

SELECT	cells that are highlighted blue contain a dropdown menu click to select one option from the list
<a href="#">guidance document link</a>	cells that contain underlined text click to access relevant guidance documents for this section
Table heading *	table headings followed by a symbol have an associated footnote or instructions
Cells with red indicator in top right corner	cells that have a red indicator in the top right corner contain a comment box with further instructions or clarification

Please note an interpretation of results is still required. This should be entered in the additional information/comments boxes within the templates. Please size these boxes appropriately to fit your interpretation, if additional space is required please include an appendix to the AER template and merge it as part of the AER PDF document. The excel template should have all cells sized appropriately so that all text is readable before it is converted to PDF document.

Facility Information Summary	
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AER Reporting Year	2015
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Licence Register Number	W0089-02
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Name of site	Derryconnell Landfill & Civic Amenity Site
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Site Location	Derryconnell, Schull, Co. Cork
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NACE Code	3821
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Class/Classes of Activity	5(c), 5(d), & 50.1
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National Grid Reference (6E, 6 N)	(49E, 53N)
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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.**

**Description of Activities on Site during 2015:**

The Facility at Derryconnell consists of a closed Landfill and a Civic Amenity Site. Deposition of waste at the landfill ceased in August 2010 and the final capping works were completed by Q2 2011. The main activities at the site during 2015 were the extraction of gas and leachate from the closed landfill (extracted gas is flared on-site and leachate is pumped to an on-site lagoon prior to being transported for treatment to Bandon WWTP) and the acceptance and storage of waste at the Civic Amenity Site for off-site treatment/disposal/recycling.

**Exceedances of Licence Limits during 2015:**

Carbon Dioxide emissions exceeded the licence limit six times at perimeter monitoring locations L6 and L7 during 2015.

**Overview of Licence Compliance during 2015:**

3 no. non compliances were issued against the licence during 2015:-

1. Late submission of the Report on Compliance with the EO (Groundwater) Regulations.
2. The leachate lagoon was not covered as required in Condition 3.24.2 of the licence.
3. ELV exceedance

**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.

<u>Mairead Hales</u>	
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Signature	<u>15/03/2015</u>
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Group/Facility manager	Date
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(or nominated, suitably qualified and experienced deputy)

**AIR-summary template**

Lic No:

W0089-02

Year

2015

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	Nitrogen Oxides at Landfill Gas Flare

**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
A1-1 (Landfill Gas Flare)	Nitrogen oxides (NOx/NO2)	Biannually	150 mg/m <sup>3</sup>	No 30min mean can exceed the ELV	75.53	mg/Nm3	yes	EN 14792:2005	17.94	
A1-1 (Landfill Gas Flare)	Nitrogen oxides (NOx/NO2)	Biannually	150 mg/m <sup>3</sup>	No 30min mean can exceed the ELV	70.22	mg/Nm3	yes	EN 14792:2005		
A1-1 (Landfill Gas Flare)	Volumetric flow	Continuous	N/A	N/A	114.00	Nm3/hour	N/A	OTH		Average flow rate during flare runtime
	SELECT			SELECT		SELECT	SELECT	SELECT		

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

<b>AIR-summary template</b>	Lic No: W0089-02	Year: 2015
<b>Continuous Monitoring</b>		

4 Does your site carry out continuous air emissions monitoring? <small>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)</small>	Yes	Carbon Monoxide at Landfill Gas Flare
5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below	No	
6 Do you have a proactive service agreement for each piece of continuous monitoring equipment?	Yes	Service & Maintenance contract in place
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
A1-1 (Landfill Gas Flare)	Carbon monoxide (CO)	N/A	10 Mins	N/A	mg/Nm3	0.64	0.93	0	N/A	
A1-1 (Landfill Gas Flare)	Volumetric flow	N/A	10 Mins	N/A	Nm3/hour	114.00	136	0	N/A	
	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

AIR-summary template		Lic No: W0089-02	Year: 2015	
<b>Solvent use and management on site</b>				
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	
<b>Table A4: Solvent Management Plan Summary Total VOC Emission limit value</b>		<a href="#">Solvent regulations</a> 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 (direct and fugitive)	Total VOC emissions as %of solvent input  Total Emission Limit Value (ELV) in licence or any revision thereof	
			SELECT	
			SELECT	
<b>Table A5: Solvent Mass Balance summary</b>				
	(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.
				Solvents destroyed onsite through
				Total emission of Solvent to air (kg)
				Total

Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table 1 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

Was it a requirement of your licence to carry out visual inspections on any surface water discharges or 2 watercourses on or near your site? If yes please complete table W2 below summarising only any evidence of contamination noted during visual inspections

Additional information	
No	
Yes	SW 7 - Inspected Weekly SW1-SW9 - Inspected Monthly

