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se include an appendix to the AER template and merge it as part of the AER PDF document. The excel
ately so that all text is readable before it is converted to PDF document.

Facility Information Summary	
AER Reporting Year	2017
Licence Register Number	W0068-03
Name of site	Youghal Landfill
Site Location	Foxhole, Youghal, co.Cork
NACE Code	3821
Class/Classes of Activity	5(c), 5(d), 50.1
National Grid Reference (6E, 6 N)	2100E 0800N
<p>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 <u>listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.</u></p>	<p>Youghal landfill accepted waste at the facility until February 2012. Since that date only cover material (soil and stones) and road building material (suitable C&D material) has been accepted to allow for a "pre-capping" profile to be constructed on Cell 9. This work continued in 2017 and a void of 180m3 is still available whenever the management of the facility decide to fill it. A capping design is currently ongoing. The environmental performance of the facility has continued to improve by comparison with previous years. No confirmed odour complaint was registered in 2017. The gas extraction system has continued to perform well with 1 the enclosed flare burning off the gas generated. The daily attendance and gas-well leachate removal has ensured increased effective length of the gas wells and, hence, the proper functioning of the system. The VOC surveys have shown a continued improvement in the profile of Cells 6 to 9. Minor exceedances have again been measured in the perimeter gas wells but are explained by the estuarine conditions that account for naturally occurring CO2. Both Leachate and groundwater results are similar to previous years. The noise survey was compliant for the year as would be expected with the removal of the 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.

_____	_____ 28/03/2018 _____
Signature	Date
	
(or nominated, suitably qualified and experienced deputy)	

AIR-summary template

Lic No:

W0068-03

Year

2017

Answer all questions and complete all tables where relevant

Additional information

- 1 Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licenced emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables

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

- 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

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	707741	m3	yes	MAB	483218	Annual mass load refers to difference
Flare Stack	Carbon dioxide (CO2)	Continuous	N/A	SELECT	222408	m3	yes	ISO 12039:2001	415903	Annual mass load refers to difference
Flare Stack	Carbon monoxide (CO)	Continuous	<50mg/Nm3	No 30min mean can exceed the ELV	7.87	mg/Nm3	yes	ISO 12039:2001	23.5	
Flare Stack	Nitrogen oxides (NOx/NO2)	Annual	<150mg/Nm3	No 30min mean can exceed the ELV	128.04	mg/Nm3	yes	EN 14792:2005	382.27	
Flare Stack	Sulphur oxides (SOx/SO2)	Annual	N/A		50.24	mg/Nm3	yes	EN 14791:2005	150	

AIR-summary template	Lic No: W0068-03	Year: 2017
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 therof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
Flare Stack	PRTR	N/A	12 month	100 % of values < ELV	m3			94	0	One enclosed flare operating on site for 2017
	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

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					
Total VOC Emission limit value			Solvent regulations Please refer to linked solvent regulations to complete table 5 and 6		
Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision thereof	Compliance
					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:

W0068-03

Year

2017

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

No

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

No

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	upstream		pH	Quarterly	No ELV or trigger levels	N/A	8.00	pH units	yes	Median Value for 2017
SW1	upstream		Temperature	Quarterly	No ELV or trigger levels	N/A		degrees C	yes	Median Value for 2017
SW1	upstream		Conductivity	Quarterly	No ELV or trigger levels	N/A	14.10	µS/cm@25oC	yes	Median Value for 2017
SW1	upstream		Dissolved Oxygen	Quarterly	No ELV or trigger levels	N/A	10	mg/L	yes	Median Value for 2017
SW1	upstream	Chlorides (as Cl)		Quarterly	No ELV or trigger levels	N/A	2775	mg/L	yes	Median Value for 2017. sw1 is influenced by saline water.
SW1	upstream		BOD	Quarterly	No ELV or trigger levels	N/A	<2	mg/L	yes	Median Value for 2017
SW1	upstream		COD	Quarterly	No ELV or trigger levels	N/A	245	mg/L	yes	Median Value for 2017
SW1	upstream		Ammonia (as N)	Quarterly	No ELV or trigger levels	N/A	0.13	mg/L	yes	Median Value for 2017
SW1	upstream		Suspended Solids	Quarterly	No ELV or trigger levels	N/A	24	mg/L	yes	Median Value for 2017
SW1	upstream	Chromium and compounds (as Cr)		Annual	No ELV or trigger levels	N/A	<3	µg/L	yes	Annual result
SW1	upstream	Copper and compounds (as Cu)		Annual	No ELV or trigger levels	N/A	<0.3	mg/L	yes	Annual result
SW1	upstream	Cadmium and compounds (as Cd)		Annual	No ELV or trigger levels	N/A		µg/L	yes	Annual result
SW1	upstream		Iron	Annual	No ELV or trigger levels	N/A	<0.19	µg/L	yes	Annual result
SW1	upstream	Lead and compounds (as Pb)		Annual	No ELV or trigger levels	N/A	0.283	µg/L	yes	Annual result
SW1	upstream		Magnesium	Annual	No ELV or trigger levels	N/A	322	mg/L	yes	Annual result
SW1	upstream		Manganese (as Mn)	Annual	No ELV or trigger levels	N/A	61.8	µg/L	yes	Annual result
SW1	upstream	Mercury and compounds (as Hg)		Annual	No ELV or trigger levels	N/A	<0.01	µg/L	yes	Annual result
SW1	upstream		Potassium	Annual	No ELV or trigger levels	N/A	102	mg/L	yes	Annual result. SALINE WATERS
SW1	upstream		Sulphate	Annual	No ELV or trigger levels	N/A	621	mg/L	yes	Annual result. SALINE WATERS
SW1	upstream		Total Oxidised Nitrogen (TON)	Annual	No ELV or trigger levels	N/A		mg/L	yes	Annual result
SW1	upstream	Zinc and compounds (as Zn)		Annual	No ELV or trigger levels	N/A	5.94	µg/L	yes	Annual result
SW1	upstream	Total phosphorus		Annual	No ELV or trigger levels	N/A	0.5	mg/L	yes	Annual result
SW2	downstream		pH	Quarterly	No ELV or trigger levels	N/A	8.0	pH units	yes	Median Value for 2017
SW2	downstream		Temperature	Quarterly	No ELV or trigger levels	N/A		degrees C	yes	Median Value for 2017
SW2	downstream		Conductivity	Quarterly	No ELV or trigger levels	N/A	13.00	µS/cm@25oC	yes	Median Value for 2017
SW2	downstream		Dissolved Oxygen	Quarterly	No ELV or trigger levels	N/A	8.00	mg/L	yes	Median Value for 2017
SW2	downstream	Chlorides (as Cl)		Quarterly	No ELV or trigger levels	N/A	4514	mg/L	yes	Median Value for 2016. SW2 is located along the mud bank and is tidal.
SW2	downstream		BOD	Quarterly	No ELV or trigger levels	N/A	<10	mg/L	yes	Median Value for 2017
SW2	downstream		COD	Quarterly	No ELV or trigger levels	N/A	157	mg/L	yes	Median Value for 2017
SW2	downstream		Ammonia (as N)	Quarterly			3.00	mg/L	yes	Median Value for 2017
SW2	downstream		Suspended Solids	Quarterly			72	mg/L	yes	Median Value for 2017
SW2	downstream	Chromium and compounds (as Cr)		Annual	No ELV or trigger levels	N/A	<3	µg/L	yes	Annual result
SW2	downstream	Copper and compounds (as Cu)		Annual	No ELV or trigger levels	N/A	0.5	mg/L	yes	Annual result
SW2	downstream	Cadmium and compounds (as Cd)		Annual	No ELV or trigger levels	N/A		µg/L	yes	Annual result
SW2	downstream		Iron	Annual	No ELV or trigger levels	N/A	0.562	µg/L	yes	Annual result
SW2	downstream	Lead and compounds (as Pb)		Annual	No ELV or trigger levels	N/A	0.35	µg/L	yes	Annual result
SW2	downstream		Magnesium	Annual	No ELV or trigger levels	N/A	415	mg/L	yes	Annual result

