ug/l	no
BH3	4-Bromophenyl Phenyl Ether	Annual	<1.0	<1.0	ug/l	no
BH3	4-Chloro-3-methylphenol	Annual	<1.0	<1.0	ug/l	no
BH3	4-Chlorophenyl phenyl ether	Annual	<1.0	<1.0	ug/l	no
BH3	4-Nitrophenol	Annual	<5.0	<5.0	ug/l	no
BH3	Acenaphthene	Annual	<1.0	<1.0	ug/l	no
BH3	Benzo(a)anthracene	Annual	<1.0	<1.0	ug/l	no
BH3	Benzo(a)pyrene	Annual	<1.0	<1.0	ug/l	no
BH3	Benzo(b)fluoranthene	Annual	<1.0	<1.0	ug/l	no
BH3	Benzo(g,h,i)perylene	Annual	<1.0	<1.0	ug/l	no
BH3	Benzyl Butyl Phthalate	Annual	<1.0	<1.0	ug/l	no
BH3	Bis(2-chloroethoxy)methane	Annual	<1.0	<1.0	ug/l	no
BH3	Bis(2-chloroethyl)ether	Annual	<1.0	<1.0	ug/l	no
BH3	Bis(2-chloroisopropyl)ether	Annual	<1.0	<1.0	ug/l	no
BH3	Bis(2-ethylhexyl)phthalate	Annual	<5.0	<5.0	ug/l	no
BH3	Dibenz(a,h)anthracene	Annual	<1.0	<1.0	ug/l	no
BH3	Dibenzofuran	Annual	<1.0	<1.0	ug/l	no
BH3	Diethylphthalate	Annual	<1.0	<1.0	ug/l	no
BH3	di-n-Butylphthalate	Annual	<1.0	<1.0	ug/l	no
BH3	Di-n-octylphthalate	Annual	<1.0	<1.0	ug/l	no
BH3	Diphenylamine	Annual	<1.0	<1.0	ug/l	no
BH3	Hexachloroethane	Annual	<1.0	<1.0	ug/l	no
BH3	Indeno(1,2,3-c,d)pyrene	Annual	<1.0	<1.0	ug/l	no
BH3	Isophorone	Annual	<1.0	<1.0	ug/l	no
BH3	Nitrobenzene	Annual	<1.0	<1.0	ug/l	no
BH3	n-Nitrosodi-n-propylamine	Annual	<1.0	<1.0	ug/l	no

Groundwater/Soil monitoring template			Lic No:	W0022-01	Year	2013
BH3	Acetone	Annual	<2.0	<2.0	ug/l	no
BH3	Dichloromethane	Annual	<5.0	<5.0	ug/l	10ug/l
BH3	Tetrahydrofuran	Annual	<0.5	<0.5	ug/l	no
BH3	Toluene	Annual	<0.5	<0.5	ug/l	10ug/l
BH3	Xylene -o	Annual	<0.5	<0.5	ug/l	10ug/l
BH3	Dichlorodifluoromethane	Annual	<1.0	<1.0	ug/l	no
BH3	Chloromethane	Annual	<0.5	<0.5	ug/l	no
BH3	Ethyl Chloride/Chloroethane	Annual	<0.5	<0.5	ug/l	no
BH3	Vinyl Chloride	Annual	<0.5	<0.5	ug/l	no
BH3	Bromomethane	Annual	<0.5	<0.5	ug/l	no
BH3	Trichloromonofluoromethane	Annual	<0.5	<0.5	ug/l	no
BH3	Ethyl Ether/Diethyl Ether	Annual	<0.5	<0.5	ug/l	no
BH3	1,1 Dichloroethene	Annual	<0.5	<0.5	ug/l	no
BH3	Iodomethane/Methyl iodide	Annual	<0.5	<0.5	ug/l	no
BH3	Carbon Disulphide	Annual	<0.5	<0.5	ug/l	no
BH3	Allyl Chloride	Annual	<0.5	<0.5	ug/l	no
BH3	Chloromethyl Cyanide/Chloroacetonitrile	Annual	<0.5	<0.5	ug/l	no
BH3	Propanenitrile	Annual	<10.	<10.	ug/l	no
BH3	Trans-1,2 Dichloroethene	Annual	<0.5	<0.5	ug/l	no
BH3	MtBE	Annual	<0.5	<0.5	ug/l	no
BH3	1,1-dichloroethane	Annual	<0.5	<0.5	ug/l	no
BH3	2,2-dichloropropane	Annual	<0.5	<0.5	ug/l	no
BH3	cis-1,2 Dichloroethene	Annual	<0.5	<0.5	ug/l	no
BH3	2-Butanone	Annual	<5.0	<5.0	ug/l	no
BH3	Methyl Acrylate	Annual	<0.5	<0.5	ug/l	no
BH3	Bromochloromethane	Annual	<0.5	<0.5	ug/l	no
BH3	Methacrylonitrile	Annual	<5.0	<5.0	ug/l	no
BH3	1,1,1-trichloroethane	Annual	<0.5	<0.5	ug/l	500ug/l
BH3	1-Chlorobutane	Annual	<0.5	<0.5	ug/l	no
BH3	Carbon Tetrachloride	Annual	<0.5	<0.5	ug/l	no
BH3	1,1 Dichloropropene	Annual	<0.5	<0.5	ug/l	no
BH3	1,2 dicloroethane	Annual	<0.5	<0.5	ug/l	10ug/l
BH3	1,2-dichloropropane	Annual	<0.5	<0.5	ug/l	no

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	BH3	Dibromomethane	Annual	<0.5	<0.5	ug/l			no
	BH3	Methyl Methacrylate	Annual	<0.5	<0.5	ug/l			no
	BH3	1,3-Dichloropropene, cis	Annual	<2.0	<2.0	ug/l			no
	BH3	MIBK/4 Methyl 2 Pentanone	Annual	<2.0	<2.0	ug/l			no
	BH3	1,3-Dichloropropene, trans	Annual	<2.0	<2.0	ug/l			no
	BH3	Ethyl Methacrylate	Annual	<2.0	<2.0	ug/l			no
	BH3	1,1,1-Trichloroethane	Annual	<0.5	<0.5	ug/l			no
	BH3	1,3-dichloropropane	Annual	<0.5	<0.5	ug/l			no
	BH3	2-Hexanone	Annual	<1.0	<1.0	ug/l			no
	BH3	1,2-dibromoethane	Annual	<0.5	<0.5	ug/l			no
	BH3	Chlorobenzene	Annual	<0.5	<0.5	ug/l		1.0ug/l	no
	BH3	1,1,1,2-tetrachloroethane	Annual	<2.0	<2.0	ug/l			no
	BH3	Ethylbenzene	Annual	<0.5	<0.5	ug/l		10ug/l	no
	BH3	Xylene P&M	Annual	<0.5	<0.5	ug/l			no
	BH3	Styrene	Annual	<0.5	<0.5	ug/l			no
	BH3	Isopropylbenzene	Annual	<0.5	<0.5	ug/l			no
	BH3	Bromobenzene	Annual	<0.5	<0.5	ug/l			no
	BH3	1,1,2,2-tetrachloroethane	Annual	<0.5	<0.5	ug/l			no
	BH3	1,2,3-trichloropropane	Annual	<2.0	<2.0	ug/l			no
	BH3	Trans 1,2-Dichloro Butene, trans	Annual	<2.0	<2.0	ug/l			no
	BH3	Propylbenzene	Annual	<0.5	<0.5	ug/l			no
	BH3	2-chlorotoluene	Annual	<0.5	<0.5	ug/l			no
	BH3	4-chlorotoluene	Annual	<0.5	<0.5	ug/l			no
	BH3	1,3,5-trimethylbenzene	Annual	<0.5	<0.5	ug/l			no
	BH3	Tert Butyl Benzene	Annual	<0.5	<0.5	ug/l			no
	BH3	1,2,4-trimethylbenzene	Annual	<0.5	<0.5	ug/l			no
	BH3	sec-butylbenzene	Annual	<0.5	<0.5	ug/l			no
	BH3	p-Isopropyltoluene	Annual	<0.5	<0.5	ug/l			no
	BH3	N Butyl Benzene	Annual	<0.5	<0.5	ug/l			no
	BH3	1,2-dibromo-3-chloropropane	Annual	<2.0	<2.0	ug/l			no