Table W1 Storm water monitoring

Location reference	Location relative to site activities	PRTR Parameter	Licensed 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	downstream		Total Ammonia	15/01/2015	1	All results < 1.2 x ELV	0.41	mg/l NH3	yes	
SW1	downstream	Chlorides (as Cl)		15/01/2015	N/A	N/A	36.59	mg/l	yes	
SW1	downstream		Conductivity	15/01/2015	750	All results < 1.2 x ELV	169	µS/cm @20oC	yes	
SW1	downstream		Total Ammonia	09/04/2015	1	All results < 1.2 x ELV	0.92	mg/l NH3	yes	
SW1	downstream	Chlorides (as Cl)		09/04/2015	N/A	N/A	46.23	mg/l	yes	
SW1	downstream		Conductivity	09/04/2015	750	All results < 1.2 x ELV	185	µS/cm @20oC	yes	
SW1	downstream		Dissolved Oxygen	09/04/2015	N/A	N/A	7.58	mg/l O2	yes	
SW1	downstream		Boron	09/04/2015	N/A	N/A	0.02	mg/l	yes	
SW1	downstream		Cadmium and compounds (as Cd)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW1	downstream		Calcium	09/04/2015	N/A	N/A	11.1	mg/l	yes	
SW1	downstream		Chromium and compounds (as Cr)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW1	downstream		Copper and compounds (as Cu)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW1	downstream		Iron	09/04/2015	N/A	N/A	271	µg/l	yes	
SW1	downstream		Lead and compounds (as Pb)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW1	downstream		Magnesium	09/04/2015	N/A	N/A	3.22	mg/l	yes	
SW1	downstream		Manganese (as Mn)	09/04/2015	N/A	N/A	101	µg/l	yes	
SW1	downstream		Nickel and compounds (as Ni)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW1	downstream		Potassium	09/04/2015	N/A	N/A	<2.000	mg/l	yes	
SW1	downstream		Zinc and compounds (as Zn)	09/04/2015	N/A	N/A	22.1	µg/l	yes	
SW1	downstream		Mercury and compounds (as Hg)	09/04/2015	N/A	N/A	<10.000	mg/l	yes	
SW1	downstream		Sulphate	09/04/2015	N/A	N/A	4.27	mg/l SO4	yes	
SW1	downstream		Total phosphorus	09/04/2015	N/A	N/A	0.03	mg/l P	yes	
SW1	downstream		Total Ammonia	30/07/2015	1	All results < 1.2 x ELV	0.66	mg/l NH3	yes	
SW1	downstream	Chlorides (as Cl)		30/07/2015	N/A	N/A	44	mg/l	yes	
SW1	downstream		Conductivity	30/07/2015	750	All results < 1.2 x ELV	168	µS/cm @20oC	yes	
SW1	downstream		Total Ammonia	23/10/2015	1	All results < 1.2 x ELV	3.18	mg/l NH3	yes	
SW1	downstream	Chlorides (as Cl)		23/10/2015	N/A	N/A	31.64	mg/l	yes	
SW1	downstream		Conductivity	23/10/2015	750	All results < 1.2 x ELV	264	µS/cm @20oC	yes	
SW2	upstream		Total Ammonia	15/01/2015	1	All results < 1.2 x ELV	0.05	mg/l NH3	yes	
SW2	upstream	Chlorides (as Cl)		15/01/2015	N/A	N/A	30.65	mg/l	yes	
SW2	upstream		Conductivity	15/01/2015	750	All results < 1.2 x ELV	108	µS/cm @20oC	yes	
SW2	upstream		Total Ammonia	09/04/2015	1	All results < 1.2 x ELV	0.16	mg/l NH3	yes	
SW2	upstream	Chlorides (as Cl)		09/04/2015	N/A	N/A	41.31	mg/l	yes	
SW2	upstream		Conductivity	09/04/2015	750	All results < 1.2 x ELV	142	µS/cm @20oC	yes	
SW2	upstream		Dissolved Oxygen	09/04/2015	N/A	N/A	8.5	mg/l O2	yes	
SW2	upstream		Boron	09/04/2015	N/A	N/A	0.01	mg/l	yes	
SW2	upstream		Cadmium and compounds (as Cd)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW2	upstream		Calcium	09/04/2015	N/A	N/A	4.76	mg/l	yes	
SW2	upstream		Chromium and compounds (as Cr)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW2	upstream		Copper and compounds (as Cu)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW2	upstream		Iron	09/04/2015	N/A	N/A	145	µg/l	yes	
SW2	upstream		Lead and compounds (as Pb)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW2	upstream		Magnesium	09/04/2015	N/A	N/A	2.7	mg/l	yes	
SW2	upstream		Manganese (as Mn)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW2	upstream		Nickel and compounds (as Ni)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW2	upstream		Potassium	09/04/2015	N/A	N/A	<2.000	mg/l	yes	
SW2	upstream		Zinc and compounds (as Zn)	09/04/2015	N/A	N/A	24.5	µg/l	yes	
SW2	upstream		Mercury and compounds (as Hg)	09/04/2015	N/A	N/A	<10.000	mg/l	yes	
SW2	upstream		Sulphate	09/04/2015	N/A	N/A	<2.500	mg/l SO4	yes	
SW2	upstream		Total phosphorus	09/04/2015	N/A	N/A	0.03	mg/l P	yes	
SW2	upstream		Total Ammonia	30/07/2015	1	All results < 1.2 x ELV	0.09	mg/l NH3	yes	
SW2	upstream		Conductivity	30/07/2015	750	All results < 1.2 x ELV	93	µS/cm @20oC	yes	
SW3	downstream		Total Ammonia	15/01/2015	1	All results < 1.2 x ELV	0.12	mg/l NH3	yes	
SW3	downstream	Chlorides (as Cl)		15/01/2015	N/A	N/A	41.38	mg/l	yes	
SW3	downstream		Conductivity	15/01/2015	750	All results < 1.2 x ELV	151	µS/cm @20oC	yes	
SW3	downstream		Total Ammonia	09/04/2015	1	All results < 1.2 x ELV	0.26	mg/l NH3	yes	
SW3	downstream	Chlorides (as Cl)		09/04/2015	N/A	N/A	48.56	mg/l	yes	
SW3	downstream		Conductivity	09/04/2015	750	All results < 1.2 x ELV	193	µS/cm @20oC	yes	
SW3	downstream		Dissolved Oxygen	09/04/2015	N/A	N/A	9.16	mg/l O2	yes	
SW3	downstream		Boron	09/04/2015	N/A	N/A	0.02	mg/l	yes	
SW3	downstream		Cadmium and compounds (as Cd)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW3	downstream		Calcium	09/04/2015	N/A	N/A	10.31	mg/l	yes	
SW3	downstream		Chromium and compounds (as Cr)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	
SW3	downstream		Copper and compounds (as Cu)	09/04/2015	N/A	N/A	<20.000	µg/l	yes	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)			Lic No:	W0089-02	Year	2015			
SW3	downstream	Lead and compounds (as Pb)	Iron	09/04/2015	N/A	N/A	427	µg/l	yes
SW3	downstream			09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW3	downstream		Magnesium	09/04/2015	N/A	N/A	3.76	mg/l	yes
SW3	downstream		Manganese (as Mn)	09/04/2015	N/A	N/A	80.6	µg/l	yes
SW3	downstream	Nickel and compounds (as Ni)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW3	downstream		Potassium	09/04/2015	N/A	N/A	<2.000	mg/l	yes
SW3	downstream	Zinc and compounds (as Zn)		09/04/2015	N/A	N/A	95.6	µg/l	yes
SW3	downstream	Mercury and compounds (as Hg)		09/04/2015	N/A	N/A	<10.000	mg/l	yes
SW3	downstream	Total phosphorus	Sulphate	09/04/2015	N/A	N/A	6.77	mg/l SO4	yes
SW3	downstream			09/04/2015	N/A	N/A	0.03	mg/l P	yes
SW3	downstream		Total Ammonia	30/07/2015	1	All results < 1.2 x ELV	0.15	mg/l NH3	yes
SW3	downstream	Chlorides (as Cl)		30/07/2015	N/A	N/A	33.84	mg/l	yes
SW3	downstream		Conductivity	30/07/2015	750	All results < 1.2 x ELV	158	µS/cm @20oC	yes
SW3	downstream		Total Ammonia	23/10/2015	1	All results < 1.2 x ELV	1.07	mg/l NH3	yes
SW3	downstream	Chlorides (as Cl)		23/10/2015	N/A	N/A	35.87	mg/l	yes
SW3	downstream		Conductivity	23/10/2015	750	All results < 1.2 x ELV	203.00	µS/cm @20oC	yes
SW4	downstream		Total Ammonia	15/01/2015	1	All results < 1.2 x ELV	0.38	mg/l NH3	yes
SW4	downstream	Chlorides (as Cl)		15/01/2015	N/A	N/A	41.37	mg/l	yes
SW4	downstream		Conductivity	15/01/2015	750	All results < 1.2 x ELV	157	µS/cm @20oC	yes
SW4	downstream		Total Ammonia	09/04/2015	1	All results < 1.2 x ELV	0.21	mg/l NH3	yes
SW4	downstream	Chlorides (as Cl)		09/04/2015	N/A	N/A	44.55	mg/l	yes
SW4	downstream		Conductivity	09/04/2015	750	All results < 1.2 x ELV	169	µS/cm @20oC	yes
SW4	downstream		Dissolved Oxygen	09/04/2015	N/A	N/A	5.76	mg/l O2	yes
SW4	downstream		Boron	09/04/2015	N/A	N/A	0.02	mg/l	yes
SW4	downstream	Cadmium and compounds (as Cd)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW4	downstream		Calcium	09/04/2015	N/A	N/A	15	mg/l	yes
SW4	downstream	Chromium and compounds (as Cr)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW4	downstream	Copper and compounds (as Cu)		09/04/2015	N/A	N/A	35.1	µg/l	yes
SW4	downstream		Iron	09/04/2015	N/A	N/A	320	µg/l	yes
SW4	downstream	Lead and compounds (as Pb)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW4	downstream		Magnesium	09/04/2015	N/A	N/A	5.15	mg/l	yes
SW4	downstream		Manganese (as Mn)	09/04/2015	N/A	N/A	42.4	µg/l	yes
SW4	downstream	Nickel and compounds (as Ni)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW4	downstream		Potassium	09/04/2015	N/A	N/A	2.58	mg/l	yes
SW4	downstream	Zinc and compounds (as Zn)		09/04/2015	N/A	N/A	111	µg/l	yes
SW4	downstream	Mercury and compounds (as Hg)		09/04/2015	N/A	N/A	<10.000	mg/l	yes
SW4	downstream	Total phosphorus	Sulphate	09/04/2015	N/A	N/A	3.87	mg/l SO4	yes
SW4	downstream			09/04/2015	N/A	N/A	0.02	mg/l P	yes
SW4	downstream		Total Ammonia	30/07/2015	1	All results < 1.2 x ELV	0.11	mg/l NH3	yes
SW4	downstream	Chlorides (as Cl)		30/07/2015	N/A	N/A	27.46	mg/l	yes
SW4	downstream		Conductivity	30/07/2015	750	All results < 1.2 x ELV	147	µS/cm @20oC	yes
SW4	downstream		Total Ammonia	23/10/2015	1	All results < 1.2 x ELV	4.38	mg/l NH3	yes
SW4	downstream	Chlorides (as Cl)		23/10/2015	N/A	N/A	34.46	mg/l	yes
SW4	downstream		Conductivity	23/10/2015	750	All results < 1.2 x ELV	264.00	µS/cm @20oC	yes
SW5	downstream		Total Ammonia	15/01/2015	1	All results < 1.2 x ELV	0.01	mg/l NH3	yes
SW5	downstream	Chlorides (as Cl)		15/01/2015	N/A	N/A	42.03	mg/l	yes
SW5	downstream		Conductivity	15/01/2015	750	All results < 1.2 x ELV	148	µS/cm @20oC	yes
SW5	downstream		Total Ammonia	09/04/2015	1	All results < 1.2 x ELV	0.15	mg/l NH3	yes
SW5	downstream	Chlorides (as Cl)		09/04/2015	N/A	N/A	53.14	mg/l	yes
SW5	downstream		Conductivity	09/04/2015	750	All results < 1.2 x ELV	187	µS/cm @20oC	yes
SW5	downstream		Dissolved Oxygen	09/04/2015	N/A	N/A	8.77	mg/l O2	yes
SW5	downstream		Boron	09/04/2015	N/A	N/A	0.02	mg/l	yes
SW5	downstream	Cadmium and compounds (as Cd)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW5	downstream		Calcium	09/04/2015	N/A	N/A	8.93	mg/l	yes
SW5	downstream	Chromium and compounds (as Cr)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW5	downstream	Copper and compounds (as Cu)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW5	downstream		Iron	09/04/2015	N/A	N/A	401	µg/l	yes
SW5	downstream	Lead and compounds (as Pb)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW5	downstream		Magnesium	09/04/2015	N/A	N/A	3.38	mg/l	yes
SW5	downstream		Manganese (as Mn)	09/04/2015	N/A	N/A	97.7	µg/l	yes
SW5	downstream	Nickel and compounds (as Ni)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW5	downstream		Potassium	09/04/2015	N/A	N/A	<2.000	mg/l	yes
SW5	downstream	Zinc and compounds (as Zn)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW5	downstream	Mercury and compounds (as Hg)		09/04/2015	N/A	N/A	<10.000	mg/l	yes
SW5	downstream	Total phosphorus	Sulphate	09/04/2015	N/A	N/A	7.21	mg/l SO4	yes
SW5	downstream			09/04/2015	N/A	N/A	0.4	mg/l P	yes
SW5	downstream		Total Ammonia	30/07/2015	1	All results < 1.2 x ELV	0.12	mg/l NH3	yes
SW5	downstream		Conductivity	30/07/2015	750	All results < 1.2 x ELV	154	µS/cm @20oC	yes
SW5	downstream		Total Ammonia	23/10/2015	1	All results < 1.2 x ELV	0.11	mg/l NH3	yes
SW5	downstream	Chlorides (as Cl)		23/10/2015	N/A	N/A	35.67	mg/l	yes
SW5	downstream		Conductivity	23/10/2015	750	All results < 1.2 x ELV	162	µS/cm @20oC	yes
SW6	downstream		Total Ammonia	15/01/2015	1	All results < 1.2 x ELV	1.06	mg/l NH3	No
SW6	downstream	Chlorides (as Cl)		15/01/2015	N/A	N/A	35.55	mg/l	yes
SW6	downstream		Conductivity	15/01/2015	750	All results < 1.2 x ELV	182	µS/cm @20oC	yes
SW6	downstream		Total Ammonia	09/04/2015	1	All results < 1.2 x ELV	5.38	mg/l NH3	No
SW6	downstream	Chlorides (as Cl)		09/04/2015	N/A	N/A	55.57	mg/l	yes
SW6	downstream		Conductivity	09/04/2015	750	All results < 1.2 x ELV	513	µS/cm @20oC	yes
SW6	downstream		Dissolved Oxygen	09/04/2015	N/A	N/A	5.1	mg/l O2	yes
SW6	downstream		Boron	09/04/2015	N/A	N/A	0.06	mg/l	yes
SW6	downstream	Cadmium and compounds (as Cd)		09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW6	downstream		Calcium	09/04/2015	N/A	N/A	59.1	mg/l	yes