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)				Lic No:	W0068-03	Year	2017			
SW2	downstream		Manganese (as Mn)	Annual	No ELV or trigger levels	N/A	1740	µg/L	yes	Annual result
SW2	downstream	Mercury and compounds (as Hg)		Annual	No ELV or trigger levels	N/A	<0.01	µg/L	yes	Annual result
SW2	downstream		Potassium	Annual	No ELV or trigger levels	N/A	133	mg/L	yes	Annual result
SW2	downstream		Sulphate	Annual	No ELV or trigger levels	N/A	747	mg/L	yes	Annual result
SW2	downstream		Total Oxidised Nitrogen (TON)	Annual	No ELV or trigger levels	N/A		mg/L	yes	Annual result
SW2	downstream	Zinc and compounds (as Zn)		Annual	No ELV or trigger levels	N/A	5.55	µg/L	yes	Annual result
SW2	downstream	Total phosphorus		Annual	No ELV or trigger levels	N/A	0.5	mg/L	yes	Annual result
SW3	downstream		PH	Quarterly	No ELV or trigger levels	N/A	9.0	pH units	yes	Median Value for 2017
SW3	downstream		Temperature	Quarterly	No ELV or trigger levels	N/A		degrees C	yes	Median Value for 2017
SW3	downstream		Conductivity	Quarterly	No ELV or trigger levels	N/A	23.0	µS/cm@25oC	yes	Median Value for 2017
SW3	downstream		Dissolved Oxygen	Quarterly	No ELV or trigger levels	N/A	8	mg/L	yes	Median Value for 2017
SW3	downstream	Chlorides (as Cl)		Quarterly	No ELV or trigger levels	N/A	8800	mg/L	yes	Median Value for 2017. Located at the sluice gate and is tidal.
SW3	downstream		BOD	Quarterly	No ELV or trigger levels	N/A	<10	mg/L	yes	Median Value for 2017
SW3	downstream		COD	Quarterly	No ELV or trigger levels	N/A	521	mg/L	yes	Median Value for 2017
SW3	downstream		Ammonia (as N)	Quarterly	No ELV or trigger levels	N/A	2.00	mg/L	yes	Median Value for 2017
SW3	downstream		Suspended Solids	Quarterly	No ELV or trigger levels	N/A	57	mg/L	yes	Median Value for 2017
SW3	downstream	Chromium and compounds (as Cr)		Annual	No ELV or trigger levels	N/A	<3	µg/L	yes	Annual result
SW3	downstream	Copper and compounds (as Cu)		Annual	No ELV or trigger levels	N/A	<0.3	µg/L	yes	Annual result
SW3	downstream	Cadmium and compounds (as Cd)		Annual	No ELV or trigger levels	N/A		µg/L	yes	Annual result
SW3	downstream		Iron	Annual	No ELV or trigger levels	N/A	<0.19	µg/L	yes	Annual result
SW3	downstream	Lead and compounds (as Pb)		Annual	No ELV or trigger levels	N/A	<0.2	µg/L	yes	Annual result
SW3	downstream		Magnesium	Annual	No ELV or trigger levels	N/A	398	mg/L	yes	Annual result for 2017. EQS limit is 50 mg/L. Elevated levels are consistent with previous years and are due to the geology of the site.
SW3	downstream		Manganese (as Mn)	Annual	No ELV or trigger levels	N/A	1690	µg/L	yes	Annual result
SW3	downstream	Mercury and compounds (as Hg)		Annual	No ELV or trigger levels	N/A	<0.01	µg/L	yes	Annual result
SW3	downstream		Potassium	Annual	No ELV or trigger levels	N/A	129	mg/L	yes	Annual result. SALINE WATERS
SW3	downstream		Sulphate	Annual	No ELV or trigger levels	N/A	756	mg/L	yes	Annual result. SALINE WATERS
SW3	downstream		Total Oxidised Nitrogen (TON)	Annual	No ELV or trigger levels	N/A		mg/L	yes	Annual result
SW3	downstream	Zinc and compounds (as Zn)		Annual	No ELV or trigger levels	N/A	3.76	µg/L	yes	Annual result
SW3	downstream	Total phosphorus		Annual	No ELV or trigger levels	N/A	0.4	mg/L	yes	Annual result
SW6	downstream		PH	Quarterly	No ELV or trigger levels	N/A	8.0	pH units	yes	Median Value for 2017
SW6	downstream		Temperature	Quarterly	No ELV or trigger levels	N/A		degrees C	yes	Median Value for 2017
SW6	downstream		Conductivity	Quarterly	No ELV or trigger levels	N/A	14.0	mS/cm@25oC	yes	Median Value for 2017
SW6	downstream		Dissolved Oxygen	Quarterly	No ELV or trigger levels	N/A	9.0	mg/L	yes	Median Value for 2017
SW6	downstream	Chlorides (as Cl)		Quarterly	No ELV or trigger levels	N/A	5245	mg/L	yes	Median Value for 2017. SW6 is located along the mud bank and is tidal.
SW6	downstream		BOD	Quarterly	No ELV or trigger levels	N/A	3	mg/L	yes	Median Value for 2017
SW6	downstream		COD	Quarterly	No ELV or trigger levels	N/A	153	mg/L	yes	Median Value for 2017
SW6	downstream		Ammonia (as N)	Quarterly	No ELV or trigger levels	N/A	3.00	mg/L	yes	Median Value for 2017
SW6	downstream		Suspended Solids	Quarterly	No ELV or trigger levels	N/A	21	mg/L	yes	Median Value for 2017
SW6	downstream	Chromium and compounds (as Cr)		Annual	No ELV or trigger levels	N/A	No results	µg/L	yes	Annual result
SW6	downstream	Copper and compounds (as Cu)		Annual	No ELV or trigger levels	N/A	No results	mg/L	yes	Annual result
SW6	downstream	Cadmium and compounds (as Cd)		Annual	No ELV or trigger levels	N/A	No results	µg/L	yes	Annual result
SW6	downstream		Iron	Annual	No ELV or trigger levels	N/A	No results	µg/L	yes	Annual result
SW6	downstream	Lead and compounds (as Pb)		Annual	No ELV or trigger levels	N/A	No results	µg/L	yes	Annual result
SW6	downstream		Magnesium	Annual	No ELV or trigger levels	N/A	No results	mg/L	yes	Annual result for 2017. EQS limit is 50mg/L. Elevated results is consistent and due to
SW6	downstream		Manganese (as Mn)	Annual	No ELV or trigger levels	N/A	No results	µg/L	yes	Annual result
SW6	downstream	Mercury and compounds (as Hg)		Annual	No ELV or trigger levels	N/A	No results	µg/L	yes	Annual result