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	BH3	1,2,3-trichlorobenzene		Annual	<0.5	<0.5	ug/l		no	
	BH3	Total Solids		Annual	1890	1890	mg/l		no	
	BH3	Total Colifoms		Annual	0	0	MPN/100ML		no	
	BH3	Faecal Coliforms		Annual	0	0	MPN/100ML		no	
Quarterly	BH4	pH	meter	Quarterly	7.12	7.02	SELECT		9.5	no
	BH4	Temp	meter	Quarterly	5.7	5.7	SELECT			no
	BH4	Elec. Conductivity	meter	Quarterly	16.08	12.16	SELECT		1000	no
	BH4	Chlorides	titration	Quarterly	15995	7741			250	no
	BH4	Ammoniacal Nitrogen	ise meter	Quarterly	1.87	0.89	mg/l		0.02	no
	BH4	Iron		Annual	389.6	389.6	ug/l		1	no
	BH4	TON		Quarterly	25.13	13.27	mg/l			no
	BH4	TOC	Hach	Quarterly	30	21.35	mg/l			no
Annual	BH4	Cadmium		Annual	<20	<20	ug/l		0.005mg/l	no
	BH4	Chromium (total)		Annual	<20	<20	ug/l		0.03mg/l	no
	BH4	Copper		Annual	26	26	ug/l		0.03mg/l	no
	BH4	Cyanide (Total)		Annual	<0.009	<0.009	ug/l		0.01mg/l	no
	BH4	Lead		Annual	<20	<20	ug/l		0.01mg/l	no
	BH4	Manganese		Annual	368	368	mg/l			no
	BH4	Manganese		Annual	264	264	ug/l		0.3mg/l	no
	BH4	Mercury		Annual	<0.10	<0.10	ug/l		0.001mg/l	no
	BH4	Potassium		Quarterly	131.9	111.65	mg/l		5mg/l	no
	BH4	Sodium		Quarterly	3063.7	2246.93				no
	BH4	Sulphate		Annual	792.95	792.95	mg/l		200mg/l	no
	BH4	Total Alkalinity		Annual	251.7	251.7	mg/l			no
	BH4	Total Phosphorus		Annual	0.26	0.26	mg/l			no
	BH4	Phenols		Annual	<1.0	<1.0	ug/l		0.5ug/l	no
	BH4	Acenaphthylene		Annual	<1.0	<1.0	ug/l			no
	BH4	Anthracene		Annual	<1.0	<1.0	ug/l			no
	BH4	Benzene		Annual	<1.0	<1.0	ug/l		10ug/l	no
	BH4	Bromodichloromethane		Annual	<1.0	<1.0	ug/l			no
	BH4	Bromoform		Annual	<1.0	<1.0	ug/l		12ug/l	no
	BH4	Chloroform		Annual	<1.0	<1.0	ug/l		12ug/l	no
	BH4	Chrysene		Annual	<1.0	<1.0	ug/l			no
	BH4	Dibromochloromethane		Annual	<1.0	<1.0	ug/l			no
	BH4	Fluoranthene		Annual	<1.0	<1.0	ug/l			no
	BH4	Fluorene		Annual	<1.0	<1.0	ug/l			no
	BH4	Naphthalene		Annual	<2.0	<2.0	ug/l			no
	BH4	Dibromochloromethane		Annual	<1.0	<1.0	ug/l			no
	BH4	Pentachlorophenol		Annual	<1.0	<1.0	ug/l		2.0ug/l	no
	BH4	Phenanthrene		Annual	<1.0	<1.0	ug/l			no
	BH4	Pyrene		Annual	<1.0	<1.0	ug/l			no
	BH4	Tetrachloroethene		Annual	<0.1	<0.1	ug/l			no

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	BH4	Trichloroethene		Annual	<1.0	<1.0	ug/l			no
	BH4	Hexachlorobenzene		Annual	<1.0	<1.0	ug/l		0.03ug/l	no
	BH4	Hexachlorobutadiene		Annual	<0.1	<0.1	ug/l		0.10ug/l	no
	BH4	2,4,6-Trichlorophenol		Annual	<1.0	<1.0	ug/l			no
	BH4	2,4-Dichlorophenol		Annual	<1.0	<1.0	ug/l			no
	BH4	2,4-Dimethylphenol		Annual	<1.0	<1.0	ug/l			no
	BH4	2-Chlorophenol		Annual	<1.0	<1.0	ug/l			no
	BH4	1,2,4-trichlorobenzene		Annual	<1.0	<1.0	ug/l			no
	BH4	1,2-dichlorobenzene		Annual	<1.0	<1.0	ug/l			no
	BH4	1,3-dichlorobenzene		Annual	<1.0	<1.0	ug/l			no
	BH4	1,4-dichlorobenzene		Annual	<1.0	<1.0	ug/l			no
	BH4	2,4,5-Trichlorophenol		Annual	<1.0	<1.0	ug/l			no
	BH4	2,4-Dinitrotoluene		Annual	<1.0	<1.0	ug/l			no
	BH4	2,6-Dinitrotoluene		Annual	<1.0	<1.0	ug/l			no
	BH4	2-Chloronaphthalene		Annual	<1.0	<1.0	ug/l			no
	BH4	2-Methylnaphthalene		Annual	<1.0	<1.0	ug/l			no
	BH4	2-Methylphenol		Annual	<1.0	<1.0	ug/l			no
	BH4	2-Nitrophenol		Annual	<1.0	<1.0	ug/l			no
	BH4	4-Bromophenyl Phenyl Ether		Annual	<1.0	<1.0	ug/l			no
	BH4	4-Chloro-3-methylphenol		Annual	<1.0	<1.0	ug/l			no
	BH4	4-Chlorophenyl phenyl ether		Annual	<1.0	<1.0	ug/l			no
	BH4	4-Nitrophenol		Annual	<5.0	<5.0	ug/l			no
	BH4	Acenaphthene		Annual	<1.0	<1.0	ug/l			no
	BH4	Benzo(a)anthracene		Annual	<1.0	<1.0	ug/l			no
	BH4	Benzo(a)pyrene		Annual	<1.0	<1.0	ug/l			no
	BH4	Benzo(b)fluoranthene		Annual	<1.0	<1.0	ug/l			no
	BH4	Benzo(g,h,i)perylene		Annual	<1.0	<1.0	ug/l			no
	BH4	Benzyl Butyl Phthalate		Annual	<1.0	<1.0	ug/l			no
	BH4	Bis(2-chloroethoxy)methane		Annual	<1.0	<1.0	ug/l			no

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	BH4	Bis(2-chloroethyl)ether	Annual	<1.0	<1.0	ug/l	no
	BH4	Bis(2-chloroisopropyl)ether	Annual	<1.0	<1.0	ug/l	no
	BH4	Bis(2-ethylhexyl)phthalate	Annual	<5.0	<5.0	ug/l	no
	BH4	Dibenz(a,h)anthracene	Annual	<1.0	<1.0	ug/l	no
	BH4	Dibenzofuran	Annual	<1.0	<1.0	ug/l	no
	BH4	Diethylphthalate	Annual	<1.0	<1.0	ug/l	no
	BH4	di-n-Butylphthalate	Annual	<1.0	<1.0	ug/l	no
	BH4	Di-n-octylphthalate	Annual	<1.0	<1.0	ug/l	no
	BH4	Diphenylamine	Annual	<1.0	<1.0	ug/l	no
	BH4	Hexachloroethane	Annual	<1.0	<1.0	ug/l	no
	BH4	Indeno(1,2,3-c,d)pyrene	Annual	<1.0	<1.0	ug/l	no
	BH4	Isophorone	Annual	<1.0	<1.0	ug/l	no
	BH4	Nitrobenzene	Annual	<1.0	<1.0	ug/l	no
	BH4	n-Nitrosodi-n-propylamine	Annual	<1.0	<1.0	ug/l	no
	BH4	Acetone	Annual	<2.0	<2.0	ug/l	no
	BH4	Dichloromethane	Annual	<5.0	<5.0	ug/l	10ug/l
	BH4	Tetrahydrofuran	Annual	<0.5	<0.5	ug/l	no
	BH4	Toluene	Annual	<0.5	<0.5	ug/l	no
	BH4	Xylene -o	Annual	<0.5	<0.5	ug/l	10ug/l
	BH4	Dichlorodifluoromethane	Annual	<1.0	<1.0	ug/l	no
	BH4	Chloromethane	Annual	<0.5	<0.5	ug/l	no
	BH4	Ethyl Chloride/Chloroethane	Annual	<0.5	<0.5	ug/l	no
	BH4	Vinyl Chloride	Annual	<0.5	<0.5	ug/l	no
	BH4	Bromomethane	Annual	<0.5	<0.5	ug/l	no
	BH4	Trichloromonofluoromethane	Annual	<0.5	<0.5	ug/l	no
	BH4	Ethyl Ether/Diethyl Ether	Annual	<0.5	<0.5	ug/l	no
	BH4	1,1 Dichloroethene	Annual	<0.5	<0.5	ug/l	no
	BH4	Iodomethane/Methyl iodide	Annual	<0.5	<0.5	ug/l	no
	BH4	Carbon Disulphide	Annual	<0.5	<0.5	ug/l	no
	BH4	Allyl Chloride	Annual	<0.5	<0.5	ug/l	no
	BH4	Chloromethyl Cyanide/Chloroacetonitrile	Annual	<0.5	<0.5	ug/l	no
	BH4	Propanenitrile	Annual	<10.	<10.	ug/l	no
	BH4	Trans-1,2 Dichloroethene	Annual	<0.5	<0.5	ug/l	no
	BH4	MtBE	Annual	<0.5	<0.5	ug/l	no