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)				Lic No:	W0089-02	Year	2015	
SW6	downstream	Chromium and compounds (as Cr)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW6	downstream	Copper and compounds (as Cu)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW6	downstream	Iron	09/04/2015	N/A	N/A	1164	µg/l	yes
SW6	downstream	Lead and compounds (as Pb)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW6	downstream	Magnesium	09/04/2015	N/A	N/A	7.48	mg/l	yes
SW6	downstream	Manganese (as Mn)	09/04/2015	N/A	N/A	1.054	µg/l	yes
SW6	downstream	Nickel and compounds (as Ni)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW6	downstream	Potassium	09/04/2015	N/A	N/A	8.24	mg/l	yes
SW6	downstream	Zinc and compounds (as Zn)	09/04/2015	N/A	N/A	36.3	µg/l	yes
SW6	downstream	Mercury and compounds (as Hg)	09/04/2015	N/A	N/A	<10.000	mg/l	yes
SW6	downstream	Sulphate	09/04/2015	N/A	N/A	11.41	mg/l SO4	yes
SW6	downstream	Total phosphorus	09/04/2015	N/A	N/A	0.04	mg/l P	yes
SW6	downstream	Total Ammonia	30/07/2015	1	All results < 1.2 x ELV	0.11	mg/l NH3	yes
SW6	downstream	Conductivity	30/07/2015	750	All results < 1.2 x ELV	310.00	µS/cm @20oC	yes
SW7	downstream	pH	15/01/2015	6-9	All values < ELV	7.60	pH units	yes
SW7	downstream	Total Ammonia	15/01/2015	1	All results < 1.2 x ELV	0.24	mg/L	yes
SW7	downstream	Conductivity	15/01/2015	750	All results < 1.2 x ELV	180.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	15/01/2015	N/A	N/A	24.00	mg/L	yes
SW7	downstream	COD	15/01/2015	N/A	N/A	29.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	15/01/2015	N/A	N/A	38.29	mg/L	yes
SW7	downstream	pH	25/02/2015	6-9	All values < ELV	6.20	pH units	yes
SW7	downstream	Total Ammonia	25/02/2015	1	All results < 1.2 x ELV	0.10	mg/L	yes
SW7	downstream	Conductivity	25/02/2015	750	All results < 1.2 x ELV	154.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	25/02/2015	N/A	N/A	8.00	mg/L	yes
SW7	downstream	COD	25/02/2015	N/A	N/A	13.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	25/02/2015	N/A	N/A	35.39	mg/L	yes
SW7	downstream	pH	25/03/2015	6-9	All values < ELV	6.40	pH units	yes
SW7	downstream	Total Ammonia	25/03/2015	1	All results < 1.2 x ELV	0.24	mg/L	yes
SW7	downstream	Conductivity	25/03/2015	750	All results < 1.2 x ELV	171.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	25/03/2015	N/A	N/A	<1.000	mg/L	yes
SW7	downstream	COD	25/03/2015	N/A	N/A	2.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	25/03/2015	N/A	N/A	41.79	mg/L	yes
SW7	downstream	pH	09/04/2015	6-9	All values < ELV	6.50	pH units	yes
SW7	downstream	Total Ammonia	09/04/2015	1	All results < 1.2 x ELV	0.16	mg/L	yes
SW7	downstream	Conductivity	09/04/2015	750	All results < 1.2 x ELV	175.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	09/04/2015	N/A	N/A	4.00	mg/L	yes
SW7	downstream	COD	09/04/2015	N/A	N/A	14.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	09/04/2015	N/A	N/A	36.06	mg/L	yes
SW7	downstream	pH	25/05/2015	6-9	All values < ELV	6.20	pH units	yes
SW7	downstream	Total Ammonia	25/05/2015	1	All results < 1.2 x ELV	0.10	mg/L	yes
SW7	downstream	Conductivity	25/05/2015	750	All results < 1.2 x ELV	154.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	25/05/2015	N/A	N/A	8.00	mg/L	yes
SW7	downstream	COD	25/05/2015	N/A	N/A	13.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	25/05/2015	N/A	N/A	35.39	mg/L	yes
SW7	downstream	pH	16/06/2015	6-9	All values < ELV	6.50	pH units	yes
SW7	downstream	Total Ammonia	16/06/2015	1	All results < 1.2 x ELV	0.06	mg/L	yes
SW7	downstream	Conductivity	16/06/2015	750	All results < 1.2 x ELV	169.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	16/06/2015	N/A	N/A	5.00	mg/L	yes
SW7	downstream	COD	16/06/2015	N/A	N/A	30.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	16/06/2015	N/A	N/A	36.32	mg/L	yes
SW7	downstream	pH	30/07/2015	6-9	All values < ELV	6.60	pH units	yes
SW7	downstream	Total Ammonia	30/07/2015	1	All results < 1.2 x ELV	0.12	mg/L	yes
SW7	downstream	Conductivity	30/07/2015	750	All results < 1.2 x ELV	150.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	30/07/2015	N/A	N/A	4.00	mg/L	yes
SW7	downstream	COD	30/07/2015	N/A	N/A	26.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	30/07/2015	N/A	N/A	29.36	mg/L	yes
SW7	downstream	pH	18/08/2015	6-9	All values < ELV	6.60	pH units	yes
SW7	downstream	Total Ammonia	18/08/2015	1	All results < 1.2 x ELV	0.41	mg/L	yes
SW7	downstream	Conductivity	18/08/2015	750	All results < 1.2 x ELV	193.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	18/08/2015	N/A	N/A	2.00	mg/L	yes
SW7	downstream	COD	18/08/2015	N/A	N/A	38.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	18/08/2015	N/A	N/A	32.52	mg/L	yes
SW7	downstream	pH	25/09/2015	6-9	All values < ELV	6.40	pH units	yes
SW7	downstream	Total Ammonia	25/09/2015	1	All results < 1.2 x ELV	0.49	mg/L	yes
SW7	downstream	Conductivity	25/09/2015	750	All results < 1.2 x ELV	140.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	25/09/2015	N/A	N/A	4.00	mg/L	yes
SW7	downstream	COD	25/09/2015	N/A	N/A	35.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	25/09/2015	N/A	N/A	34.80	mg/L	yes
SW7	downstream	pH	23/10/2015	6-9	All values < ELV	6.80	pH units	yes
SW7	downstream	Total Ammonia	23/10/2015	1	All results < 1.2 x ELV	1.50	mg/L	yes
SW7	downstream	Conductivity	23/10/2015	750	All results < 1.2 x ELV	227.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	23/10/2015	N/A	N/A	8.00	mg/L	yes
SW7	downstream	COD	23/10/2015	N/A	N/A	38.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	23/10/2015	N/A	N/A	30.78	mg/L	yes
SW7	downstream	pH	18/11/2015	6-9	All values < ELV	6.50	pH units	yes
SW7	downstream	Total Ammonia	18/11/2015	1	All results < 1.2 x ELV	0.35	mg/L	yes
SW7	downstream	Conductivity	18/11/2015	750	All results < 1.2 x ELV	150.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	18/11/2015	N/A	N/A	11.00	mg/L	yes
SW7	downstream	COD	18/11/2015	N/A	N/A	25.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	18/11/2015	N/A	N/A	32.72	mg/L	yes
SW7	downstream	pH	04/12/2015	6-9	All values < ELV	6.30	pH units	yes



AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)			Lic No:	W0089-02	Year	2015		
SW7	downstream	Total Ammonia	04/12/2015	1	All results < 1.2 x ELV	0.79	mg/L	yes
SW7	downstream	Conductivity	04/12/2015	750	All results < 1.2 x ELV	177.00	µS/cm @20oC	yes
SW7	downstream	Suspended Solids	04/12/2015	N/A	N/A	11.00	mg/L	yes
SW7	downstream	COD	04/12/2015	N/A	N/A	30.00	mg/L	yes
SW7	downstream	Chlorides (as Cl)	04/12/2015	N/A	N/A	36.81	mg/L	yes
SW8	upstream	Total Ammonia	15/01/2015	1	All results < 1.2 x ELV	0.04	mg/l NH3	yes
SW8	upstream	Chlorides (as Cl)	15/01/2015	N/A	N/A	27.94	mg/l	yes
SW8	upstream	Conductivity	15/01/2015	750	All results < 1.2 x ELV	103	µS/cm @20oC	yes
SW8	upstream	Total Ammonia	09/04/2015	1	All results < 1.2 x ELV	0.09	mg/l NH3	yes
SW8	upstream	Chlorides (as Cl)	09/04/2015	N/A	N/A	41.17	mg/l	yes
SW8	upstream	Conductivity	09/04/2015	750	All results < 1.2 x ELV	141	µS/cm @20oC	yes
SW8	upstream	Dissolved Oxygen	09/04/2015	N/A	N/A	6.8	mg/l O2	yes
SW8	upstream	Boron	09/04/2015	N/A	N/A	0.01	mg/l	yes
SW8	upstream	Cadmium and compounds (as Cd)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW8	upstream	Calcium	09/04/2015	N/A	N/A	4.49	mg/l	yes
SW8	upstream	Chromium and compounds (as Cr)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW8	upstream	Copper and compounds (as Cu)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW8	upstream	Iron	09/04/2015	N/A	N/A	147	µg/l	yes
SW8	upstream	Lead and compounds (as Pb)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW8	upstream	Magnesium	09/04/2015	N/A	N/A	2.72	mg/l	yes
SW8	upstream	Manganese (as Mn)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW8	upstream	Nickel and compounds (as Ni)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW8	upstream	Potassium	09/04/2015	N/A	N/A	<2.000	mg/l	yes
SW8	upstream	Zinc and compounds (as Zn)	09/04/2015	N/A	N/A	28.9	µg/l	yes
SW8	upstream	Mercury and compounds (as Hg)	09/04/2015	N/A	N/A	<10.000	mg/l	yes
SW8	upstream	Sulphate	09/04/2015	N/A	N/A	<2.500	mg/l SO4	yes
SW8	upstream	Total phosphorus	09/04/2015	N/A	N/A	0.04	mg/l P	yes
SW8	upstream	Total Ammonia	30/07/2015	1	All results < 1.2 x ELV	0.1	mg/l NH3	yes
SW8	upstream	Conductivity	30/07/2015	750	All results < 1.2 x ELV	83.00	µS/cm @20oC	yes
SW8	upstream	Total Ammonia	23/10/2015	1	All results < 1.2 x ELV	0.02	mg/l NH3	yes
SW8	upstream	Chlorides (as Cl)	23/10/2015	N/A	N/A	22.58	mg/l	yes
SW8	upstream	Conductivity	23/10/2015	750	All results < 1.2 x ELV	96	µS/cm @20oC	yes
SW9	upstream	Total Ammonia	15/01/2015	1	All results < 1.2 x ELV	0.04	mg/l NH3	yes
SW9	upstream	Chlorides (as Cl)	15/01/2015	N/A	N/A	43.79	mg/l	yes
SW9	upstream	Conductivity	15/01/2015	750	All results < 1.2 x ELV	141	µS/cm @20oC	yes
SW9	upstream	Total Ammonia	09/04/2015	1	All results < 1.2 x ELV	0.13	mg/l NH3	yes
SW9	upstream	Chlorides (as Cl)	09/04/2015	N/A	N/A	70.52	mg/l	yes
SW9	upstream	Conductivity	09/04/2015	750	All results < 1.2 x ELV	215	µS/cm @20oC	yes
SW9	upstream	Dissolved Oxygen	09/04/2015	N/A	N/A	5.99	mg/l O2	yes
SW9	upstream	Boron	09/04/2015	N/A	N/A	0.01	mg/l	yes
SW9	upstream	Cadmium and compounds (as Cd)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW9	upstream	Calcium	09/04/2015	N/A	N/A	3.42	mg/l	yes
SW9	upstream	Chromium and compounds (as Cr)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW9	upstream	Copper and compounds (as Cu)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW9	upstream	Iron	09/04/2015	N/A	N/A	3149	µg/l	yes
SW9	upstream	Lead and compounds (as Pb)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW9	upstream	Magnesium	09/04/2015	N/A	N/A	3.5	mg/l	yes
SW9	upstream	Manganese (as Mn)	09/04/2015	N/A	N/A	503	µg/l	yes
SW9	upstream	Nickel and compounds (as Ni)	09/04/2015	N/A	N/A	<20.000	µg/l	yes
SW9	upstream	Potassium	09/04/2015	N/A	N/A	<2.000	mg/l	yes
SW9	upstream	Zinc and compounds (as Zn)	09/04/2015	N/A	N/A	35.9	µg/l	yes
SW9	upstream	Mercury and compounds (as Hg)	09/04/2015	N/A	N/A	<10.000	mg/l	yes
SW9	upstream	Sulphate	09/04/2015	N/A	N/A	5.87	mg/l SO4	yes
SW9	upstream	Total phosphorus	09/04/2015	N/A	N/A	0.12	mg/l P	yes
SW9	upstream	Total Ammonia	30/07/2015	1	All results < 1.2 x ELV	0.12	mg/l NH3	yes
SW9	upstream	Conductivity	30/07/2015	750	All results < 1.2 x ELV	166	µS/cm @20oC	yes

\*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

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

4 Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below

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

External/Internal Lab Quality checklist Assessment of results checklist

Additional information

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	licence or any revision thereof <sup>Note 2</sup>	licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	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

5 Continuous monitoring

Does your site carry out continuous emissions to water/sewer monitoring?

Yes

Additional Information

SW7

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

6

7 Did continuous monitoring equipment experience downtime? If yes please record downtime in table W4 below

No

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

Yes

Service & Maintenance contract in place

No

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
SW7	Water	volumetric flow	N/A	1 hour	N/A	l/s	N/A	N/A	0	0	Volumes not required to be recorded/calculated
SW7	Water	pH	6-9	1 hour	All values < ELV	pH units	N/A	N/A	0	0	
SW7	Water	Temperature	N/A	1 hour	N/A	degrees C	N/A	N/A	0	0	
SW7	Water	Conductivity	750	1 hour	All values < ELV	µS/cm @20oC	N/A	N/A	0	0	
SW7	Water	Ammonia (as N)	1	1 hour	All values < ELV	mg/L	N/A	N/A	0	0	Volumes not required to be recorded/calculated
SW7	Water	Total organic carbon (TOC) (as total C or COD/3)	60	1 hour	All values < ELV	ppm	N/A	N/A	0	0	Volumes not required to be recorded/calculated

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 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 Please provide integrity testing frequency period
- 2 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)
- 3 How many bunds are on site?
- 4 How many of these bunds have been tested within the required test schedule?
- 5 How many mobile bunds are on site?
- 6 Are the mobile bunds included in the bund test schedule?
- 7 How many of these mobile bunds have been tested within the required test schedule?
- 8 How many sumps on site are included in the integrity test schedule?
- 9 How many of these sumps are integrity tested within the test schedule?