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)						Lic No:	W0068-03	Year	2017	
SW6	downstream		Potassium	Annual	No ELV or trigger levels	N/A	757	mg/L	yes	Annual result. This is saline water.
SW6	downstream		Sulphate	Annual	No ELV or trigger levels	N/A	No results	mg/L	yes	Annual result. This is saline water.
SW6	downstream		Total Oxidised Nitrogen (TON)	Annual	No ELV or trigger levels	N/A	No results	mg/L	yes	Annual result
SW6	downstream	Zinc and compounds (as Zn)		Annual	No ELV or trigger levels	N/A	No results	µg/L	yes	Annual result
SW6	downstream	Total phosphorus		Annual	No ELV or trigger levels	N/A	0.47	mg/L	yes	Annual result
GA127	onsite		pH	Quarterly	No ELV or trigger levels	N/A	dry	pH units	yes	Median Value for 2017
GA127	onsite		Temperature	Quarterly	No ELV or trigger levels	N/A	dry	degrees C	yes	Median Value for 2017
GA127	onsite		Conductivity	Quarterly	No ELV or trigger levels	N/A	dry	µS/cm@25oC	yes	Median Value for 2017
GA127	onsite	Chlorides (as Cl)		Quarterly	No ELV or trigger levels	N/A	dry	mg/L	yes	Median Value for 2017
GA127	onsite		BOD	Quarterly	No ELV or trigger levels	N/A	dry	mg/L	yes	Median Value for 2017
GA127	onsite		COD	Quarterly	No ELV or trigger levels	N/A	dry	mg/L	yes	Median Value for 2017
GA127	onsite		Ammonia (as N)	Quarterly	No ELV or trigger levels	N/A	dry	mg/L	yes	Median Value for 2017
GA127	onsite		Suspended Solids	Quarterly	No ELV or trigger levels	N/A	dry	mg/L	yes	Median Value for 2017
GA127	onsite	Chromium and compounds (as Cr)		Annual	No ELV or trigger levels	N/A	dry	mg/L	yes	Annual result
GA127	onsite	Copper and compounds (as Cu)		Annual	No ELV or trigger levels	N/A	dry	µg/L	yes	Annual result
GA127	onsite	Cadmium and compounds (as Cd)		Annual	No ELV or trigger levels	N/A	dry	mg/L	yes	Annual result
GA127	onsite		Iron	Annual	No ELV or trigger levels	N/A	dry	µg/L	yes	Annual result
GA127	onsite	Lead and compounds (as Pb)		Annual	No ELV or trigger levels	N/A	dry	µg/L	yes	Annual result
GA127	onsite		Magnesium	Annual	No ELV or trigger levels	N/A	dry	mg/L	yes	Annual result
GA127	onsite		Manganese (as Mn)	Annual	No ELV or trigger levels	N/A	dry	µg/L	yes	Annual result
GA127	onsite	Mercury and compounds (as Hg)		Annual	No ELV or trigger levels	N/A	dry	µg/L	yes	Annual result
GA127	onsite		Potassium	Annual	No ELV or trigger levels	N/A	dry	µg/L	yes	Annual result
GA127	onsite		Sulphate	Annual	No ELV or trigger levels	N/A	dry	mg/L	yes	Annual result
3	GA127	onsite	Total Oxidised Nitrogen (TON)	Annual	No ELV or trigger levels	N/A	dry	mg/L	yes	Annual result
4	GA127	onsite	Zinc and compounds (as Zn)	Annual	No ELV or trigger levels	N/A	dry	µg/L	yes	Annual result
	GA127	onsite	Total phosphorus	Annual	No ELV or trigger levels	N/A	dry	mg/L	yes	Annual result

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

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision 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
	SELECT	SELECT		SELECT	SELECT	SELECT					
	SELECT	SELECT		SELECT	SELECT	SELECT					

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

Table W5: Abatement system bypass reporting table

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

*Measures taken or proposed to reduce or limit bypass frequency









Bund 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)

Yes	Only one bund test is required at the site for the leachate lagoon. The lagoon is used for storage of leachate prior to transport to local
3 years	
No	
1	
1	
1	
No	
1	
0	
N/A	
No	
N/A	
No	

- 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?
- Please list any sump integrity failures in table B1**
- 12 Do all sumps and chambers have high level liquid alarms?
 - 13 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	Liner covered concrete	Leachate	2000 m3	1500 m3	Structural assessment		Oct-08	Yes	Pass		SELECT	Jun-18	
	SELECT					SELECT			SELECT	SELECT		SELECT		

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

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](#)

Commentary	
SELECT	
SELECT	
SELECT	

- 15 Are channels/transfer systems to remote containment systems tested?
- 17 Are channels/transfer systems compliant in both integrity and available volume?

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**

SELECT	
SELECT	

- 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)

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

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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 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.	Groundwater monitoring template SELECT	<p>There are 7 ground water wells on site at Youghal Landfill. MW1/MW4/MW7 are sampled quarterly with annual parameters attached, while MW2/MW2A/MW3/MW5 are sampled quarterly for quarterly parameters. Licence trigger limits set at MW1 and MW4 for ammonia and TON were not exceeded during 2017. Licence trigger limits set at MW7 for TON were not exceeded during 2017. However, trigger limits set at MW7 for ammonia were exceeded in 2017. It is advised that trigger limits for MW7 be reassessed, as MW7 was redrilled at a different position in 2013. Quarterly parameters such as conductivity and chlorides limits were exceeded frequently during 2017. These exceedances are attributed to the location of the site in relation to the estuary and the effect of saline water on the ground water wells. Overall, ground water results were similar to previous years.</p>
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?	SELECT	
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	

Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTVs*	SELECT**	Upward trend in pollutant concentration over last 5 years of monitoring data
Quarterly	MW4	pH	Meter	Quarterly	7.72	7.5	SELECT		9.5	no
Quarterly	MW4	Temp	Meter	Quarterly					25	no
Quarterly	MW4	Elec.Conductivity	Meter	Quarterly	864.00	217.00		800-1875	1000	no
Quarterly	MW4	Chlorides	titration	Quarterly	699	239	mg/l	24-187.5	250	no
Quarterly	MW4	Ammoniacal Nitrogen	ISE	Quarterly	19	9.52	mg/l	0.065-0.175	80mg/l* (Trigger limit)	no
Quarterly	MW4	Iron	ICP	Quarterly	<0.20	<0.19	ug/l		0.2	no
Quarterly	MW4	TON	HACH	Quarterly	5.8	5.19	ug/l	-	No abnormal change	no
Quarterly	MW4	TOC	TOC analyser	Quarterly	15	10.10	mg/l		30mg/l (Trigger limit)	no
Annual	MW4	Cadmium	ICP	Annual	<0.08	<0.09	ug/l	-	0.005	no
Annual	MW4	Chromium (total)	ICP	Annual	<3	<4	ug/l	37.5	0.03	no
Annual	MW4	Copper	COLORIMETRY	Annual	<0.3	<0.3	ug/l	1500	0.03	no
Annual	MW4	Cyanide (Total)	ICP	Annual	<0.05	<0.05	ug/l	-	0.01	no
Annual	MW4	Lead	ICP	Annual	0.239	0.239	ug/l	18.75	0.01	no
Annual	MW4	Magnesium	ICP	Annual	13.2	13.2	mg/l	-	50	no
Annual	MW4	Manganese	ICP	Annual	18.6	18.6	ug/l	-	0.05	no
Annual	MW4	Mercury	ICP	Annual	<0.01	<0.01	ug/l	0.75	0.001	no
Annual	MW4	Nickle	ICP	Annual	<0.4	<0.4	ug/l	15	0.02	no
Annual	MW4	Potassium	ICP	Annual	2.25	2.25	mg/l	-	5	no
Annual	MW4	Sulphate	Aquakem auto analyser	Annual	19.4	19.4	mg/l	187.5	200	no
Annual	MW4	Total Alkalinity	icp	Annual	270	270	mg/l	-		no
Annual	MW4	Total Phosphorus	spectrophotometry	Annual			mg/l	0.09		no
Annual	MW4	Phenols	GC-MS	Annual	<0.002	<0.002	ug/l		0.5	no
Annual	MW4	Acenaphthylene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Anthracene	GC-MS	Annual	<1	<1	ug/l		1000	no
Annual	MW4	Benzene	GC-MS	Annual	<1	<1	ug/l		2	no