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BH4	1,1-dichloroethane	Annual	<0.5	<0.5	ug/l	no	
BH4	2,2-dichloropropane	Annual	<0.5	<0.5	ug/l	no	
BH4	cis-12 Dichloroethene	Annual	<0.5	<0.5	ug/l	no	
BH4	2-Butanone	Annual	<5.0	<5.0	ug/l	no	
BH4	Methyl Acrylate	Annual	<0.5	<0.5	ug/l	no	
BH4	Bromochloromethane	Annual	<0.5	<0.5	ug/l	no	
BH4	Methacrylonitrile	Annual	<5.0	<5.0	ug/l	no	
BH4	1,1,1-trichloroethane	Annual	<0.5	<0.5	ug/l	no	
BH4	1-Chlorobutane	Annual	<0.5	<0.5	ug/l	no	
BH4	Carbon Tetrachloride	Annual	<0.5	<0.5	ug/l	no	
BH4	11 Dichloropropene	Annual	<0.5	<0.5	ug/l	no	
BH4	1,2 dicloroethane	Annual	<0.5	<0.5	ug/l	no	
BH4	1,2-dichloropropane	Annual	<0.5	<0.5	ug/l	10ug/l	no
BH4	Dibromomethane	Annual	<0.5	<0.5	ug/l	no	
BH4	Methyl Methacrylate	Annual	<0.5	<0.5	ug/l	no	
BH4	13 Dichloropropene, cis	Annual	<2.0	<2.0	ug/l	no	
BH4	MIBK/4 Methyl 2 Pentanone	Annual	<2.0	<2.0	ug/l	no	
BH4	13 Dichloropropene, trans	Annual	<2.0	<2.0	ug/l	no	
BH4	Ethyl Methacrylate	Annual	<2.0	<2.0	ug/l	no	
BH4	112 Trichloroethane	Annual	<0.5	<0.5	ug/l	no	
BH4	1,3-dichloropropane	Annual	<0.5	<0.5	ug/l	no	
BH4	2-Hexanone	Annual	<1.0	<1.0	ug/l	no	
BH4	1,2-dibromoethane	Annual	<0.5	<0.5	ug/l	no	
BH4	Chlorobenzene	Annual	<0.5	<0.5	ug/l	1.0ug/l	no
BH4	1,1,1,2-tetrachloroethane	Annual	<2.0	<2.0	ug/l	no	
BH4	Ethylbenzene	Annual	<0.5	<0.5	ug/l	10ug/l	no
BH4	Xylene P&M	Annual	<0.5	<0.5	ug/l	no	
BH4	Styrene	Annual	<0.5	<0.5	ug/l	no	
BH4	Isopropylbenzene	Annual	<0.5	<0.5	ug/l	no	
BH4	Bromobenzene	Annual	<0.5	<0.5	ug/l	no	
BH4	1,1,1,2-tetrachloroethane	Annual	<0.5	<0.5	ug/l	no	

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	BH4	1,2,3-trichloropropane	Annual	<2.0	<2.0	ug/l	no	
	BH4	Trans 1,4 Dichloro 2 Butene, tran	Annual	<2.0	<2.0	ug/l	no	
	BH4	Propylbenzene	Annual	<0.5	<0.5	ug/l	no	
	BH4	2-chlorotoluene	Annual	<0.5	<0.5	ug/l	no	
	BH4	4-chlorotoluene	Annual	<0.5	<0.5	ug/l	no	
	BH4	1,3,5-trimethylbenzene	Annual	<0.5	<0.5	ug/l	no	
	BH4	Tert Butyl Benzene	Annual	<0.5	<0.5	ug/l	no	
	BH4	1,2,4-trimethylbenzene	Annual	<0.5	<0.5	ug/l	no	
	BH4	sec-butylbenzene	Annual	<0.5	<0.5	ug/l	no	
	BH4	P Isopropyltoluene	Annual	<0.5	<0.5	ug/l	no	
	BH4	N Butyl Benzene	Annual	<0.5	<0.5	ug/l	no	
	BH4	1,2-dibromo-3-chloropropane	Annual	<2.0	<2.0	ug/l	no	
	BH4	1,2,3-trichlorobenzene	Annual	<0.5	<0.5	ug/l	no	
	BH4	Total Solids	Annual	100000	100000	mg/l	no	
	BH4	Total Colifroms	Annual	>100	>100	MPN/100ML	no	
	BH4	Faecal Coliforms	Annual	>100	>100	MPN/100ML	no	
Quarterly	BH5	pH	Quarterly	7.33	7.33	SELECT	no	
	BH5	Temp	Quarterly	7.5	7.5	SELECT	9.5	
	BH5	Elec. Conductivity	Quarterly	3.6	3.6	SELECT	1000	
	BH5	Chlorides	Quarterly	359	359		250	
	BH5	Ammoniacal Nitrogen	Quarterly	6.15	6.15	mg/l	0.02	
	BH5	Iron	Annual	no annual	no annual	ug/l	0.02	
	BH5	TON	Quarterly	0.1	0.1	mg/l	no	
	BH5	TOC	Quarterly	3.1	3.1	mg/l	no	
	Annual	BH5	Cadmium	Annual	no annual	no annual	ug/l	0.005mg/l
		BH5	Chromium (total)	Annual	no annual	no annual	ug/l	0.03mg/l
	BH5	Copper	Annual	no annual	no annual	ug/l	0.03mg/l	
	BH5	Cyanide (Total)	Annual	no annual	no annual	ug/l	0.01mg/l	
	BH5	Lead	Annual	no annual	no annual	ug/l	0.01mg/l	
	BH5	Manganese	Annual	no annual	no annual	mg/l	no	
	BH5	Manganese	Annual	no annual	no annual	ug/l	0.3mg/l	
	BH5	Mercury	Annual	no annual	no annual	ug/l	0.001mg/l	
	BH5	Potassium	Quarterly	34.6	34.6	mg/l	5mg/l	
	BH5	Sodium	Quarterly	518.1	518.1		no	
	BH5	Sulphate	Annual	no annual	no annual	mg/l	no	
	BH5	Total Alkalinity	Annual	no annual	no annual	mg/l	no	

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	BH5	Total Phosphorus	Annual	no annual	no annual	mg/l			no
	BH5	Phenols	Annual	no annual	no annual	ug/l		0.5ug/l	no
	BH5	Acenaphthylene	Annual	no annual	no annual	ug/l			no
	BH5	Acenaphthylene	Annual	no annual	no annual	ug/l			no
	BH5	Anthracene	Annual	no annual	no annual	ug/l			no
	BH5	Benzene	Annual	no annual	no annual	ug/l			no
	BH5	Bromodichloromethane	Annual	no annual	no annual	ug/l			no
	BH5	Bromoform	Annual	no annual	no annual	ug/l			no
	BH5	Chloroform	Annual	no annual	no annual	ug/l		12ug/l	no
	BH5	Chrysene	Annual	no annual	no annual	ug/l			no
	BH5	Dibromochloromethane	Annual	no annual	no annual	ug/l			no
	BH5	Fluoranthene	Annual	no annual	no annual	ug/l			no
	BH5	Fluorene	Annual	no annual	no annual	ug/l			no
	BH5	Naphthalene	Annual	no annual	no annual	ug/l			no
	BH5	Dibromochloromethane	Annual	no annual	no annual	ug/l			no
	BH5	Pentachlorophenol	Annual	no annual	no annual	ug/l		2.0ug/l	no
	BH5	Phenanthrene	Annual	no annual	no annual	ug/l			no
	BH5	Pyrene	Annual	no annual	no annual	ug/l			no
	BH5	Tetrachloroethene	Annual	no annual	no annual	ug/l			no
	BH5	Trichloroethene	Annual	no annual	no annual	ug/l			no
	BH5	Hexachlorobenzene	Annual	no annual	no annual	ug/l		0.03ug/l	no
	BH5	Hexachlorobutadiene	Annual	no annual	no annual	ug/l		0.10ug/l	no
	BH5	2,4,6-Trichlorophenol	Annual	no annual	no annual	ug/l			no
	BH5	2,4-Dichlorophenol	Annual	no annual	no annual	ug/l			no
	BH5	2,4-Dimethylphenol	Annual	no annual	no annual	ug/l			no
	BH5	2-Chlorophenol	Annual	no annual	no annual	ug/l			no
	BH5	1,2,4-trichlorobenzene	Annual	no annual	no annual	ug/l			no
	BH5	1,2-dichlorobenzene	Annual	no annual	no annual	ug/l			no
	BH5	1,3-dichlorobenzene	Annual	no annual	no annual	ug/l			no
	BH5	1,4-dichlorobenzene	Annual	no annual	no annual	ug/l			no
	BH5	2,4,5-Trichlorophenol	Annual	no annual	no annual	ug/l			no
	BH5	2,4-Dinitrotoluene	Annual	no annual	no annual	ug/l			no
	BH5	2,6-Dinitrotoluene	Annual	no annual	no annual	ug/l			no