Yes	
3 years	
Yes	
1	
1	
0	
N/A	
N/A	
N/A	
N/A	
Yes	
Yes	
N/A	

- 10 **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?

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

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

Yes	
Yes	
Yes	

**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

- 1 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**
- 2 Please provide integrity testing frequency period

Yes	
3 years	

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type 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: W0089-02

Year

2015

		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 interpretation 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 Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	yes	
5	Is the contamination related to operations at the facility (either current and/or historic)	yes	
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	yes	
7	Please specify the proposed time frame for the remediation strategy	Ongoing	
8	Is there a licence condition to carry out/update ELRA for the site?	yes	
9	Has any type of risk assessment been carried out for the site?	yes	
10	Has a Conceptual Site Model been developed for the site?	yes	
11	Have potential receptors been identified on and off site?	yes	
12	Is there evidence that contamination is migrating offsite?	no	

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SW EQS	Upward trend in pollutant concentration over last 5 years of monitoring data
15/01/2015	GW4	Total ammonia	Konelab Aquakem	Quarterly	0.13	0.04	mg/l NH3	0.065-0.175	<0.014	no
15/01/2015	GW4	Conductivity	Electrometry	Quarterly	420	291	µS/cm @20oC	800-1875	N/A	no
09/04/2015	GW4	Total ammonia	Konelab Aquakem	Quarterly		0.13	mg/l NH3	0.065-0.175	<0.014	no
09/04/2015	GW4	Conductivity	Electrometry	Quarterly		420	µS/cm @20oC	800-1875	N/A	no
09/04/2015	GW4	Chloride	Konelab Aquakem	Annual		37.69	mg/l	24-187.5	250	no
09/04/2015	GW4	Boron	ICP-MS	Annual		0.03	mg/l	0.75	N/A	no
09/04/2015	GW4	Cadmium	ICP-MS	Annual		<20.000	µg/l	3.75	N/A	no
09/04/2015	GW4	Calcium	ICP-MS	Annual		65.8	mg/l	N/A	N/A	no
09/04/2015	GW4	Chromium (total)	ICP-MS	Annual		<20.000	µg/l	37.5	4.7	no
09/04/2015	GW4	Copper	ICP-MS	Annual		<20.000	µg/l	1500	5	no
09/04/2015	GW4	Iron	ICP-MS	Annual		172	µg/l		N/A	no
09/04/2015	GW4	Lead	ICP-MS	Annual		<20.000	µg/l	18.75	7.2	no
09/04/2015	GW4	Magnesium	ICP-MS	Annual		3.7	mg/l	N/A	N/A	no
09/04/2015	GW4	Manganese	ICP-MS	Annual		1.263	µg/l	N/A	N/A	no
09/04/2015	GW4	Nickel	ICP-MS	Annual		<20.000	µg/l	15	20	no
09/04/2015	GW4	Potassium	ICP-MS	Annual		<2.000	mg/l	N/A	N/A	no
09/04/2015	GW4	Zinc	ICP-MS	Annual		22	µg/l	N/A	40	no

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09/04/2015	GW4	Cyanide (total)	Steam Distillation & Colourimetry	Annual		4	µg/l	37.5	10	no
09/04/2015	GW4	Flouride	Konelab Aquakem	Annual		0.11	mg/l	N/A	0.5	no
09/04/2015	GW4	Mercury	ICP-MS	Annual		<10.000	mg/l			no
09/04/2015	GW4	Sulphate	Konelab Aquakem	Annual		8.58	mg/l SO4	187.5	N/A	no
09/04/2015	GW4	Total Phosphorous	ICP-MS	Annual		0.03	mg/l P	N/A	0.075	no
30/07/2015	GW4	Total ammonia	Konelab Aquakem	Quarterly		0.09	mg/l NH3	0.065-0.175	<0.014	no
30/07/2015	GW4	Conductivity	Electrometry	Quarterly		376	µS/cm @20oC	800-1875	N/A	no
23/10/2015	GW4	Total ammonia	Konelab Aquakem	Quarterly		0.06	mg/l NH3	0.065-0.175	<0.014	no
23/10/2015	GW4	Conductivity	Electrometry	Quarterly		385	µS/cm @20oC	800-1875	N/A	no
15/01/2015	GW8	Total ammonia	Konelab Aquakem	Quarterly	0.27	0.06	mg/l NH3	0.065-0.175	<0.014	yes
15/01/2015	GW8	Conductivity	Electrometry	Quarterly	497	180	µS/cm @20oC	800-1875	N/A	yes
09/04/2015	GW8	Total ammonia	Konelab Aquakem	Quarterly		0.27	mg/l NH3	0.065-0.175	<0.014	yes
09/04/2015	GW8	Conductivity	Electrometry	Quarterly		497	µS/cm @20oC	800-1875	N/A	yes
09/04/2015	GW8	Chloride	Konelab Aquakem	Annual		49.72	mg/l	24-187.5	250	yes
09/04/2015	GW8	Boron	ICP-MS	Annual		0.02	mg/l	0.75	N/A	no
09/04/2015	GW8	Cadmium	ICP-MS	Annual		<20.000	µg/l	3.75	N/A	no
09/04/2015	GW8	Calcium	ICP-MS	Annual		29.8	mg/l	N/A	N/A	no
09/04/2015	GW8	Chromium (total)	ICP-MS	Annual		<20.000	µg/l	37.5	4.7	no
09/04/2015	GW8	Copper	ICP-MS	Annual		<20.000	µg/l	1500	5	no
09/04/2015	GW8	Iron	ICP-MS	Annual		288	µg/l		N/A	no
09/04/2015	GW8	Lead	ICP-MS	Annual		<20.000	µg/l	18.75	7.2	no
09/04/2015	GW8	Magnesium	ICP-MS	Annual		10.9	mg/l	N/A	N/A	no
09/04/2015	GW8	Manganese	ICP-MS	Annual		0.814	µg/l	N/A	N/A	no
09/04/2015	GW8	Nickel	ICP-MS	Annual		<20.000	µg/l	15	20	no
09/04/2015	GW8	Potassium	ICP-MS	Annual		<2.000	mg/l	N/A	N/A	no
09/04/2015	GW8	Zinc	ICP-MS	Annual		<20.000	µg/l	N/A	40	no
09/04/2015	GW8	Cyanide (total)	Steam Distillation & Colourimetry	Annual		2	µg/l	37.5	10	no
09/04/2015	GW8	Flouride	Konelab Aquakem	Annual		0.12	mg/l	N/A	0.5	no
09/04/2015	GW8	Mercury	ICP-MS	Annual		<10.000	mg/l			no
09/04/2015	GW8	Sulphate	Konelab Aquakem	Annual		8.77	mg/l SO4	187.5	N/A	no
09/04/2015	GW8	Total Phosphorous	ICP-MS	Annual		0.03	mg/l P	N/A	0.075	no
30/07/2015	GW8	Total ammonia	Konelab Aquakem	Quarterly		0.17	mg/l NH3	0.065-0.175	<0.014	yes
30/07/2015	GW8	Conductivity	Electrometry	Quarterly		441	µS/cm @20oC	800-1875	N/A	yes
23/10/2015	GW8	Total ammonia	Konelab Aquakem	Quarterly		0.15	mg/l NH3	0.065-0.175	<0.014	yes
23/10/2015	GW8	Conductivity	Electrometry	Quarterly		407	µS/cm @20oC	800-1875	N/A	yes

.+ 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
15/01/2015	GW1	Total ammonia	Konelab Aquakem	Quarterly	0.31	0.06	mg/l NH3	0.065-0.175	<0.014	no
15/01/2015	GW1	Conductivity	Electrometry	Quarterly	299	180	µS/cm @20oC	800-1875	N/A	no
09/04/2015	GW1	Total ammonia	Konelab Aquakem	Quarterly		0.31	mg/l NH3	0.065-0.175	<0.014	no
09/04/2015	GW1	Conductivity	Electrometry	Quarterly		264	µS/cm @20oC	800-1875	N/A	no