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Annual	MW4	Bromodichloromethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Bromoform	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Chloroform	GC-MS	Annual	<1	<1	ug/l	12	no
Annual	MW4	Chrysene	GC-MS	Annual	<0.02	<0.02	ug/l		no
Annual	MW4	Dibromochloromethane	GC-MS	Annual	<1	<1	ug/l	0.03	no
Annual	MW4	Fluoranthene	GC-MS	Annual	<1	<1	ug/l	0.1	no
Annual	MW4	Fluorene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Naphthalene	GC-MS	Annual	<1	<1	ug/l	1	no
Annual	MW4	Dibromochloromethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Pentachlorophenol	GC-MS	Annual	<1	<1	ug/l	2	no
Annual	MW4	Phenanthrene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Pyrene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Tetrachloroethene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Trichloroethene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Hexachlorobenzene	GC-MS	Annual			ug/l	0.03	no
Annual	MW4	Hexachlorobutadiene	GC-MS	Annual	<1	<1	ug/l	0.1	no
Annual	MW4	2,4,6-Trichlorophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2,4-Dichlorophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2,4-Dimethylphenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2-Chlorophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	1,2,4-trichlorobenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	1,2-dichlorobenzene	GC-MS	Annual	<1	<1	ug/l	10	no
Annual	MW4	1,3-dichlorobenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	1,4-dichlorobenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2,4,5-Trichlorophenol	GC-MS	Annual			ug/l		no
Annual	MW4	2,4-Dinitrotoluene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2,6-Dinitrotoluene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2-Chloronaphthalene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2-Methylnaphthalene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2-Methylphenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2-Nitrophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	4-Bromophenyl Phenyl Ether	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	4-Chloro-3-methylphenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	4-Chlorophenyl phenyl ether	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	4-Nitrophenol	GC-MS	Annual	<1	<1	ug/l		no

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Annual	MW4	Acenaphthene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Benzo(a)anthracene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Benzo(a)pyrene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Benzo(b)fluoranthene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Benzo(g,h,i)perylene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Benzyl Butyl Phthalate	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Bis(2-chloroethoxy)methane	GC-MS	Annual	<0.04	<0.04	ug/l			no
Annual	MW4	Bis(2-chloroethyl)ether	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Bis(2-chloroisopropyl)ether	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Bis(2-ethylhexyl)phthalate	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Dibenz(a,h)anthracene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Dibenzofuran	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Diethylphthalate	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Di-n-Butylphthalate	GC-MS	Annual	<1	<1	ug/l		2	no
Annual	MW4	Di-n-octylphthalate	GC-MS	Annual	<1	<1	ug/l		10	no
Annual	MW4	Diphenylamine	GC-MS	Annual	<1	<1	ug/l		10	no
Annual	MW4	Hexachloroethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Indeno(1,2,3-c,d)pyrene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Isophorone	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Nitrobenzene	GC-MS	Annual	<1	<1	ug/l		10	no
Annual	MW4	n-Nitrosodi-n-propylamine	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Acetone	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Dichloromethane	GC-MS	Annual	<1	<1	ug/l		0.04	no
Annual	MW4	Tetrahydrofuran	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Toluene	GC-MS	Annual	<1	<1	ug/l		10	no
Annual	MW4	Xylene -o	GC-MS	Annual	<1	<1	ug/l		10	no
Annual	MW4	Dichlorodifluoromethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Chloromethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Ethyl Chloride/Chloroethane	GC-MS	Annual			ug/l			no
Annual	MW4	Vinyl Chloride	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Bromomethane	GC-MS	Annual			ug/l			no
Annual	MW4	Trichloromonofluoromethane	GC-MS	Annual	<1	<1	ug/l		30	no
Annual	MW4	Ethyl Ether/Diethyl Ether	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	1,1 Dichloroethene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Iodomethane/Methyl iodide	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Carbon Disulphide	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Allyl Chloride	GC-MS	Annual	<1	<1	ug/l			no

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Annual	MW4	Chlormethyl Cyanide/Chloroac etonitrile	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Propanenitrile	GC-MS	Annual	<1	<1	ug/l	500	no
Annual	MW4	Trans-1,2 Dichloroethene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	MtBE	GC-MS	Annual	<1	<1	ug/l	30	no
Annual	MW4	1,1- dichloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2,2- dichloropropane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	cis-12 Dichloroethene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	2-Butanone	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Methyl Acrylate	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Bromochlorometh ane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Methacrylonitrile	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	1,1,1- trichloroethane	GC-MS	Annual	<1	<1	ug/l	500	no
Annual	MW4	1-Chlorobutane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Carbon Tetrachloride	GC-MS	Annual			ug/l		no
Annual	MW4	11 Dichloropropene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	1,2 dicloroethane	GC-MS	Annual			ug/l		no
Annual	MW4	1,2- dichloropropane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Dibromomethane	GC-MS	Annual	<1	<1	ug/l	1	no
Annual	MW4	Methyl Methacrylate	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	13 Dichloropropene, c is	GC-MS	Annual	<1	<1	ug/l	10	no
Annual	MW4	MIBK/4 Methyl 2 Pentanone	GC-MS	Annual			ug/l		no
Annual	MW4	13 Dichloropropene, t rans	GC-MS	Annual			ug/l		no
Annual	MW4	Ethyl Methacrylate	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	112 Trichloroethane	GC-MS	Annual			ug/l		no
Annual	MW4	1,3- dichloropropane	GC-MS	Annual			ug/l		no
Annual	MW4	2-Hexanone	GC-MS	Annual			ug/l		no
Annual	MW4	1,2- dibromoethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Chlorobenzene	GC-MS	Annual	<1	<1	ug/l	1	no
Annual	MW4	1,1,1,2- tetrachloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Ethylbenzene	GC-MS	Annual	<1	<1	ug/l	10	no
Annual	MW4	Xylene P&M	GC-MS	Annual			ug/l	10	no
Annual	MW4	Styrene	GC-MS	Annual			ug/l		no
Annual	MW4	Isopropylbenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW4	Bromobenzene	GC-MS	Annual			ug/l		no