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BH5	2-Chloronaphthalene	Annual	no annual	no annual	ug/l	no
BH5	2-Methylnaphthalene	Annual	no annual	no annual	ug/l	no
BH5	2-Methylphenol	Annual	no annual	no annual	ug/l	no
BH5	2-Nitrophenol	Annual	no annual	no annual	ug/l	no
BH5	4-Bromophenyl Phenyl Ether	Annual	no annual	no annual	ug/l	no
BH5	4-Chloro-3-methylphenol	Annual	no annual	no annual	ug/l	no
BH5	4-Chlorophenyl phenyl ether	Annual	no annual	no annual	ug/l	no
BH5	4-Nitrophenol	Annual	no annual	no annual	ug/l	no
BH5	Acenaphthene	Annual	no annual	no annual	ug/l	no
BH5	Benzo(a)anthracene	Annual	no annual	no annual	ug/l	no
BH5	Benzo(a)pyrene	Annual	no annual	no annual	ug/l	no
BH5	Benzo(b)fluoranthene	Annual	no annual	no annual	ug/l	no
BH5	Benzo(g,h,i)perylene	Annual	no annual	no annual	ug/l	no
BH5	Benzyl Butyl Phthalate	Annual	no annual	no annual	ug/l	no
BH5	Bis(2-chloroethoxy)methane	Annual	no annual	no annual	ug/l	no
BH5	Bis(2-chloroethyl)ether	Annual	no annual	no annual	ug/l	no
BH5	Bis(2-chloroisopropyl)ether	Annual	no annual	no annual	ug/l	no
BH5	Bis(2-ethylhexyl)phthalate	Annual	no annual	no annual	ug/l	no
BH5	Dibenz(a,h)anthracene	Annual	no annual	no annual	ug/l	no
BH5	Dibenzofuran	Annual	no annual	no annual	ug/l	no
BH5	Diethylphthalate	Annual	no annual	no annual	ug/l	no
BH5	di-n-Butylphthalate	Annual	no annual	no annual	ug/l	no
BH5	Di-n-octylphthalate	Annual	no annual	no annual	ug/l	no
BH5	Diphenylamine	Annual	no annual	no annual	ug/l	no
BH5	Hexachloroethane	Annual	no annual	no annual	ug/l	no
BH5	Indeno(1,2,3-c,d)pyrene	Annual	no annual	no annual	ug/l	no
BH5	Isophorone	Annual	no annual	no annual	ug/l	no
BH5	Nitrobenzene	Annual	no annual	no annual	ug/l	no
BH5	n-Nitrosodi-n-propylamine	Annual	no annual	no annual	ug/l	no
BH5	Acetone	Annual	no annual	no annual	ug/l	no
BH5	Dichloromethane	Annual	no annual	no annual	ug/l	no
BH5	Tetrahydrofuran	Annual	no annual	no annual	ug/l	no
BH5	Toluene	Annual	no annual	no annual	ug/l	10ug/l

Groundwater/Soil monitoring template			Lic No:	W0022-01	Year	2013			
BH5	Xylene -o		Annual	no annual	no annual	ug/l			no
BH5	Dichlorodifluoromethane		Annual	no annual	no annual	ug/l			no
BH5	Chloromethane		Annual	no annual	no annual	ug/l			no
BH5	Ethyl Chloride/Chloroethane		Annual	no annual	no annual	ug/l			no
BH5	Vinyl Chloride		Annual	no annual	no annual	ug/l			no
BH5	Bromomethane		Annual	no annual	no annual	ug/l			no
BH5	Trichloromonofluoromethane		Annual	no annual	no annual	ug/l			no
BH5	Ethyl Ether/Diethyl Ether		Annual	no annual	no annual	ug/l			no
BH5	1,1 Dichloroethene		Annual	no annual	no annual	ug/l			no
BH5	Iodomethane/Methyl iodide		Annual	no annual	no annual	ug/l			no
BH5	Carbon Disulphide		Annual	no annual	no annual	ug/l			no
BH5	Allyl Chloride		Annual	no annual	no annual	ug/l			no
BH5	Chlormethyl Cyanide/Chloroacetonitrile		Annual	no annual	no annual	ug/l			no
BH5	Propanenitrile		Annual	no annual	no annual	ug/l			no
BH5	Trans-1,2 Dichloroethene		Annual	no annual	no annual	ug/l			no
BH5	MtBE		Annual	no annual	no annual	ug/l			no
BH5	1,1-dichloroethane		Annual	no annual	no annual	ug/l			no
BH5	2,2-dichloropropane		Annual	no annual	no annual	ug/l			no
BH5	cis-1,2 Dichloroethene		Annual	no annual	no annual	ug/l			no
BH5	2-Butanone		Annual	no annual	no annual	ug/l			no
BH5	Methyl Acrylate		Annual	no annual	no annual	ug/l			no
BH5	Bromochloromethane		Annual	no annual	no annual	ug/l			no
BH5	Methacrylonitrile		Annual	no annual	no annual	ug/l			no
BH5	1,1,1-trichloroethane		Annual	no annual	no annual	ug/l			no
BH5	1-Chlorobutane		Annual	no annual	no annual	ug/l			no
BH5	Carbon Tetrachloride		Annual	no annual	no annual	ug/l			no
BH5	1,1 Dichloropropene		Annual	no annual	no annual	ug/l			no
BH5	1,2 dichloroethane		Annual	no annual	no annual	ug/l			no
BH5	1,2-dichloropropane		Annual	no annual	no annual	ug/l		10ug/l	no
BH5	Dibromomethane		Annual	no annual	no annual	ug/l			no
BH5	Methyl Methacrylate		Annual	no annual	no annual	ug/l			no
BH5	1,3 Dichloropropene,cis		Annual	no annual	no annual	ug/l			no

Groundwater/Soil monitoring template			Lic No:	W0022-01	Year	2013		
BH5	MBK/4 Methyl 2 Pentanone		Annual	no annual	no annual	ug/l		no
BH5	1,3 Dichloropropene,t rans		Annual	no annual	no annual	ug/l		no
BH5	Ethyl Methacrylate		Annual	no annual	no annual	ug/l		no
BH5	112 Trichloroethane		Annual	no annual	no annual	ug/l		no
BH5	1,3- dichloropropane		Annual	no annual	no annual	ug/l		no
BH5	2-Hexanone		Annual	no annual	no annual	ug/l		no
BH5	1,2- dibromoethane		Annual	no annual	no annual	ug/l		no
BH5	Chlorobenzene		Annual	no annual	no annual	ug/l	1.0ug/l	no
BH5	1,1,1,2- tetrachloroethane		Annual	no annual	no annual	ug/l		no
BH5	Ethylbenzene		Annual	no annual	no annual	ug/l	10ug/l	no
BH5	Xylene P&M		Annual	no annual	no annual	ug/l		no
BH5	Styrene		Annual	no annual	no annual	ug/l		no
BH5	Isopropylbenzene		Annual	no annual	no annual	ug/l		no
BH5	Bromobenzene		Annual	no annual	no annual	ug/l		no
BH5	1,1,2,2- tetrachloroethane		Annual	no annual	no annual	ug/l		no
BH5	1,2,3- trichloropropane		Annual	no annual	no annual	ug/l		no
BH5	Trans 1,4 Dichloro 2 Butene, tran		Annual	no annual	no annual	ug/l		no
BH5	Propylbenzene		Annual	no annual	no annual	ug/l		no
BH5	2-chlorotoluene		Annual	no annual	no annual	ug/l		no
BH5	4-chlorotoluene		Annual	no annual	no annual	ug/l		no
BH5	1,3,5- trimethylbenzene		Annual	no annual	no annual	ug/l		no
BH5	Tert Butyl Benzene		Annual	no annual	no annual	ug/l		no
BH5	1,2,4- trimethylbenzene		Annual	no annual	no annual	ug/l		no
BH5	sec-butylbenzene		Annual	no annual	no annual	ug/l		no
BH5	P Isopropyltoluene		Annual	no annual	no annual	ug/l		no
BH5	N Butyl Benzene		Annual	no annual	no annual	ug/l		no
BH5	1,2-dibromo-3- chloropropane		Annual	no annual	no annual	ug/l		no
BH5	1,2,3- trichlorobenzene		Annual	no annual	no annual	ug/l		no
BH5	Total Solids		Annual	no annual	no annual	mg/l		no
BH5	Total Coliforms		Annual	no annual	no annual	MPN/100ML		no