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09/04/2015	GW1	Chloride	Konelab Aquakem	Annual		27.25	mg/l	24-187.5	250	no
09/04/2015	GW1	Boron	ICP-MS	Annual		0.02	mg/l	0.75	N/A	no
09/04/2015	GW1	Cadmium	ICP-MS	Annual		<20.000	µg/l	3.75	N/A	no
09/04/2015	GW1	Calcium	ICP-MS	Annual		34.6	mg/l	N/A	N/A	no
09/04/2015	GW1	Chromium (total)	ICP-MS	Annual		<20.000	µg/l	37.5	4.7	no
09/04/2015	GW1	Copper	ICP-MS	Annual		<20.000	µg/l	1500	5	no
09/04/2015	GW1	Iron	ICP-MS	Annual		1140	µg/l		N/A	no
09/04/2015	GW1	Lead	ICP-MS	Annual		<20.000	µg/l	18.75	7.2	no
09/04/2015	GW1	Magnesium	ICP-MS	Annual		6.15	mg/l	N/A	N/A	no
09/04/2015	GW1	Manganese	ICP-MS	Annual		1.385	µg/l	N/A	N/A	no
09/04/2015	GW1	Nickel	ICP-MS	Annual		<20.000	µg/l	15	20	no
09/04/2015	GW1	Potassium	ICP-MS	Annual		1.01	mg/l	N/A	N/A	no
09/04/2015	GW1	Zinc	ICP-MS	Annual		<20.000	µg/l	N/A	40	no
09/04/2015	GW1	Cyanide (total)	Steam Distillation & Colourimetry	Annual		12	µg/l	37.5	10	no
09/04/2015	GW1	Flouride	Konelab Aquakem	Annual		<0.020	mg/l	N/A	0.5	no
09/04/2015	GW1	Mercury	ICP-MS	Annual		<10.000	mg/l			no
09/04/2015	GW1	Sulphate	Konelab Aquakem	Annual		8.36	mg/l SO4	187.5	N/A	no
09/04/2015	GW1	Total Phosphorous	ICP-MS	Annual		0.05	mg/l P	N/A	0.075	no
30/07/2015	GW1	Total ammonia	Konelab Aquakem	Quarterly		0.13	mg/l NH3	0.065-0.175	<0.014	no
30/07/2015	GW1	Conductivity	Electrometry	Quarterly		260	µS/cm @20oC	800-1875	N/A	no
23/10/2015	GW1	Total ammonia	Konelab Aquakem	Quarterly		0.09	mg/l NH3	0.065-0.175	<0.014	no
23/10/2015	GW1	Conductivity	Electrometry	Quarterly		299	µS/cm @20oC	800-1875	N/A	no
15/01/2015	GW2	Total ammonia	Konelab Aquakem	Quarterly	1.73	<0.01	mg/l NH3	0.065-0.175	<0.014	yes
15/01/2015	GW2	Conductivity	Electrometry	Quarterly	322	232	µS/cm @20oC	800-1875	N/A	no
09/04/2015	GW2	Total ammonia	Konelab Aquakem	Quarterly		1.73	mg/l NH3	0.065-0.175	<0.014	yes
09/04/2015	GW2	Conductivity	Electrometry	Quarterly		284	µS/cm @20oC	800-1875	N/A	no
09/04/2015	GW2	Chloride	Konelab Aquakem	Annual		19.14	mg/l	24-187.5	250	yes
09/04/2015	GW2	Boron	ICP-MS	Annual		0.02	mg/l	0.75	N/A	no
09/04/2015	GW2	Cadmium	ICP-MS	Annual		<20.000	µg/l	3.75	N/A	no
09/04/2015	GW2	Calcium	ICP-MS	Annual		37.8	mg/l	N/A	N/A	no
09/04/2015	GW2	Chromium (total)	ICP-MS	Annual		<20.000	µg/l	37.5	4.7	no
09/04/2015	GW2	Copper	ICP-MS	Annual		<20.000	µg/l	1500	5	no
09/04/2015	GW2	Iron	ICP-MS	Annual		478	µg/l		N/A	no
09/04/2015	GW2	Lead	ICP-MS	Annual		<20.000	µg/l	18.75	7.2	no
09/04/2015	GW2	Magnesium	ICP-MS	Annual		3.75	mg/l	N/A	N/A	no
09/04/2015	GW2	Manganese	ICP-MS	Annual		0.0041	µg/l	N/A	N/A	no
09/04/2015	GW2	Nickel	ICP-MS	Annual		<20.00	µg/l	15	20	no
09/04/2015	GW2	Potassium	ICP-MS	Annual		2.03	mg/l	N/A	N/A	no
09/04/2015	GW2	Zinc	ICP-MS	Annual		20	µg/l	N/A	40	no
09/04/2015	GW2	Cyanide (total)	Steam Distillation & Colourimetry	Annual		12	µg/l	37.5	10	no
09/04/2015	GW2	Flouride	Konelab Aquakem	Annual		0.04	mg/l	N/A	0.5	no
09/04/2015	GW2	Mercury	ICP-MS	Annual		<10.000	mg/l			no
09/04/2015	GW2	Sulphate	Konelab Aquakem	Annual		10.87	mg/l SO4	187.5	N/A	no
09/04/2015	GW2	Total Phosphorous	ICP-MS	Annual		0.05	mg/l P	N/A	0.075	no
30/07/2015	GW2	Total ammonia	Konelab Aquakem	Quarterly		0.04	mg/l NH3	0.065-0.175	<0.014	yes
30/07/2015	GW2	Conductivity	Electrometry	Quarterly		176	µS/cm @20oC	800-1875	N/A	no
23/10/2015	GW2	Total ammonia	Konelab Aquakem	Quarterly		0.01	mg/l NH3	0.065-0.175	<0.014	yes
23/10/2015	GW2	Conductivity	Electrometry	Quarterly		322	µS/cm @20oC	800-1875	N/A	no
15/01/2015	GW5	Total ammonia	Konelab Aquakem	Quarterly	0.11	<0.01	mg/l NH3	0.065-0.175	<0.014	yes