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Annual	MW4	1,1,2,2-tetrachloroethane	GC-MS	Annual			ug/l			no
Annual	MW4	1,2,3-trichloropropane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Trans 1,4 Dichloro-2 Butene, trans	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Propylbenzene	GC-MS	Annual			ug/l			no
Annual	MW4	2-chlorotoluene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	4-chlorotoluene	GC-MS	Annual			ug/l			no
Annual	MW4	1,3,5-trimethylbenzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Tert Butyl Benzene	GC-MS	Annual			ug/l			no
Annual	MW4	1,2,4-trimethylbenzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	sec-butylbenzene	GC-MS	Annual			ug/l			no
Annual	MW4	p Isopropyltoluene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	N Butyl Benzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	1,2-dibromo-3-chloropropane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	1,2,3-trichlorobenzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW4	Mecoprop	GC-MS	Annual	<0.04	<0.04				
Annual	MW4	Bentazone	GC-MS	Annual	<0.04	<0.04	ug/l			
Annual	MW4	Simazine	GC-MS	Annual	<0.01	<0.01	ng/l			
Quarterly	MW7	pH	Meter	Quarterly	7.42	7.22	unit		9.5	
Quarterly	MW7	Temp	Meter	Quarterly					25	no
Quarterly	MW7	Elec.Conductivity	Meter	Quarterly	1813	455			1000	no
Quarterly	MW7	Chlorides	titration	Quarterly	1649	489	mg/l		250	no
Quarterly	MW7	Ammoniacal Nitrogen	ISE	Quarterly	119	104	mg/l		6mg/l* (Trigger limit)	no
Quarterly	MW7	Iron	ICP	Quarterly	29000	9686	ug/l		0.2	no
Quarterly	MW7	TON	HACH	Quarterly	3.9	3.9	ug/l		No abnormal change	no
Quarterly	MW7	TOC	TOC analyser	Quarterly	19.7	11.1	mg/l		6mg/l (Tigger limit)	no
Annual	MW7	Cadmium	ICP	Annual	<0.08	<0.08	ug/l		0.005	no
Annual	MW7	Chromium (total)	ICP	Annual	14.8	14.8	ug/l		0.03	no
Annual	MW7	Copper	COLORIMETRY	Annual	<0.3	<0.3	ug/l		0.03	no
Annual	MW7	Cyanide (Total)	ICP	Annual	<0.05	<0.05	ug/l		0.01	no
Annual	MW7	Lead	ICP	Annual	<0.2	<0.2	ug/l		0.01	no
Annual	MW7	Magnesium	ICP	Annual	27.1	27.1	mg/l		50	no
Annual	MW7	Manganese	ICP	Annual	5120	5120	ug/l		0.05	no
Annual	MW7	Mercury	ICP	Annual	<0.01	<0.01	ug/l		0.001	no
Annual	MW7	Nickle	ICP	Annual	4.18	4.18	ug/l		0.02	no
Annual	MW7	Potassium	ICP	Annual	65.8	65.8	mg/l		5	no
Annual	MW7	Sulphate	Aquakem auto analyser	Annual	<2.0	<2.0	mg/l		200	no
Annual	MW7	Total Alkalinity	icp	Annual	1120	1120	mg/l			no
Annual	MW7	Total Phosphorus	spectrophotometry	Annual			mg/l			no
Annual	MW7	Naphthalene	GC-MS	Annual	4.29	4.29	ug/l		0.5	no
Annual	MW7	Acenaphthylene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Anthracene	GC-MS	Annual	<1	<1	ug/l		1000	no
Annual	MW7	Chrysene	GC-MS	Annual	<1	<1	ug/l		1	no

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Annual	MW7	Fluoranthene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Fluorene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Pyrene	GC-MS	Annual	<0.02	<0.02	ug/l	12	no
Annual	MW7	Phenanthrene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Bromodichlorome thane	GC-MS	Annual			ug/l		no
Annual	MW7	Bromoform	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Chloroform	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Dibromochlorome thane	GC-MS	Annual	<1	<1	ug/l	1	no
Annual	MW7	Vinyl Chloride	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Chloromethane	GC-MS	Annual	<1	<1	ug/l	2	no
Annual	MW7	Trichloroethene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Bromomethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Trichloromonofluo romethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	11 Dichloroethene	GC-MS	Annual			ug/l		no
Annual	MW7	Chloromethane	GC-MS	Annual	<1	<1	ug/l	0.03	no
Annual	MW7	1,1- dichloroethane	GC-MS	Annual	<1	<1	ug/l	0.1	no
Annual	MW7	11 Dichloropropene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	1,2 dicloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	1,2- dichloropropane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	1,1,1- trichloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	112 Trichloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	1,3- dichloropropane	GC-MS	Annual	<1	<1	ug/l	10	no
Annual	MW7	2-Hexanone	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	1,2- dibromoethane	GC-MS	Annual			ug/l		no
Annual	MW7	Chlorobenzene	GC-MS	Annual	21	21	ug/l		no
Annual	MW7	1,1,1,2- tetrachloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Ethylbenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Xylene P&M	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Xylene O	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Styrene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Isopropylbenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	1,1,2,2- tetrachloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	1,2,3- trichloropropane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Propylbenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	2-chlorotoluene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	4-chlorotoluene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	1,3,5- trimethylbenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW7	Tert Butyl Benzene	GC-MS	Annual	<1	<1	ug/l		no

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Annual	MW7	1,2,4-trimethylbenzene	GC-MS	Annual	5.02	5.02	ug/l			no
Annual	MW7	sec-butylbenzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Pentachlorophenol	GC-MS	Annual	<0.04	<0.04	ug/l			no
Annual	MW7	Tetrachloroethene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Hexachlorobenzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Hexachlorobutadiene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2,4,6-Trichlorophenol	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2,4-Dichlorophenol	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2,4-Dimethylphenol	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2-Chlorophenol	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	1,2,4-trichlorobenzene	GC-MS	Annual	<1	<1	ug/l		2	no
Annual	MW7	1,2-dichlorobenzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	1,3-dichlorobenzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	1,4-dichlorobenzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2,4,5-Trichlorophenol	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2,4-Dinitrotoluene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2,6-Dinitrotoluene	GC-MS	Annual	<1	<1	ug/l		10	no
Annual	MW7	2-Chloronaphthalene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2-Methylnaphthalene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2-Methylphenol	GC-MS	Annual	<1	<1	ug/l		0.04	no
Annual	MW7	2-Nitrophenol	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	4-Bromophenyl Phenyl Ether	GC-MS	Annual	<1	<1	ug/l		10	no
Annual	MW7	4-Chloro-3-methylphenol	GC-MS	Annual	<1	<1	ug/l		10	no
Annual	MW7	4-Chlorophenyl phenyl ether	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	4-Nitrophenol	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Acenaphthene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Benzo(a)anthracene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Benzo(a)pyrene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Benzo(b)fluoranthene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Benzo(g,h,i)perylene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Benzyl Butyl Phthalate	GC-MS	Annual	<1	<1	ug/l			no

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Annual	MW7	Bis(2-chloroethoxy)methane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Bis(2-chloroethyl)ether	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Bis(2-chloroisopropyl)ether	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Bis(2-ethylhexyl)phthalate	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Dibenz(a,h)anthracene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Dibenzofuran	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Diethylphthalate	GC-MS	Annual	<1	<1	ug/l		30	no
Annual	MW7	Di-n-Butylphthalate	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Di-n-octylphthalate	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Diphenylamine	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Hexachloroethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Indeno(1,2,3-c,d)pyrene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Isophorone	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Nitrobenzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	n-Nitrosodi-n-propylamine	GC-MS	Annual	<1	<1	ug/l		500	no
Annual	MW7	Acetone	GC-MS	Annual			ug/l			no
Annual	MW7	Dichloromethane	GC-MS	Annual	<3	<3	ug/l			no
Annual	MW7	Tetrahydrofuran	GC-MS	Annual			ug/l			no
Annual	MW7	Toluene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Xylene-o	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Dichlorodifluoromethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Ethyl Chloride/Chloroethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Ethyl Ether/Diethyl Ether	GC-MS	Annual			ug/l			no
Annual	MW7	Iodomethane/Methyl Iodide	GC-MS	Annual			ug/l			no
Annual	MW7	Carbon Disulphide	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Allyl Chloride	GC-MS	Annual			ug/l			no
Annual	MW7	Chlormethyl Cyanide/Chloroacetonitrile	GC-MS	Annual			ug/l			no
Annual	MW7	Propanenitrile	GC-MS	Annual			ug/l			no
Annual	MW7	Trans-1,2 Dichloroethene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	MTBE	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2,2-dichloropropane	GC-MS	Annual	<1	<1	ug/l		1	no
Annual	MW7	cis-12 Dichloroethene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	2-Butanone	GC-MS	Annual			ug/l		10	no
Annual	MW7	Methyl Acrylate	GC-MS	Annual			ug/l		10	no
Annual	MW7	Bromochloromethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW7	Methacrylonitrile	GC-MS	Annual			ug/l			no