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	BH5	Faecal Coliforms		Annual	no annual	no annual	MPN/100ML			no
							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**	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
Quarterly	BH1	pH	METER	Quarterly	7.36	7.06	SELECT		9.5	no
	BH1	Temp	METER	Quarterly	5.3	5.3	SELECT			no
	BH1	Elec. Conductivity	METER	Quarterly	4.76	3.04	SELECT		1000	no
	BH1	Chlorides	TITRATION	Quarterly	14995	4947			250	no
	BH1	Ammoniacal Nitrogen	ISE METER	Quarterly	3.51	2.29	mg/l		0.02	no
	BH1	TON		Quarterly	2.69	1.72	mg/l			no
	BH1	TOC	HACH	Quarterly	19.8	15.75	mg/l			no
	BH1	Potassium		Quarterly	44.3	27.8	mg/l		5mg/l	
	BH1	Sodium		Quarterly	683	475.53				
Annual	BH1	Iron		Annual	724	724	ug/l			
	BH1	Cadmium		Annual	<20	<20	ug/l		0.005mg/l	no
	BH1	Chromium (total)		Annual	<20	<20	ug/l		0.03mg/l	no
	BH1	Copper		Annual	<20	<20	ug/l		0.03mg/l	no
	BH1	Cyanide (Total)		Annual	<0.009	<0.009	ug/l		0.01mg/l	no
	BH1	Lead		Annual	<20	<20	ug/l		0.01mg/l	no
	BH1	Manganese		Annual	67.8	67.8	mg/l			no
	BH1	Manganese		Annual	3881	3881	ug/l		0.3mg/l	no
	BH1	Mercury		Annual	<0.1	<0.1	ug/l		0.001mg/l	no
	BH1	Sulphate		Annual	135.5	135.5	mg/l		200mg/l	no
	BH1	Total Alkalinity		Annual	392.86	392.86	mg/l			no
	BH1	Total Phosphorus		Annual	0.02	0.02	mg/l			no
	BH1	Phenols		Annual	<1.0	<1.0	ug/l		0.5ug/l	no
	BH1	Acenaphthylene		Annual	<1.0	<1.0	ug/l			no
	BH1	Anthracene		Annual	<1.0	<1.0	ug/l			no
	BH1	Benzene		Annual	<1.0	<1.0	ug/l		10ug/l	no
	BH1	Bromodichloromethane		Annual	<1.0	<1.0	ug/l			no
	BH1	Bromoform		Annual	<1.0	<1.0	ug/l		12ug/l	no
	BH1	Chloroform		Annual	<1.0	<1.0	ug/l		12ug/l	no
	BH1	Chrysene		Annual	<1.0	<1.0	ug/l			no
	BH1	Dibromochloromethane		Annual	<1.0	<1.0	ug/l			no
	BH1	Fluoranthene		Annual	<1.0	<1.0	ug/l			no
	BH1	Fluorene		Annual	<1.0	<1.0	ug/l			no

Groundwater/Soil monitoring template			Lic No:	W0022-01	Year	2013
BH1	Naphthalene	Annual	<2.0	<2.0	ug/l	no
BH1	Dibromochloromethane	Annual	<1.0	<1.0	ug/l	no
BH1	Pentachlorophenol	Annual	<1.0	<1.0	ug/l	2.0ug/l
BH1	Phenanthrene	Annual	<1.0	<1.0	ug/l	no
BH1	Pyrene	Annual	<1.0	<1.0	ug/l	no
BH1	Tetrachloroethene	Annual	<0.1	<0.1	ug/l	no
BH1	Trichloroethene	Annual	<1.0	<1.0	ug/l	no
BH1	Hexachlorobenzene	Annual	<1.0	<1.0	ug/l	0.03ug/l
BH1	Hexachlorobutadiene	Annual	<0.1	<0.1	ug/l	0.10ug/l
BH1	2,4,6-Trichlorophenol	Annual	<1.0	<1.0	ug/l	no
BH1	2,4-Dichlorophenol	Annual	<1.0	<1.0	ug/l	no
BH1	2,4-Dimethylphenol	Annual	<1.0	<1.0	ug/l	no
BH1	2-Chlorophenol	Annual	<1.0	<1.0	ug/l	no
BH1	1,2,4-trichlorobenzene	Annual	<1.0	<1.0	ug/l	no
BH1	1,2-dichlorobenzene	Annual	<1.0	<1.0	ug/l	no
BH1	1,3-dichlorobenzene	Annual	<1.0	<1.0	ug/l	no
BH1	1,4-dichlorobenzene	Annual	<1.0	<1.0	ug/l	no
BH1	2,4,5-Trichlorophenol	Annual	<1.0	<1.0	ug/l	no
BH1	2,4-Dinitrotoluene	Annual	<1.0	<1.0	ug/l	no
BH1	2,6-Dinitrotoluene	Annual	<1.0	<1.0	ug/l	no
BH1	2-Chloronaphthalene	Annual	<1.0	<1.0	ug/l	no
BH1	2-Methylnaphthalene	Annual	<1.0	<1.0	ug/l	no
BH1	2-Methylphenol	Annual	<1.0	<1.0	ug/l	no
BH1	2-Nitrophenol	Annual	<1.0	<1.0	ug/l	no
BH1	4-Bromophenyl Phenyl Ether	Annual	<1.0	<1.0	ug/l	no
BH1	4-Chloro-3-methylphenol	Annual	<1.0	<1.0	ug/l	no
BH1	4-Chlorophenyl phenyl ether	Annual	<1.0	<1.0	ug/l	no
BH1	4-Nitrophenol	Annual	<5.0	<5.0	ug/l	no
BH1	Acenaphthene	Annual	<1.0	<1.0	ug/l	no
BH1	Benzo(a)anthracene	Annual	<1.0	<1.0	ug/l	no
BH1	Benzo(a)pyrene	Annual	<1.0	<1.0	ug/l	no

Groundwater/Soil monitoring template			Lic No:	W0022-01	Year	2013			
	BH1	Benzo(b)fluoranthene	Annual	<1.0	<1.0	ug/l			no
	BH1	Benzo(g,h,i)perylene	Annual	<1.0	<1.0	ug/l			no
	BH1	Butyl Phthalate	Annual	<1.0	<1.0	ug/l			no
	BH1	Bis(2-chloroethoxy)methane	Annual	<1.0	<1.0	ug/l			no
	BH1	Bis(2-chloroethoxy)ether	Annual	<1.0	<1.0	ug/l			no
	BH1	Bis(2-chloroisopropyl)ether	Annual	<1.0	<1.0	ug/l			no
	BH1	Bis(2-ethylhexyl)phthalate	Annual	<5.0	<5.0	ug/l			no
	BH1	Dibenz(a,h)anthracene	Annual	<1.0	<1.0	ug/l			no
	BH1	Dibenzofuran	Annual	<1.0	<1.0	ug/l			no
	BH1	Diethylphthalate	Annual	<1.0	<1.0	ug/l			no
	BH1	di-n-Butylphthalate	Annual	<1.0	<1.0	ug/l			no
	BH1	Di-n-octylphthalate	Annual	<1.0	<1.0	ug/l			no
	BH1	Diphenylamine	Annual	<1.0	<1.0	ug/l			no
	BH1	Hexachloroethane	Annual	<1.0	<1.0	ug/l			no
	BH1	Indeno(1,2,3-c,d)pyrene	Annual	<1.0	<1.0	ug/l			no
	BH1	Isophorone	Annual	<1.0	<1.0	ug/l			no
	BH1	Nitrobenzene	Annual	<1.0	<1.0	ug/l			no
	BH1	n-Nitrosodi-n-propylamine	Annual	<1.0	<1.0	ug/l			no
	BH1	Acetone	Annual	<2.0	<2.0	ug/l			no
	BH1	Dichloromethane	Annual	<5.0	<5.0	ug/l		10ug/l	no
	BH1	Tetrahydrofuran	Annual	<0.5	<0.5	ug/l			no
	BH1	Toluene	Annual	<0.5	<0.5	ug/l			no
	BH1	Xylene -o	Annual	<0.5	<0.5	ug/l		10ug/l	no
	BH1	Dichlorodifluoromethane	Annual	<1.0	<1.0	ug/l			no
	BH1	Chloromethane	Annual	<0.5	<0.5	ug/l			no
	BH1	Ethyl Chloride/Chloroethane	Annual	<0.5	<0.5	ug/l			no
	BH1	Vinyl Chloride	Annual	<0.5	<0.5	ug/l			no
	BH1	Bromomethane	Annual	<0.5	<0.5	ug/l			no
	BH1	Trichloromonofluoromethane	Annual	<0.5	<0.5	ug/l			no
	BH1	Ethyl Ether/Diethyl Ether	Annual	<0.5	<0.5	ug/l			no
	BH1	1,1 Dichloroethene	Annual	<0.5	<0.5	ug/l			no
	BH1	Iodomethane/Methyl iodide	Annual	<0.5	<0.5	ug/l			no
	BH1	Carbon Disulphide	Annual	<0.5	<0.5	ug/l			no

Groundwater/Soil monitoring template			Lic No:	W0022-01	Year	2013
BH1	Allyl Chloride	Annual	<0.5	<0.5	ug/l	no
BH1	Chlormethyl Cyanide/Chloroacetonitrile	Annual	<0.5	<0.5	ug/l	no
BH1	Propanenitrile	Annual	<10.	<10.	ug/l	no
BH1	Trans-1,2 Dichloroethene	Annual	<0.5	<0.5	ug/l	no
BH1	MtBE	Annual	<0.5	<0.5	ug/l	no
BH1	1,1-dichloroethane	Annual	<0.5	<0.5	ug/l	no
BH1	2,2-dichloropropane	Annual	<0.5	<0.5	ug/l	no
BH1	cis-1,2 Dichloroethene	Annual	<0.5	<0.5	ug/l	no
BH1	2-Butanone	Annual	<5.0	<5.0	ug/l	no
BH1	Methyl Acrylate	Annual	<0.5	<0.5	ug/l	no
BH1	Bromochloromethane	Annual	<0.5	<0.5	ug/l	no
BH1	Methacrylonitrile	Annual	<5.0	<5.0	ug/l	no
BH1	1,1,1-trichloroethane	Annual	<0.5	<0.5	ug/l	no
BH1	1-Chlorobutane	Annual	<0.5	<0.5	ug/l	no
BH1	Carbon Tetrachloride	Annual	<0.5	<0.5	ug/l	no
BH1	1,1 Dichloropropene	Annual	<0.5	<0.5	ug/l	no
BH1	1,2 dichloroethane	Annual	<0.5	<0.5	ug/l	no
BH1	1,2-dichloropropane	Annual	<0.5	<0.5	ug/l	10ug/l
BH1	Dibromomethane	Annual	<0.5	<0.5	ug/l	no
BH1	Methyl Methacrylate	Annual	<0.5	<0.5	ug/l	no
BH1	1,3 Dichloropropene, cis	Annual	<2.0	<2.0	ug/l	no
BH1	MIBK/4 Methyl 2 Pentanone	Annual	<2.0	<2.0	ug/l	no
BH1	1,3 Dichloropropene, trans	Annual	<2.0	<2.0	ug/l	no
BH1	Ethyl Methacrylate	Annual	<2.0	<2.0	ug/l	no
BH1	1,1,2 Trichloroethane	Annual	<0.5	<0.5	ug/l	no
BH1	1,3-dichloropropane	Annual	<0.5	<0.5	ug/l	no
BH1	2-Hexanone	Annual	<1.0	<1.0	ug/l	no
BH1	1,2-dibromoethane	Annual	<0.5	<0.5	ug/l	no
BH1	Chlorobenzene	Annual	<0.5	<0.5	ug/l	1.0ug/l
BH1	1,1,1,2-tetrachloroethane	Annual	<2.0	<2.0	ug/l	no
BH1	Ethylbenzene	Annual	<0.5	<0.5	ug/l	10ug/l