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15/01/2015	GW5	Conductivity	Electrometry	Quarterly	384	172	µS/cm @20oC	800-1875	N/A	yes
09/04/2015	GW5	Total ammonia	Konelab Aquakem	Quarterly		0.04	mg/l NH3	0.065-0.175	<0.014	no
09/04/2015	GW5	Conductivity	Electrometry	Quarterly		262	µS/cm @20oC	800-1875	N/A	yes
09/04/2015	GW5	Chloride	Konelab Aquakem	Annual		35.73	mg/l	24-187.5	250	yes
09/04/2015	GW5	Boron	ICP-MS	Annual		0.03	mg/l	0.75	N/A	no
09/04/2015	GW5	Cadmium	ICP-MS	Annual		<20.000	µg/l	3.75	N/A	no
09/04/2015	GW5	Calcium	ICP-MS	Annual		30	mg/l	N/A	N/A	no
09/04/2015	GW5	Chromium (total)	ICP-MS	Annual		<20.000	µg/l	37.5	4.7	no
09/04/2015	GW5	Copper	ICP-MS	Annual		<20.000	µg/l	1500	5	no
09/04/2015	GW5	Iron	ICP-MS	Annual		205	µg/l		N/A	no
09/04/2015	GW5	Lead	ICP-MS	Annual		<20.000	µg/l	18.75	7.2	no
09/04/2015	GW5	Magnesium	ICP-MS	Annual		3.79	mg/l	N/A	N/A	no
09/04/2015	GW5	Manganese	ICP-MS	Annual		0.104	µg/l	N/A	N/A	no
09/04/2015	GW5	Nickel	ICP-MS	Annual		<20.000	µg/l	15	20	no
09/04/2015	GW5	Potassium	ICP-MS	Annual		<2.000	mg/l	N/A	N/A	no
09/04/2015	GW5	Zinc	ICP-MS	Annual		78	µg/l	N/A	40	no
09/04/2015	GW5	Cyanide (total)	Steam Distillation & Colourimetry	Annual		3	µg/l	37.5	10	no
09/04/2015	GW5	Flouride	Konelab Aquakem	Annual		0.2	mg/l	N/A	0.5	no
09/04/2015	GW5	Mercury	ICP-MS	Annual		<10.000	mg/l			no
09/04/2015	GW5	Sulphate	Konelab Aquakem	Annual		<2.500	mg/l SO4	187.5	N/A	no
09/04/2015	GW5	Total Phosphorous	ICP-MS	Annual		0.04	mg/l P	N/A	0.075	no
30/07/2015	GW5	Total ammonia	Konelab Aquakem	Quarterly		0.11	mg/l NH3	0.065-0.175	<0.014	no
30/07/2015	GW5	Conductivity	Electrometry	Quarterly		207	µS/cm @20oC	800-1875	N/A	yes
23/10/2015	GW5	Total ammonia	Konelab Aquakem	Quarterly		0.05	mg/l NH3	0.065-0.175	<0.014	no
23/10/2015	GW5	Conductivity	Electrometry	Quarterly		384	µS/cm @20oC	800-1875	N/A	yes
15/01/2015	GW6	Total ammonia	Konelab Aquakem	Quarterly	0.9	0.24	mg/l NH3	0.065-0.175	<0.014	no
15/01/2015	GW6	Conductivity	Electrometry	Quarterly	556	536	µS/cm @20oC	800-1875	N/A	yes
09/04/2015	GW6	Total ammonia	Konelab Aquakem	Quarterly		0.28	mg/l NH3	0.065-0.175	<0.014	no
09/04/2015	GW6	Conductivity	Electrometry	Quarterly		556	µS/cm @20oC	800-1875	N/A	yes
09/04/2015	GW6	Chloride	Konelab Aquakem	Annual		93.34	mg/l	24-187.5	250	yes
09/04/2015	GW6	Boron	ICP-MS	Annual		0.17	mg/l	0.75	N/A	no
09/04/2015	GW6	Cadmium	ICP-MS	Annual		<20.000	µg/l	3.75	N/A	no
09/04/2015	GW6	Calcium	ICP-MS	Annual		136.9	mg/l	N/A	N/A	no
09/04/2015	GW6	Chromium (total)	ICP-MS	Annual		<20.000	µg/l	37.5	4.7	no
09/04/2015	GW6	Copper	ICP-MS	Annual		<20.000	µg/l	1500	5	no
09/04/2015	GW6	Iron	ICP-MS	Annual		1824	µg/l		N/A	no
09/04/2015	GW6	Lead	ICP-MS	Annual		<20.000	µg/l	18.75	7.2	no
09/04/2015	GW6	Magnesium	ICP-MS	Annual		16.4	mg/l	N/A	N/A	no
09/04/2015	GW6	Manganese	ICP-MS	Annual		6.629	µg/l	N/A	N/A	no
09/04/2015	GW6	Nickel	ICP-MS	Annual		<20.00	µg/l	15	20	no
09/04/2015	GW6	Potassium	ICP-MS	Annual		25	mg/l	N/A	N/A	no
09/04/2015	GW6	Zinc	ICP-MS	Annual		44	µg/l	N/A	40	no
09/04/2015	GW6	Cyanide (total)	Steam Distillation & Colourimetry	Annual		14	µg/l	37.5	10	no
09/04/2015	GW6	Flouride	Konelab Aquakem	Annual		<0.020	mg/l	N/A	0.5	no
09/04/2015	GW6	Mercury	ICP-MS	Annual		<10.000	mg/l			no
09/04/2015	GW6	Sulphate	Konelab Aquakem	Annual		<2.5	mg/l SO4	187.5	N/A	no
09/04/2015	GW6	Total Phosphorous	ICP-MS	Annual		0.03	mg/l P	N/A	0.075	no
30/07/2015	GW6	Total ammonia	Konelab Aquakem	Quarterly		0.46	mg/l NH3	0.065-0.175	<0.014	no
30/07/2015	GW6	Conductivity	Electrometry	Quarterly		546	µS/cm @20oC	800-1875	N/A	yes

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23/10/2015	GW6	Total ammonia	Konelab Aquakem	Quarterly		0.9	mg/l NH3	0.065-0.175	<0.014	no
23/10/2015	GW6	Conductivity	Electrometry	Quarterly		501	µS/cm @20oC	800-1875	N/A	yes
15/01/2015	GW7	Total ammonia	Konelab Aquakem	Quarterly	40.88	31.85	mg/l NH3	0.065-0.175	<0.014	yes
15/01/2015	GW7	Conductivity	Electrometry	Quarterly	1250	1113	µS/cm @20oC	800-1875	N/A	yes
09/04/2015	GW7	Total ammonia	Konelab Aquakem	Quarterly		48.17	mg/l NH3	0.065-0.175	<0.014	yes
09/04/2015	GW7	Conductivity	Electrometry	Quarterly		1315	µS/cm @20oC	800-1875	N/A	yes
09/04/2015	GW7	Chloride	Konelab Aquakem	Annual		99.21	mg/l	24-187.5	250	yes
09/04/2015	GW7	Boron	ICP-MS	Annual		0.17	mg/l	0.75	N/A	no
09/04/2015	GW7	Cadmium	ICP-MS	Annual		<20.000	µg/l	3.75	N/A	no
09/04/2015	GW7	Calcium	ICP-MS	Annual		137	mg/l	N/A	N/A	yes
09/04/2015	GW7	Chromium (total)	ICP-MS	Annual		<20.000	µg/l	37.5	4.7	no
09/04/2015	GW7	Copper	ICP-MS	Annual		<20.000	µg/l	1500	5	yes
09/04/2015	GW7	Iron	ICP-MS	Annual		2466	µg/l		N/A	no
09/04/2015	GW7	Lead	ICP-MS	Annual		<20.000	µg/l	18.75	7.2	no
09/04/2015	GW7	Magnesium	ICP-MS	Annual		16.5	mg/l	N/A	N/A	yes
09/04/2015	GW7	Manganese	ICP-MS	Annual		6.33	µg/l	N/A	N/A	yes
09/04/2015	GW7	Nickel	ICP-MS	Annual		<20.000	µg/l	15	20	no
09/04/2015	GW7	Potassium	ICP-MS	Annual		28.2	mg/l	N/A	N/A	yes
09/04/2015	GW7	Zinc	ICP-MS	Annual		36	µg/l	N/A	40	yes
09/04/2015	GW7	Cyanide (total)	Steam Distillation & Colourimetry	Annual		6	µg/l	37.5	10	no
09/04/2015	GW7	Flouride	Konelab Aquakem	Annual		<0.020	mg/l	N/A	0.5	no
09/04/2015	GW7	Mercury	ICP-MS	Annual		<10.000	mg/l			no
09/04/2015	GW7	Sulphate	Konelab Aquakem	Annual		<2.500	mg/l SO4	187.5	N/A	no
09/04/2015	GW7	Total Phosphorous	ICP-MS	Annual		0.04	mg/l P	N/A	0.075	no
30/07/2015	GW7	Total ammonia	Konelab Aquakem	Quarterly		43.93	mg/l NH3	0.065-0.175	<0.014	yes
30/07/2015	GW7	Conductivity	Electrometry	Quarterly		1170	µS/cm @20oC	800-1875	N/A	yes
23/10/2015	GW7	Total ammonia	Konelab Aquakem	Quarterly		49.08	mg/l NH3	0.065-0.175	<0.014	yes
23/10/2015	GW7	Conductivity	Electrometry	Quarterly		1335	µS/cm @20oC	800-1875	N/A	yes

\*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.

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 (see the link in G31).

\*\*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)

[Groundwater monitoring template](#)

[Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites \(EPA 2013\).](#)

[Groundwater](#) [Drinking water](#)  
[Surface water](#) [regulations](#) [\(private supply\)](#) [Drinking water \(public](#) [Interim Guideline](#)  
[EQS](#) [GTV's](#) [standards](#) [supply\) standards](#) [Values \(IGV\)](#)



**Groundwater/Soil monitoring template**

Lic No: W0089-02

Year

2015

**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

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

		Commentary	
1	ELRA initial agreement status	Submitted and agreed by EPA	
2	ELRA review status	SELECT	
3	Amount of Financial Provision cover required as determined by the latest ELRA	Specify	
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	

<b>Environmental Management Programme/Continuous Improvement Programme template</b>	Lic No:	W0089-02	Year	2015
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Highlighted cells contain dropdown menu click to view	Additional Information
1 Do you maintain an Environmental Management System (EMS) for the site. If yes, please detail in additional information	Yes Site procedures make up the EMS
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/Improve landfill gas extraction regime	Ongoing	Regular & frequent field gas balancing	Individual	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Procure secure storage unit for WEEE	50	Interaction with WEEE Collection Contractor	Individual	Improved Environmental Management Practices
Groundwater protection	Ensure contaminated groundwater/surface water does not impact of site receptors	Ongoing	Consultants retained to monitor and make recommendations for on site GW contamination issues	Individual	Remediation of contamination on site

## Noise monitoring summary report

Lic No:

W0089-02

Year

2015

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 [Noise Guidance note NG4](#) completion of the "Checklist for noise measurement report" included in the