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Annual	MW7	1-Chlorobutane	GC-MS	Annual		ug/l		no
Annual	MW7	Carbon Tetrachloride	GC-MS	Annual	<1	<1	ug/l	no
Annual	MW7	Dibromomethane	GC-MS	Annual	<1	<1	ug/l	no
Annual	MW7	Methyl Methacrylate	GC-MS	Annual			ug/l	no
Annual	MW7	1,3-Dichloropropene, cis	GC-MS	Annual	<1	<1	ug/l	no
Annual	MW7	MIBK/4 Methyl 2-Pentanone	GC-MS	Annual			ug/l	no
Annual	MW7	1,3-Dichloropropene, trans	GC-MS	Annual	<1	<1	ug/l	no
Annual	MW7	Ethyl Methacrylate	GC-MS	Annual			ug/l	no
Annual	MW7	Bromobenzene	GC-MS	Annual	<1	<1	ug/l	no
Annual	MW7	Trans 1,4-Dichloro-2-Butene, trans	GC-MS	Annual			ug/l	no
Annual	MW7	p-Isopropyltoluene	GC-MS	Annual	<1	<1	ug/l	no
Annual	MW7	N-Butyl Benzene	GC-MS	Annual	<1	<1	ug/l	no
Annual	MW7	1,2-dibromo-3-chloropropane	GC-MS	Annual	<1	<1	ug/l	no
Annual	MW7	1,2,3-trichlorobenzene	GC-MS	Annual	<1	<1	ug/l	no
Annual	MW7	Mecoprop	GC-MS	Annual	6.56	6.56	ug/l	no
Annual	MW7	Bentazone	GC-MS	Annual	<0.04	<0.04		no
Annual	MW7	Simazine	GC-MS	Annual	<0.01	<0.01	ug/l	no
Average indicates arithmetic mean concentration from all monitoring results produced during the reporting year					7.7	7.475		
Annual Groundwater monitoring results					39.7	28.41		

Date of sampling	Sample location reference	Parameter/Substance	Methodology	Monitoring frequency	10400	7816	unit	GTV's*	SELECT**	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
Quarterly	MW1	pH	Meter	Quarterly	7.3	5.7	unit		9.5	
Quarterly	MW1	Temp	Meter	Quarterly	49	48			25	no
Quarterly	MW1	Elec. Conductivity	Meter	Quarterly	4.8	3.29			1000	no
Quarterly	MW1	Chlorides	titration	Quarterly	11	6.5	mg/l		250	no
Quarterly	MW1	Ammoniacal Nitrogen	ISE	Quarterly	0.422	0.422	mg/l		20mg/l* (Trigger limit)	no
Quarterly	MW1	Iron	ICP	Quarterly	<3	<3	ug/l		0.2	no
Quarterly	MW1	TON	HACH	Quarterly	1.09	1.09	ug/l		No abnormal change	no
Quarterly	MW1	TOC	TOC analyser	Quarterly	<0.05	<0.05	mg/l		12mg/l (Tigger limit)	no
Annual	MW1	Cadmium	ICP	Annual	<0.2	<0.2	ug/l		0.005	no
Annual	MW1	Chromium (total)	ICP	Annual	638	638	ug/l		0.03	no
Annual	MW1	Copper	COLORIMETRY	Annual	5930	5930	ug/l		0.03	no
Annual	MW1	Cyanide (Total)	ICP	Annual	<0.01	<0.01	ug/l		0.01	no
Annual	MW1	Lead	ICP	Annual	2.14	2.14	ug/l		0.01	no
Annual	MW1	Magnesium	ICP	Annual	180	180	mg/l		50	no
Annual	MW1	Manganese	ICP	Annual	984	984	ug/l		0.05	no
Annual	MW1	Mercury	ICP	Annual	455	455	ug/l		0.001	no
Annual	MW1	Nickle	ICP	Annual			ug/l		0.02	no
Annual	MW1	Potassium	ICP	Annual	<1	<1	mg/l		5	no
Annual	MW1	Sulphate	Aquakem auto analyser	Annual	<1	<1	mg/l		200	no

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Annual	MW1	Total Alkalinity	Icp spectrophotometry	Annual	<1	<1	mg/l		no
Annual	MW1	Total Phosphorus	apha	Annual	<1	<1	mg/l		no
Annual	MW1	Naphthalene	GC-MS	Annual	<1	<1	ug/l	0.5	no
Annual	MW1	Acenaphthylene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Anthracene	GC-MS	Annual	<1	<1	ug/l	1000	no
Annual	MW1	Chrysene	GC-MS	Annual	<1	<1	ug/l	1	no
Annual	MW1	Fluoranthene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Fluorene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Pyrene	GC-MS	Annual	<1	<1	ug/l	12	no
Annual	MW1	Phenanthrene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Bromodichloromethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Bromoform	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Chloroform	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Dibromochloromethane	GC-MS	Annual	<1	<1	ug/l	1	no
Annual	MW1	Vinyl Chloride	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Chloromethane	GC-MS	Annual	<1	<1	ug/l	2	no
Annual	MW1	Trichloroethene	GC-MS	Annual			ug/l		no
Annual	MW1	Bromomethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Trichloromonofluoromethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,1-Dichloroethene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Chloromethane	GC-MS	Annual	<1	<1	ug/l	0.03	no
Annual	MW1	1,1-dichloroethane	GC-MS	Annual	<1	<1	ug/l	0.1	no
Annual	MW1	1,1-Dichloropropene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,2-dichloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,2-dichloropropane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,1,1-trichloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,1,2-Trichloroethane	GC-MS	Annual			ug/l		no
Annual	MW1	1,3-dichloropropane	GC-MS	Annual	<1	<1	ug/l	10	no
Annual	MW1	2-Hexanone	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,2-dibromoethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Chlorobenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,1,1,2-tetrachloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Ethylbenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Xylene P&M	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Xylene O	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Styrene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Isopropylbenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,1,2,2-tetrachloroethane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,2,3-trichloropropane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Propylbenzene	GC-MS	Annual	<1	<1	ug/l		no

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Annual	MW1	2-chlorotoluene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	4-chlorotoluene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,3,5-trimethylbenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Tert Butyl Benzene	GC-MS	Annual	<0.04	<0.04	ug/l		no
Annual	MW1	1,2,4-trimethylbenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	sec-butylbenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Pentachlorophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Tetrachloroethene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Hexachlorobenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Hexachlorobutadiene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	2,4,6-Trichlorophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	2,4-Dichlorophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Dimethylphenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	2-Chlorophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,2,4-trichlorobenzene	GC-MS	Annual	<1	<1	ug/l	2	no
Annual	MW1	1,2-dichlorobenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,3-dichlorobenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,4-dichlorobenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	2,4,5-Trichlorophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	2,4-Dinitrotoluene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	2,6-Dinitrotoluene	GC-MS	Annual	<1	<1	ug/l	10	no
Annual	MW1	2-Chloronaphthalen	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1-Methylnaphthalen	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	2-Methylphenol	GC-MS	Annual	<1	<1	ug/l	0.04	no
Annual	MW1	2-Nitrophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	4-Bromophenyl Phenyl Ether	GC-MS	Annual			ug/l	10	no
Annual	MW1	4-Chloro-3-methylphenol	GC-MS	Annual	<1	<1	ug/l	10	no
Annual	MW1	4-Chlorophenyl phenyl ether	GC-MS	Annual			ug/l		no
Annual	MW1	4-Nitrophenol	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Acenaphthene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Benzo(a)anthracene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Benzo(a)pyrene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Benzo(b)fluoranthene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Benzo(g,h,i)perylene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Benzyl Butyl Phthalate	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Bis(2-chloroethoxy)methane	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Bis(2-chloroethyl)ether	GC-MS	Annual	<1	<1	ug/l		no