Groundwater/Soil monitoring template				Lic No:	W0022-01	Year	2013				
	BH1	Xylene P&M		Annual	<0.5	<0.5	ug/l			no	
	BH1	Styrene		Annual	<0.5	<0.5	ug/l			no	
	BH1	Isopropylbenzene		Annual	<0.5	<0.5	ug/l			no	
	BH1	Bromobenzene		Annual	<0.5	<0.5	ug/l			no	
	BH1	1,1,2,2-tetrachloroethane		Annual	<0.5	<0.5	ug/l			no	
	BH1	1,2,3-trichloropropane		Annual	<2.0	<2.0	ug/l			no	
	BH1	Trans 1,4 Dichloro 2 Butene, tran		Annual	<2.0	<2.0	ug/l			no	
	BH1	Propylbenzene		Annual	<0.5	<0.5	ug/l			no	
	BH1	2-chlorotoluene		Annual	<0.5	<0.5	ug/l			no	
	BH1	4-chlorotoluene		Annual	<0.5	<0.5	ug/l			no	
	BH1	1,3,5-trimethylbenzene		Annual	<0.5	<0.5	ug/l			no	
	BH1	Tert Butyl Benzene		Annual	<0.5	<0.5	ug/l			no	
	BH1	1,2,4-trimethylbenzene		Annual	<0.5	<0.5	ug/l			no	
	BH1	sec-butylbenzene		Annual	<0.5	<0.5	ug/l			no	
	BH1	p Isopropyltoluene		Annual	<0.5	<0.5	ug/l			no	
	BH1	N Butyl Benzene		Annual	<0.5	<0.5	ug/l			no	
	BH1	1,2-dibromo-3-chloropropane		Annual	<2.0	<2.0	ug/l			no	
	BH1	1,2,3-trichlorobenzene		Annual	<0.5	<0.5	ug/l			no	
	BH1	Total Solids		Annual	1990	1990	mg/l			no	
	BH1	Total Colifoms		Annual	>100	>100	MPN/100ML			no	
	BH1	Faecal Coliforms		Annual	0	0	MPN/100ML			no	
	Quarterly	BH2	pH	METER	Quarterly	7.51	7.23			9.5	no
		BH2	Temp	METER	Quarterly	7.5	7.5	SELECT			no
		BH2	Elec. Conductivity	METER	Quarterly	545	185.54	SELECT		1000	no
		BH2	Chlorides	TITRATION	Quarterly	6995	2633.86			250	no
		BH2	Ammoniacal Nitrogen	ISE METER	Quarterly	1.04	0.71	mg/l		0.02	no
		BH2	TON		Quarterly	8.05	2.49	mg/l			no
		BH2	TOC	HACH	Quarterly	20	6.52	mg/l			no
		BH2	Potassium		Quarterly	17	8.81	mg/l		5mg/l	
		BH2	Sodium		Quarterly	624	163.35				
	Annual	BH2	Iron		Annual	385	385	ug/l			
		BH2	Cadmium		Annual	<20	<20	ug/l		0.005mg/l	no
		BH2	Chromium (total)		Annual	<20	<20	ug/l		0.03mg/l	no
		BH2	Copper		Annual	<20	<20	ug/l		0.03mg/l	no

Groundwater/Soil monitoring template			Lic No:	W0022-01	Year	2013	
BH2	Cyanide (Total)	Annual	<0.009	<0.009	ug/l	0.01mg/l	no
BH2	Lead	Annual	<20	<20	ug/l	0.01mg/l	no
BH2	Magnesium	Annual	8.04	8.04	mg/l		no
BH2	Manganese	Annual	3716	3716	ug/l	0.3mg/l	no
BH2	Mercury	Annual	<0.10	<0.10	ug/l	0.001mg/l	no
BH2	Sulphate	Annual	5.78	5.78	mg/l	200mg/l	no
BH2	Total Alkalinity	Annual	330.03	330.03	mg/l		no
BH2	Total Phosphorus	Annual	0.04	0.04	mg/l		no
BH2	Phenols	Annual	<1.0	<1.0	ug/l	0.5ug/l	no
BH2	Acenaphthylene	Annual	<1.0	<1.0	ug/l		no
BH2	Anthracene	Annual	<1.0	<1.0	ug/l		no
BH2	Benzene	Annual	<1.0	<1.0	ug/l	10ug/l	no
BH2	Bromodichloromethane	Annual	<1.0	<1.0	ug/l		no
BH2	Bromoform	Annual	<1.0	<1.0	ug/l	12ug/l	no
BH2	Chloroform	Annual	<1.0	<1.0	ug/l	12ug/l	no
BH2	Chrysene	Annual	<1.0	<1.0	ug/l		no
BH2	Dibromochloromethane	Annual	<1.0	<1.0	ug/l		no
BH2	Fluoranthene	Annual	<1.0	<1.0	ug/l		no
BH2	Fluorene	Annual	<1.0	<1.0	ug/l		no
BH2	Naphthalene	Annual	<2.0	<2.0	ug/l		no
BH2	Dibromochloromethane	Annual	<1.0	<1.0	ug/l		no
BH2	Pentachlorophenol	Annual	<1.0	<1.0	ug/l	2.0ug/l	no
BH2	Phenanthrene	Annual	<1.0	<1.0	ug/l		no
BH2	Pyrene	Annual	<1.0	<1.0	ug/l		no
BH2	Tetrachloroethene	Annual	4.7	4.7	ug/l		no
BH2	Trichloroethene	Annual	<1.0	<1.0	ug/l		no
BH2	Hexachlorobenzene	Annual	<1.0	<1.0	ug/l	0.03ug/l	no
BH2	Hexachlorobutadiene	Annual	<0.1	<0.1	ug/l	0.10ug/l	no
BH2	2,4,6-Trichlorophenol	Annual	<1.0	<1.0	ug/l		no
BH2	2,4-Dichlorophenol	Annual	<<1.0	<1.0	ug/l		no
BH2	2,4-Dimethylphenol	Annual	<1.0	<1.0	ug/l		no
BH2	2-Chlorophenol	Annual	<1.0	<1.0	ug/l		no
BH2	1,2,4-trichlorobenzene	Annual	<1.0	<1.0	ug/l		no
BH2	1,2-dichlorobenzene	Annual	<1.0	<1.0	ug/l		no
BH2	1,3-dichlorobenzene	Annual	<1.0	<1.0	ug/l		no
BH2	1,4-dichlorobenzene	Annual	<1.0	<1.0	ug/l		no