Yes

3 Does your site have a noise reduction plan

No

4 When was the noise reduction plan last updated?

N/A

5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the

No

**Table N1: Noise monitoring summary**

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location - NSL (if applicable)	LA <sub>eq</sub>	LA <sub>90</sub>	LA <sub>10</sub>	LA <sub>max</sub>	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 <u>site</u> compliant with noise limits (day/evening/night)?
17/12/2015	13:08 - 14:40	N1		42.20	36.30	45.10	59.80	No		By EPA agreement, nighttime monitoring not required	Yes
17/12/2015	08:22 - 09:53	N6		48.90	39.20	52.80	65.30	No		By EPA agreement, nighttime monitoring not required	Yes
17/12/2015	09:57 - 11:30	N7		53.10	44.80	56.60	77.90	No		By EPA agreement, nighttime monitoring not required	Yes
17/12/2015	11:35 - 13:05	N10		52.00	44.70	55.00	81.10	No		By EPA agreement, nighttime monitoring not required	Yes
17/12/2015	14:47 - 16:18	N12		49.70	43.60	52.90	69.10	No		By EPA agreement, nighttime monitoring not required	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:

W0089-02

Year

2015

## Additional information

1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below

	Sep-15	
SELECT		Cork County Council has energy usage reduction team in operation countywide
SELECT		N/A

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 \(LIEN\)](#)

Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

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)	51.4	32.4	N/A	N/A
Total Energy Generated (MWHrs)	0	0		
Total Renewable Energy Generated (MWHrs)	0	0		
Electricity Consumption (MWHrs)	51.4	32.4		N/A
Fossil Fuels Consumption:	N/A			
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)				
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 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*	Water Emissions		Water Consumption	
					Volume Discharged back to environment(m <sup>3</sup> /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:	
Groundwater								
Surface water								
Public supply								
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: W0089-02 Year 2015

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
Sep-15	Replace existing lighting with modern, more efficient LED lights and sensors.	Replace existing lighting with modern, more efficient LED lights and sensors.	energy audit	33		Facility Manager	Dec-16	Ongoing
			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					



<b>WASTE SUMMARY</b>	Lic No: W0089-02	Year: 2015
<b>SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES</b>	<a href="#">PRTR facility logon</a>	dropdown list click to see options

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

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 **1 is to be captured through PRTR reporting**)

No	Additional Information
----	------------------------

If yes please enter details in table 1 below

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	Additional Information
----	------------------------

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	Additional Information
----	------------------------

**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)**

Licensed annual tonnage limit for your site (total tonnes/annum)	EWC code <a href="#">European Waste Catalogue EWC codes</a>	Source of waste accepted	Description of waste accepted <b>Please enter an accurate and detailed description - which applies to relevant EWC code</b> <a href="#">European Waste Catalogue EWC codes</a>	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 -

**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
N/A - Landfill Closed				

**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	
N/A - Landfill Closed													

**Table 4 Environmental monitoring-landfill only** [Landfill Manual-Monitoring Standards](#)



<b>WASTE SUMMARY</b>	Lic No:	W0089-02	Year	2015
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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
No	Yes	Yes	Yes	Yes	Yes	No	Yes	

+ 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					
N/A - Landfill Capped						

\*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

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
6289.31					No	Bandon WWTP	

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
CH <sub>4</sub> - 56,371		0	No	

[Guidance to completing the PRTR workbook](#)

# PRTR Returns Workbook

Version 1.1.19

<b>REFERENCE YEAR</b>	2015
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## 1. FACILITY IDENTIFICATION

Parent Company Name	Cork County Council
Facility Name	Derryconnell Landfill
PRTR Identification Number	W0089
Licence Number	W0089-02

### Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Derryconnell
Address 2	Schull
Address 3	
Address 4	
	Cork
Country	Ireland
Coordinates of Location	-7.46596 53.2762
River Basin District	IESW
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
<b>AER Returns Contact Name</b>	Mairead Hales
<b>AER Returns Contact Email Address</b>	mairead.hales@corkcoco.ie
<b>AER Returns Contact Position</b>	Executive Engineer
<b>AER Returns Contact Telephone Number</b>	028 37742
<b>AER Returns Contact Mobile Phone Number</b>	086 6018493
<b>AER Returns Contact Fax Number</b>	028 37742
<b>Production Volume</b>	0.0
<b>Production Volume Units</b>	
<b>Number of Installations</b>	0
<b>Number of Operating Hours in Year</b>	0
<b>Number of Employees</b>	3
<b>User Feedback/Comments</b>	
<b>Web Address</b>	

## 2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(c)	Installations for the disposal of non-hazardous waste
5(c)	Installations for the disposal of non-hazardous waste
5(d)	Landfills
50.1	General

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

Is it applicable?	No
Have you been granted an exemption ?	
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) ?	
--	--

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

**SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS**

POLLUTANT		METHOD			Please enter all quantities in this section in KGs			
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
01	Methane (CH4)	C	OTH	LandGEM Modelling	0.0	241656.6	0.0	241656.6

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

**SECTION B : REMAINING PRTR POLLUTANTS**

POLLUTANT		METHOD			Please enter all quantities in this section in KGs			
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)**

POLLUTANT		METHOD			Please enter all quantities in this section in KGs			
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: Derryconnell Landfill

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)	279969.6	C	OTH	Landgem	N/A
Methane flared	38313.0	C	OTH	Landfill Gas Survey	500.0 (Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)	241656.6	C	OTH	LandGEM Modelling	N/A

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

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	13 02 08	Yes	1.58	other engine, gear and lubricating oils	R13	M	Weighed	Offsite in Ireland	Enva Ireland Ltd.,W0184-01 Green Dragon Recycling,WFP-CK-10-0060-02	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland
Within the Country	15 01 04	No	5.3	metallic packaging	R13	M	Weighed	Offsite in Ireland	Bantry Skip Hire,WFP-CK-12-0120-01	Corbally,Glanmire,Co. Cork,.,Ireland Dunbittern East ,Bantry ,Co. Cork ,.,Ireland		
Within the Country	15 01 06	No	131.46	mixed packaging	R13	M	Weighed	Offsite in Ireland	Mr. Binman Ltd.,W0061-02	Luddenmore,Grange,Kilmallock,Co. Limerick,Ireland		
Within the Country	15 01 07	No	44.0	glass packaging	R13	M	Weighed	Offsite in Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland
Within the Country	16 01 07	Yes	0.12	oil filters	R13	M	Weighed	Offsite in Ireland	KMK Metals Recycling,W0113-03	Cappincur Industrial Estate,Duingean Road,Tullamore,Co. Offaly,Ireland		
Within the Country	16 02 14	No	36.04	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R13	M	Weighed	Offsite in Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland
Within the Country	16 05 04	Yes	0.48	gases in pressure containers (including halons) containing dangerous substances	R13	M	Weighed	Offsite in Ireland	KMK Metals Recycling,W0113-03	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland
Within the Country	16 06 01	Yes	1.96	lead batteries	R13	M	Weighed	Offsite in Ireland	KMK Metals Recycling,W0113-03	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland
Within the Country	16 06 05	No	0.7	other batteries and accumulators	R13	M	Weighed	Offsite in Ireland	KMK Metals Recycling,W0113-03	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland		
Within the Country	19 07 03	No	6289.31	landfill leachate other than those mentioned in 19 07 02	D9	M	Weighed	Offsite in Ireland	Cork County Council - Bandon WWTP,.	Glaslin Road,Bandon,Co. Cork,.,Ireland		
To Other Countries	20 01 11	No	5.36	textiles	R13	M	Weighed	Abroad	All-Tex Recyclers Ltd.,LN/13/17	1 Ballycreagh Road,Cloughmills,Co. Antrim,.,Ireland		
Within the Country	20 01 25	No	0.78	edible oil and fat	R13	M	Weighed	Offsite in Ireland	Cork Oil Collectors,WFP-CK-10-0058-02	5 St. Lappans Place,Little Island,Cork,.,Ireland		
Within the Country	20 01 27	Yes	6.24	paint, inks, adhesives and resins containing dangerous substances	R13	M	Weighed	Offsite in Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,Co. Laois,.,Ireland
Within the Country	20 01 38	No	53.98	wood other than that mentioned in 20 01 37	R13	M	Weighed	Offsite in Ireland	Ballineen Skip Hire,WFP-CK-10-0054-01-A2	Caher & Connagh,Ballineen,Co. Cork,.,Ireland		
Within the Country	20 01 40	No	42.24	metals	R13	M	Weighed	Offsite in Ireland	Pouladuff Dismantlers,CK-10-0070-02	Forge Hill,Airport Road,Cork,.,Ireland		
Within the Country	20 03 01	No	288.54	mixed municipal waste	D15	M	Weighed	Offsite in Ireland	Bantry Skip Hire,WFP-CK-12-0120-01	Dunbittern East ,Bantry ,Co. Cork ,.,Ireland		
Within the Country	20 03 07	No	134.9	bulky waste	D15	M	Weighed	Offsite in Ireland	Bantry Skip Hire,WFP-CK-12-0120-01	Dunbittern East ,Bantry ,Co. Cork ,.,Ireland		
			0.0									

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