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Annual	MW1	Bis(2-chloroisopropyl)ether	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Bis(2-ethylhexyl)phthalate	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Dibenz(a,h)anthracene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Dibenzofuran	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Diethylphthalate	GC-MS	Annual			ug/l		30	no
Annual	MW1	di-n-Butylphthalate	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Di-n-octylphthalate	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Diphenylamine	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Hexachloroethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Indeno(1,2,3-c,d)pyrene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Isophorone	GC-MS	Annual			ug/l			no
Annual	MW1	Nitrobenzene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	n-Nitrosodi-n-propylamine	GC-MS	Annual			ug/l		500	no
Annual	MW1	Acetone	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Dichloromethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Tetrahydrofuran	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Toluene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Xylene-o	GC-MS	Annual			ug/l			no
Annual	MW1	Dichlorodifluoroethane	GC-MS	Annual			ug/l			no
Annual	MW1	Ethyl Chloride/Chloroethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Ethyl Ether/Diethyl Ether	GC-MS	Annual			ug/l			no
Annual	MW1	Iodomethane/Methyl Iodide	GC-MS	Annual			ug/l			no
Annual	MW1	Carbon Disulphide	GC-MS	Annual			ug/l			no
Annual	MW1	Alyl Chloride	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Chlormethyl Cyanide/Chloroacetonitrile	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Propanenitrile	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Trans-1,2 Dichloroethene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	MTBE	GC-MS	Annual			ug/l			no
Annual	MW1	2,2-dichloropropane	GC-MS	Annual			ug/l		1	no
Annual	MW1	cis-12 Dichloroethene	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	2-Butanone	GC-MS	Annual			ug/l		10	no
Annual	MW1	Methyl Acrylate	GC-MS	Annual			ug/l		10	no
Annual	MW1	Bromochloromethane	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Methacrylonitrile	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	1-Chlorobutane	GC-MS	Annual			ug/l			no
Annual	MW1	Carbon Tetrachloride	GC-MS	Annual	<1	<1	ug/l			no
Annual	MW1	Dibromomethane	GC-MS	Annual			ug/l			no

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Annual	MW1	Methyl Methacrylate	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,3-Dichloropropene, cis	GC-MS	Annual			ug/l		no
Annual	MW1	MIBK/4 Methyl 2-Pentanone	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	1,3-Dichloropropene, trans	GC-MS	Annual			ug/l		no
Annual	MW1	Ethyl Methacrylate	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Bromobenzene	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	Trans 1,4-Dichloro-2-Butene, trans	GC-MS	Annual	<1	<1	ug/l		no
Annual	MW1	p-Isopropyltoluene	GC-MS	Annual	<0.04	<0.04	ug/l		no
Annual	MW1	n-Butyl Benzene	GC-MS	Annual	<0.01	<0.01	ug/l		no
Annual	MW1	1,2-dibromo-3-chloropropane	GC-MS	Annual	<0.01	<0.01	ug/l		no
Annual	MW1	1,2,3-trichlorobenzene	GC-MS	Annual			ug/l		no
Annual	MW1	Mecoprop	GC-MS	Annual	<0.1	<0.1	ug/l		no
Annual	MW1	Bentazone	GC-MS	Annual					no
Annual	MW1	Simazine	GC-MS	Annual	<0.01	<0.01	ug/l		no

Water/Soil monitoring template Lic No: W0068-03 Year 2017

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

**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)

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 not agreed by EPA;	Site operational
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	

Environmental Management Programme/Continuous Improvement Programme template	Lic No:	W0068-03	Year	2017
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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 number of complaints, annually, to less than 2	100	Improvement of gas extraction system and operational controls. Additional flow controls added to existing well heads. Additional pumping	Site Staff	Improved Environmental Management Practices
Materials Handling/Storage/Bunding	Improve annual recycling rate by 5%	90	Improvement of Civic Amenity Site layout and improved maintenance of existing infrastructure. Improved sign markings and road sign markings.	Site Staff & Management	Improved use by customers.
Additional improvements	Improve Site Security	95	Liasing with Security Company and An Gardaí Síochana to deter would-be intruders. Introduction of "infra-red" cameras and additional intruder beams.	Site Staff & Management	Cleaner site and improved Health & Safety practice. Energy saving due to the removal of night-time site lighting.
Additional improvements	To control environmental nuisances at the facility	95	Reduction of litter & improved site practices	Site Staff & Management	Increased compliance with licence conditions
Leachate collection	Provision of pumping facilities to capture all run-off generated at site.	90	Additional sump constructed on Cell 9 to capture leachate run-off.	Site Staff & Management	Increased compliance with licence conditions
Capping Design and Infrastructure	To complete full capping design of remaining capping detail to be installed on Cell 9	25	Designated staff member within Environment staff selected to investigate requirements.	Senior Engineering Management	Waste body profiling design

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	W0068-03	Year	2017
Gas extraction system	Improved gas intake to flare unit and more efficient burning of gas	95	Improvement of site practice to ensure increased gas capture	Site Staff	Increased compliance with licence conditions		

Noise monitoring summary report

Lic No: W0068-03

Year

2017

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?

Enter date

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)?
24/11/2017	30 min	N1		47.7	44.1	49	68.6	No	SELECT	Traffic from N25.	Yes
	30 min	N1		48	45.2	49.8	62.5	No		Bird calls audible	Yes
	30 min	N1		48.9	44.8	48.7	80	No		JCB working on site	Yes
	30 min	N2		50.1	47.3	51.9	60.9	No		Very windy during survey	Yes
	30 min	N2		52.3	49.5	53.3	68.4	No		Traffic from N25.	Yes
	30 min	N2		51.1	48.6	53	61.9	No			Yes
	30 min	N3		47.5	44.4	49.5	60.1	No		Noise from N25	Yes
	30 min	N3		45.3	41.5	47.8	59	No		Country noise of birds and trees shaking	Yes
	30 min	N3		46.8	43.9	48.6	63.3	No		JCB active onsite	Yes
	30 min	N4		55.2	50	55.3	78.5	No		Traffic N25	Yes
	30 min	N4		51.7	49.4	53.1	62.4	No		Traffic entering and leaving site	Yes
	30 min	N4		50.7	47.6	52.2	70.1	No		JCB active onsite	Yes

** 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:

W0068-03

Year

2017

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

	2015	
No		
SELECT		

Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	82.65	83.5	1.00%	
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	82.65	83.5	1.00%	
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)	0.2	0.2	0%	
Light Fuel Oil (m3)	18	18	0%	
Natural gas (m3)	0	0	0	
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

Water use	Water extracted		Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Water Emissions		Water Consumption	
	Previous year m3/yr.	Current year m3/yr.			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	180	174	-3%	N/A	174	N/A		
Recycled water								
Total	180	174	-3%		174			

* 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

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

Resource Usage/Energy efficiency summary Lic No: W0068-03 Year 2017

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
Jun-15	Replacement of lighting	Replace units when fa	energy audit	10%	Jan-16	Site management	Ongoing	Energy Audit find
			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: W0068-03	Year: 2017
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SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES [PRTR facility logon](#) [dropdown list click to see options](#)