Groundwater/Soil monitoring template			Lic No:	W0022-01	Year	2013	
	BH2	2,4,5-Trichlorophenol	Annual	<1.0	<1.0	ug/l	no
	BH2	2,4-Dinitrotoluene	Annual	<1.0	<1.0	ug/l	no
	BH2	2,6-Dinitrotoluene	Annual	<1.0	<1.0	ug/l	no
	BH2	2-Chloronaphthalene	Annual	<1.0	<1.0	ug/l	no
	BH2	2-Methylnaphthalene	Annual	<1.0	<1.0	ug/l	no
	BH2	2-Methylphenol	Annual	<1.0	<1.0	ug/l	no
	BH2	2-Nitrophenol	Annual	<1.0	<1.0	ug/l	no
	BH2	4-Bromophenyl Phenyl Ether	Annual	<1.0	<1.0	ug/l	no
	BH2	4-Chloro-3-methylphenol	Annual	<1.0	<1.0	ug/l	no
	BH2	4-Chlorophenyl phenyl ether	Annual	<1.0	<1.0	ug/l	no
	BH2	4-Nitrophenol	Annual	<5.0	<5.0	ug/l	no
	BH2	Acenaphthene	Annual	<1.0	<1.0	ug/l	no
	BH2	Benzo(a)anthracene	Annual	<1.0	<1.0	ug/l	no
	BH2	Benzo(a)pyrene	Annual	<1.0	<1.0	ug/l	no
	BH2	Benzo(b)fluoranthene	Annual	<1.0	<1.0	ug/l	no
	BH2	Benzo(g,h,i)perylene	Annual	<1.0	<1.0	ug/l	no
	BH2	Benzyl Butyl Phthalate	Annual	<1.0	<1.0	ug/l	no
	BH2	Bis(2-chloroethoxy)methane	Annual	<1.0	<1.0	ug/l	no
	BH2	Bis(2-chloroethyl)ether	Annual	<1.0	<1.0	ug/l	no
	BH2	Bis(2-chloroisopropyl)ether	Annual	<1.0	<1.0	ug/l	no
	BH2	Bis(2-ethylhexyl)phthalate	Annual	<5.0	<5.0	ug/l	no
	BH2	Dibenz(a,h)anthracene	Annual	<1.0	<1.0	ug/l	no
	BH2	Dibenzofuran	Annual	<1.0	<1.0	ug/l	no
	BH2	Diethylphthalate	Annual	<1.0	<1.0	ug/l	no
	BH2	di-n-Butylphthalate	Annual	<1.0	<1.0	ug/l	no
	BH2	Di-n-octylphthalate	Annual	<1.0	<1.0	ug/l	no
	BH2	Diphenylamine	Annual	<1.0	<1.0	ug/l	no
	BH2	Hexachloroethane	Annual	<1.0	<1.0	ug/l	no
	BH2	Indeno(1,2,3-c,d)pyrene	Annual	<1.0	<1.0	ug/l	no
	BH2	Isophorone	Annual	<1.0	<1.0	ug/l	no
	BH2	Nitrobenzene	Annual	<1.0	<1.0	ug/l	no
	BH2	n-Nitrosodi-n-propylamine	Annual	<1.0	<1.0	ug/l	no

Groundwater/Soil monitoring template			Lic No:	W0022-01	Year	2013
BH2	Acetone	Annual	<2.0	<2.0	ug/l	no
BH2	Dichloromethane	Annual	<5.0	<5.0	ug/l	10ug/l
BH2	Tetrahydrofuran	Annual	<0.5	<0.5	ug/l	no
BH2	Toluene	Annual	<0.5	<0.5	ug/l	no
BH2	Xylene -o	Annual	<0.5	<0.5	ug/l	10ug/l
BH2	Dichlorodifluoromethane	Annual	<1.0	<1.0	ug/l	no
BH2	Chloromethane	Annual	<0.5	<0.5	ug/l	no
BH2	Ethyl Chloride/Chloroethane	Annual	<0.5	<0.5	ug/l	no
BH2	Vinyl Chloride	Annual	<0.5	<0.5	ug/l	no
BH2	Bromomethane	Annual	<0.5	<0.5	ug/l	no
BH2	Trichloromonofluoromethane	Annual	<0.5	<0.5	ug/l	no
BH2	Ethyl Ether/Diethyl Ether	Annual	<0.5	<0.5	ug/l	no
BH2	1,1 Dichloroethene	Annual	<0.5	<0.5	ug/l	no
BH2	Iodomethane/Methyl Iodide	Annual	<0.5	<0.5	ug/l	no
BH2	Carbon Disulphide	Annual	<0.5	<0.5	ug/l	no
BH2	Allyl Chloride	Annual	<0.5	<0.5	ug/l	no
BH2	Chloromethyl Cyanide/Chloroacetonitrile	Annual	<0.5	<0.5	ug/l	no
BH2	Propanenitrile	Annual	<10.	<10.	ug/l	no
BH2	Trans-1,2 Dichloroethene	Annual	<0.5	<0.5	ug/l	no
BH2	MtBE	Annual	<0.5	<0.5	ug/l	no
BH2	1,1-dichloroethane	Annual	<0.5	<0.5	ug/l	no
BH2	2,2-dichloropropane	Annual	<0.5	<0.5	ug/l	no
BH2	cis-1,2 Dichloroethene	Annual	<0.5	<0.5	ug/l	no
BH2	2-Butanone	Annual	<5.0	<5.0	ug/l	no
BH2	Methyl Acrylate	Annual	<0.5	<0.5	ug/l	no
BH2	Bromochloromethane	Annual	<0.5	<0.5	ug/l	no
BH2	Methacrylonitrile	Annual	<5.0	<5.0	ug/l	no
BH2	1,1,1-trichloroethane	Annual	<0.5	<0.5	ug/l	no
BH2	1-Chlorobutane	Annual	<0.5	<0.5	ug/l	no
BH2	Carbon Tetrachloride	Annual	<0.5	<0.5	ug/l	no
BH2	1,1 Dichloropropene	Annual	<0.5	<0.5	ug/l	no
BH2	1,2 dicloroethane	Annual	<0.5	<0.5	ug/l	no
BH2	1,2-dichloropropane	Annual	<0.5	<0.5	ug/l	10ug/l

Groundwater/Soil monitoring template			Lic No:	W0022-01	Year	2013			
	BH2	Dibromomethane	Annual	<0.5	<0.5	ug/l			no
	BH2	Methyl Methacrylate	Annual	<0.5	<0.5	ug/l			no
	BH2	1,3-Dichloropropene, cis	Annual	<2.0	<2.0	ug/l			no
	BH2	MIBK/4 Methyl 2 Pentanone	Annual	<2.0	<2.0	ug/l			no
	BH2	1,3-Dichloropropene, trans	Annual	<2.0	<2.0	ug/l			no
	BH2	Ethyl Methacrylate	Annual	<2.0	<2.0	ug/l			no
	BH2	1,1,1-Trichloroethane	Annual	<0.5	<0.5	ug/l			no
	BH2	1,3-dichloropropane	Annual	<0.5	<0.5	ug/l			no
	BH2	2-Hexanone	Annual	<1.0	<1.0	ug/l			no
	BH2	1,2-dibromoethane	Annual	<0.5	<0.5	ug/l			no
	BH2	Chlorobenzene	Annual	<0.5	<0.5	ug/l		1.0ug/l	no
	BH2	1,1,1,2-tetrachloroethane	Annual	<2.0	<2.0	ug/l			no
	BH2	Ethylbenzene	Annual	<0.5	<0.5	ug/l		10ug/l	no
	BH2	Xylene P&M	Annual	<0.5	<0.5	ug/l			no
	BH2	Styrene	Annual	<0.5	<0.5	ug/l			no
	BH2	Isopropylbenzene	Annual	<0.5	<0.5	ug/l			no
	BH2	Bromobenzene	Annual	<0.5	<0.5	ug/l			no
	BH2	1,1,2,2-tetrachloroethane	Annual	<0.5	<0.5	ug/l			no
	BH2	1,2,3-trichloropropane	Annual	<2.0	<2.0	ug/l			no
	BH2	Trans 1,2-Dichloro Butene, trans	Annual	<2.0	<2.0	ug/l			no
	BH2	Propylbenzene	Annual	<0.5	<0.5	ug/l			no
	BH2	2-chlorotoluene	Annual	<0.5	<0.5	ug/l			no
	BH2	4-chlorotoluene	Annual	<0.5	<0.5	ug/l			no
	BH2	1,3,5-trimethylbenzene	Annual	<0.5	<0.5	ug/l			no
	BH2	Tert Butyl Benzene	Annual	<0.5	<0.5	ug/l			no
	BH2	1,2,4-trimethylbenzene	Annual	<0.5	<0.5	ug/l			no
	BH2	sec-butylbenzene	Annual	<0.5	<0.5	ug/l			no
	BH2	p-Isopropyltoluene	Annual	<0.5	<0.5	ug/l			no
	BH2	N Butyl Benzene	Annual	<0.5	<0.5	ug/l			no
	BH2	1,2-dibromo-3-chloropropane	Annual	<2.0	<2.0	ug/l			no

Groundwater/Soil monitoring template				Lic No:	W0022-01	Year	2013
	BH2	1,2,3-trichlorobenzene	Annual	<0.5	<0.5	ug/l	no
	BH2	Total Solids	Annual	366	366	mg/l	no
	BH2	Total Colifoms	Annual	>100	>100	MPN/100ML	no
	BH2	Faecal Coliforms	Annual	>100	>100	MPN/100ML	no
						SELECT	SELECT
<p>*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed by the EPA. Groundwater monitoring template</p>							
<p>More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites (EPA 2013). (see the link in G31)</p>							
<p>**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)</p>						<p>Groundwater Drinking water Surface regulations (private supply) Drinking water (public Interim Guideline water EQS GTV's standards supply) standards Values (IGV)</p>	

Groundwater/Soil monitoring template

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2013

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:

W0022-01

Year

2013

[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

		Commentary	
1	ELRA initial agreement status	Submitted and not agreed by EPA;	Closed Feb 2007
2	ELRA review status	SELECT	
3	Amount of Financial Provision cover required as determined by the latest ELRA	Specify	Authority Responsibility as
4	Financial Provision for ELRA status	SELECT	
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	SELECT	
9	Closure plan review status	SELECT	
10	Financial Provision for Closure status	SELECT	
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:	W0022-01	Year	2013
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	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 2008. It includes sections on Use of manual, Site location and description, Types of waste accepted and procedures,
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
Reduction of emissions to Air	Maintain low complaint numbers against the facility	90	Improvement of gas extraction system and operation	Site Staff & Management	Reduced emissions
Materials Handling/Storage/Bunding	Improve annual recycling rate by 5%	90	Improvement of Civic Amenity Site layout and improved maintenance of existing infrastructure	Site Staff & Management	Installation of infrastructure and improved housekeeping
Additional improvements	Improve Site security	75	Liasing with Security Company and An Gardaí Síochana to deter would-be intruders	Site Staff & Management	Improved Environmental Management Practices
Additional improvements	To control environmental nuisances at the facility	90	Reduction of waste intake, improved site practises	Site Staff	Increased compliance with licence conditions
Additional improvements	Review the closure modifications of the Waste Licence following the closure of landfill in Feb 2007	25	Improvement of site practise to ensure minimal interaction with surrounding environment	Site management	Increased compliance with licence conditions

Noise monitoring summary report

Lic No: W0022-01

Year

2013

1 Was noise monitoring a licence requirement for the AER period?

Yes

If yes please fill in table N1 noise summary below

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)?
10/10/2013	30min	N1		41.5	36.3	42.1	58.4	No	No	No noise from landfill site. External noise from road, nature and adjacent quarry	Yes
10/10/2013	30min	N3		46.7	42.4	48.2	65.5	No	No	No noise from landfill site. External noise from road, nature and adjacent quarry	Yes
10/10/2013	30min	N4		50.6	43.9	53.1	73.7	No	No	No noise from landfill site. Civic Amenity Site JCB in operation for approx 5min of survey. External noise from road, nature and adjacent quarry.	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?

Site fully compliant with Waste Licence Noise Regulations

Resource Usage/Energy efficiency summary

Lic No:

W0022-01

Year

2013

Additional information

- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below
- 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
- 3 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

Enter date of audit	
No	
SELECT	

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)	70.093	68.251	-3%	
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	70.093	68.251	-3%	
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)	0.85	0.9	6%	
Light Fuel Oil (m3)	100	110	10%	
Natural gas (m3)				
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 ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater							
Surface water							
Public supply	238	224	6%	N/A	224	N/A	0
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

Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)					
Non-Hazardous (Tonnes)					

Resource Usage/Energy efficiency summary	Lic No: W0022-01	Year	2013
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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					

WASTE SUMMARY		Lic No:	W0022-01	Year	2013
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	

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 Recoverer/Disposer	Haz Waste : Address of Next Destination Facility Non-Haz Waste: Address of Recoverer/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	13 02 08	Yes	3.92	other engine, gear and lubricating oils	R9	M	Weighed	Offsite in Ireland	Enva Ltd,W184-01	Clonminam Industrial Estate, " ,Portlaoise,Co Laois,Ireland	Enva Ltd,W184-01	Clonminam Industrial Estate, " ,Portlaoise,Co Laois,Ireland
Within the Country	15 01 01	No	51.16	paper and cardboard packaging	R3	M	Weighed	Offsite in Ireland	greenstar Ltd,W136-02	Corbally North,Srasfields Court,Glanmire, Co Cork,Ireland		
Within the Country	15 01 02	No	32.08	plastic packaging	R5	M	Weighed	Offsite in Ireland	Green Dragon Recycling Ltd,CK/09/0629/01	Corbally North,Sarsfields Court,Glanmire, Co Cork,Ireland		
Within the Country	15 01 04	No	0.46	metallic packaging	R4	M	Weighed	Offsite in Ireland	Mr Binman,W0061-01	Luddenmore,Grange,Kilmallock,Co Limerick,Ireland		
Within the Country	15 01 07	No	29.94	glass packaging	R5	M	Weighed	Offsite in Ireland	Mr Binman,W0061-01	Luddenmore,Grange,Kilmallock,Co Limerick,Ireland		
Within the Country	16 06 01	Yes	1.38	lead batteries	R6	M	Weighed	Offsite in Ireland	KMK Metals Ltd,W0133-03	Cappincur Industrail Estate,Daingean Rd,Tullamore,Co Offaly,Ireland	KMK Metals Ltd,W0133-03	Cappincur Industrail Estate,Daingean Rd,Tullamore,Co Offaly,Ireland
Within the Country	16 06 04	No	1.37	alkaline batteries (except 16 06 03)	R13	M	Weighed	Offsite in Ireland	KMK Metals Ltd,W0133-03	Cappincur Industrail Estate,Daingean Rd,Tullamore,Co Offaly,Ireland		
Within the Country	17 01 07	No	483.81	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Ballineen Skip Hire,WCP-CK-09-0608-04	Connagh,Ballineen ,Co Cork,,Ireland		
Within the Country	19 07 03	No	9740.07	landfill leachate other than those mentioned in 19 07 02	D8	M	Weighed	Offsite in Ireland	Carrigtwohill Wastewater Treatment Plant,D0044-01	Wastewater Treatment Plant,Tullagreen, Carrigtwohill Wastewater Treatment Plant,Co Cork,Ireland		
Within the Country	20 01 01	No	59.73	paper and cardboard	R3	M	Weighed	Offsite in Ireland	greenstar Ltd,W136-02	Corbally North,Srasfields Court,Glanmire, Co Cork,Ireland		

WASTE SUMMARY		Lic No:	W0022-01	Year	2013						
Within the Country	20 01 02	No	23.6 glass	R5	M	Weighed	Offsite in Ireland	MSM Recycling Ltd,W0079-01	41-42 Cookstown Industrial Estate,Tallaght,Dublin,D24,Ireland		
Within the Country	20 01 11	No	8.43 textiles	R5	M	Weighed	Offsite in Ireland	Textile Recycling Ltd,WCP-DC-08-1225-01	Glen Abbey Business Park,Tallaght,Dublin,D24,Ireland		
Within the Country	20 01 23	Yes	discarded equipment containing 0.41 chlorofluorocarbons	R4	M	Weighed	Offsite in Ireland	KMK Metals Ltd,W0133-03	Cappincur Industriail Estate,Daingean Rd,Tullamore,Co Offaly,Ireland	KMK Metals Ltd,W0133-03	Cappincur Industriail Estate,Daingean Rd,Tullamore,Co Offaly,Ireland
Within the Country	20 01 28	No	paint, inks, adhesives and resins other than those mentioned in 20 01 27	R1	M	Weighed	Offsite in Ireland	Enva Ltd,W184-01	Industrial Estate,"",Portlaoise,Co Laois,Ireland		
Within the Country	20 01 35	Yes	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	R4	M	Weighed	Offsite in Ireland	KMK Metals Ltd,W0133-03	Cappincur Industriail Estate,Daingean Rd,Tullamore,Co Offaly,Ireland	KMK Metals Ltd,W0133-03	Cappincur Industriail Estate,Daingean Rd,Tullamore,Co Offaly,Ireland
Within the Country	20 01 36	No	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R4	M	Weighed	Offsite in Ireland	KMK Metals Ltd,W0133-03	Cappincur Industriail Estate,Daingean Rd,Tullamore,Co Offaly,Ireland		
Within the Country	20 01 36	No	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R4	M	Weighed	Offsite in Ireland	KMK Metals Ltd,W0133-03	Cappincur Industriail Estate,Daingean Rd,Tullamore,Co Offaly,Ireland		
Within the Country	20 01 38	No	wood other than that mentioned in 20 01 37	R13	M	Weighed	Offsite in Ireland	CTO Environmental Solutions Ltd,CK/09/0018/02	Tait's Farm,Rostellan, Middleton,Co Cork,Ireland		
Within the Country	20 01 40	No	82.4 metals	R4	M	Weighed	Offsite in Ireland	Pouladuff Dismantlers Ltd,CK/0584/01	Pouladuff Rd,Togher,Cork,Co Cork,Ireland		
Within the Country	20 02 01	No	296.84 biodegradable waste	R3	M	Weighed	Offsite in Ireland	Bord na Mona,W0198-01	Kilberry,Athy,Co Kildare,Kildare,Ireland		
Within the Country	20 03 01	No	665.68 mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Country Clean Recycling Ltd,W0257	Chuchfield Industrial Estate,John F Connolly Road,Cork,Co Cork,Ireland		
Within the Country	20 03 07	No	621.12 bulky waste	D5	M	Weighed	Offsite in Ireland	greenstar Ltd,W136-02	Corbally North,Srasfields Court,Glanmire,Co Cork,Ireland		

WASTE SUMMARY	Lic No:	W0022-01	Year	2013
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Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

Was meteorological 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	Yes	Yes	Yes	Yes	Yes	Yes	All license conditions being met under current monitoring regime

-> 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	0	65760m2	0	65760m2	1mm HDPE welded liner, geotextile drainage layer and protection barrier covered with 1m of suitable, screened soil.	

*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?

Yes
No

10 Is leachate released to surface water? If yes please complete leachate mass load information below

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
9740.07	247.7	9824.5	1799	58398.2	No	Wastewater Treatment Plant with Mixing tank, Oxidation ditch & Settlement tanks	

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
395471 kg CH4/annum	0	0	Yes	Gas captured figure is Annual Methane burn-off in kg/annum. Areas of elevated VOC's are identified by the surveys and are attended to by site staff.

Comments on liner type