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT			RELEASERS TO AIR		Please enter all quantities in this section in KGs			
No. Annex II	Name	M/C/E	METHOD		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
01	Methane (CH4)	M	OTH	Measured through analysis of flare flue gas emissions monitoring	0.0	538530.0	0.0	538530.0
02	Carbon monoxide (CO)	M	ISO 12039:2001	Measured through analysis of flare flue gas emissions monitoring	0.0	23.5	0.0	23.5
03	Carbon dioxide (CO2)	M	ISO 12039:2001	Measured through analysis of flare flue gas emissions monitoring	0.0	2375620.0	0.0	2375620.0
07	Non-methane volatile organic compounds	M	EN 13649:2001	Measured through analysis of flare flue gas emissions monitoring	0.0	20.54	0.0	20.54
08	Nitrogen oxides (NOx/NO2)	M	EN 14792:2005	Measured through analysis of flare flue gas emissions monitoring	0.0	382.27	0.0	382.27
11	Sulphur oxides (SOx/SO2)	M	EN 14791:2005	Measured through analysis of flare flue gas emissions monitoring	0.0	150.0	0.0	150.0

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

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT			RELEASERS TO AIR		Please enter all quantities in this section in KGs			
No. Annex II	Name	M/C/E	METHOD		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		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			RELEASERS TO AIR		Please enter all quantities in this section in KGs			
Pollutant No.	Name	M/C/E	METHOD		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		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

operators are requested to provide summary data on landfill gas (Methane)

Landfill: Youghal Landfill						
Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year		M/C/E	Method Used		
				Method Code	Designation or Description	
				Facility Total Capacity m3 per hour		
	Total estimated methane generation (as per site model)	1021748.89	C	OTH	Gas Sim model	N/A
	Methane flared	483218.49	M	OTH	Measured through analysis of flare flue gas emissions monitoring	1380.0 (Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0 (Total Utilising Capacity)	
Net methane emission (as reported in Section A above)	538530.4	C	OTH	Gas Sim model and measured through analysis of flare flue gas emissions monitoring	N/A	

WASTE SUMMARY

Lic No:

W0068-03

Year

2017

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR#: W0068 | Facility Name : Youghal Landfill | Filename : AER summary Youghal 2017.xlsx | Return Year : 2017 |

28/03/2018 09:46

Please enter all quantities on this sheet in Tonnes

3

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 05	Yes	1.5	mineral-based non-chlorinated engine, gear and lubricating oils	R9	M	Weighed	Offsite in Ireland	Enva Ltd,W0184-01	Clonminam Industrial Estate,Portlaoise ,Co Laois,,Ireland	Enva Ltd,W0184-01,Clonminam Industrial Estate,Portlaoise,Co Laois,,Ireland	Clonminam Industrial Estate,Portlaoise,C o Laois,,Ireland
Within the Country	15 01 01	No	66.5	paper and cardboard packaging	R3	M	Weighed	Offsite in Ireland	Greenstar Ltd,W0136-01	Sarsfield Court Industrial Estate,Glanmire, Cork,,Ireland		
Within the Country	15 01 02	No	25.56	plastic packaging	R5	M	Weighed	Offsite in Ireland	Green Dragon Recycling,CK/09/0629/01	Corbally North,Glanmire, Cork,,Ireland		
Within the Country	15 01 04	No	8.2	metallic packaging	R4	M	Weighed	Offsite in Ireland	Green Dragon Recycling,CK/09/0629/01	Corbally North,Glanmire, Cork,,Ireland		
Within the Country	15 01 07	No	42.34	glass packaging	R5	M	Weighed	Offsite in Ireland	Mr. Binman,W0061-01	Luddenmore,Gra nge,Kilmalock,Co Limerick,Ireland		
Within the Country	16 06 01	Yes	0.26	lead batteries	R4	M	Weighed	Offsite in Ireland	KMK Metals Ltd,W0133-03	Cappinacur Industrial Estate,Tullamore ,Co Offlay,,Ireland	KMK Metals Ltd,W0133-03,Cappinacur Industrial Estate,Tullamore, Co Offlay,,Ireland	Cappinacur Industrial Estate,Tullamore,C o Offlay,,Ireland
Within the Country	16 06 02	Yes	0.34	Ni-Cd batteries	R4	M	Weighed	Offsite in Ireland	KMK Metals Ltd,W0133-03	Cappinacur Industrial Estate,Tullamore ,Co Offlay,,Ireland	KMK Metals Ltd,W0133-03,Cappinacur Industrial Estate,Tullamore, Co Offlay,,Ireland	Cappinacur Industrial Estate,Tullamore,C o Offlay,,Ireland
Within the Country	16 06 04	No	0.28	alkaline batteries (except 16 06 03)	R4	M	Weighed	Offsite in Ireland	KMK Metals Ltd,W0133-03	Cappinacur Industrial Estate,Tullamore ,Co Offlay,,Ireland		
Within the Country	19 07 03	No	4962.59	landfill leachate other than those mentioned in 19 07 02	D8	M	Weighed	Offsite in Ireland	Cork County Council,,	Carrigtohill Wastewater Treatment Plant,Tullagreen, Carrigtohill ,Co Cork,Ireland		
Within the Country	20 01 01	No	80.9	paper and cardboard	R3	M	Weighed	Offsite in Ireland	Greenstar Ltd,W0136-01	Sarsfield Court Industrial Estate,Glanmire, Cork,,Ireland		

WASTE SUMMARY										
					Lic No:	W0068-03		Year	2017	

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

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	

4 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	

5 Does your facility have relevant nuisance controls in place?

Do you have an odour management system in place for your facility? If no why?

6 Do you maintain a sludge register on site?

SELECT	
SELECT	
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
Household & Commercial	128,000	0	180	Void Area is almost completely filled. Waste has ceased to be accepted but management of Cork County Council have yet to decide when to fill the remaining void.
Industrial non-haz	27,000	0		
Construction&Demolition Waste	5,300	0		

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
										SELECT UNIT	SELECT UNIT	SELECT UNIT
Cell 9		Dec-08 Temporary Cease Feb 2012	Yes	Public	Non Hazardous	2018	No	No	No	80000	40000	40000

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

WASTE SUMMARY								Lic No:	W0068-03	Year	2017
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			

WASTE SUMMARY								Lic No:	W0068-03	Year	2017
Yes	Yes	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	should be permanently capped to date under	What materials are used in the cap	Comments
SELECT UNIT	SELECT UNIT					
0	17,000 square metres	81,800 square metres	0	17,000 square metres	1mm HDPE welded liner, geotextile drainage layer and protection barrier covered with 1m of suitable, screened	

*please note this includes daily cover area

Table 6 Leachate-Landfill only

Is leachate from your site treated in a Waste Water Treatment Plant?

Yes
No

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
4962.59	873.7	2516	487.9	2013.4	No	Wastewater Treatment Plant with Mixing tank, Batch operated Treatment System	Values are in line with than previous years due but with a decreased volume of leachate taken off-site. This indicates a further reduction in the parameter results of the leachate at Youghal Landfill. This is attributed to the greater capture of dilute leachate from Cell 9.

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
483218 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. Well heads and flanked areas are repaired to improve gas system coverage at the site. Ongoing on-site maintenance.

WASTE SUMMARY	Lic No:	W0068-03	Year	2017
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D1	D1-Deposit into or onto land	Yes	Public	01-WASTE RESULTING FROM EXPLORATION, MINING, QUARRYING, AND PHYSICAL AND CHEMICAL TREATMENT OF MINERALS
D2	D2-Land treatment	No	Private	

Comments on liner type
HDPE 1mm liner with geo-textile layer and 0.5m gravel

