

Facility Information Summary	
AER Reporting Year	2018
Licence Register Number	P0809-01
Name of site	Mondelez Ireland Production Ltd.
Site Location	Malahise rd., Coolock, Dublin 5
NACE Code	1081
Class/Classes of Activity	7.8(a)(iii)
National Grid Reference (6E, 6 N)	23941 6E, 3 19820N

A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year and an overview of compliance with your licence listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.

The installation is involved in the manufacture of chocolate and confectionary products. The main production activities on site are the milling of chocolate crumb and blending with cocoa butter to produce chocolate, mixing ingredients and packaging operations.

During 2018 the following changes occurred on site

- The contractors compound was adjusted removing all contractors except the waste management and builders companies to minimise pedestrian/vehicle interaction on the recommendation of the HSA following an inspection
 - Contractors from the compound were re-located to a new area on the opposite side of K Block where all contract companies on site are centred
 - The manufacturing support office was relocated to the Failte building
 - The site Lab was moved to the former manufacturing support office.
 - The old Lab was re-designed and re-fitted as a new central canteen for the site

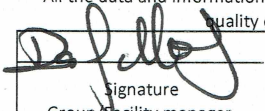
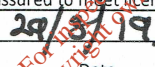
Targets:

- Reduction of Energy usage: % Energy Consumption vs production increased on previous year due to refits, maintenance and product pilots. It is noted that product from product pilots is not included in the final overall site production amount. However, the target for 2017 was to reduce energy usage per tonne of product produced by 28% and overall energy usage versus product produced is 28% lower than 2013 baseline.
- Reduction of Water used: A target reduction of 5% water consumption per tonne of product produced was also set for the site. Through addressing leaks and other water loss around the site, a reduction in water usage of 28% was achieved.
- Waste management: The target for 2017 was to reduce waste produced per tonne of product by 48% from baseline year of 2013. Through management of waste and stock, the site reduced waste generated per tonne of product by 67% over the 2013.

The organisation maintained compliance with ELV's in respect to Air and Water Emissions throughout 2018.

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.

 Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	 Date
---	---

AIR-summary template	Lic No:	P0809-01	Year	2018
-----------------------------	---------	----------	------	------

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 <u>do not</u> need to complete the tables	No

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	SELECT

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

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision 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
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		

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

AIR-summary template		Lic No:	P0809-01	Year	2018
Continuous Monitoring					

4	Does your site carry out continuous air emissions monitoring?	SELECT	
	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)		
5	Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below	SELECT	
6	Do you have a proactive service agreement for each piece of continuous monitoring equipment?	SELECT	
7	Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	SELECT	

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
	SELECT			SELECT	SELECT					
	SELECT			SELECT	SELECT					
	SELECT			SELECT	SELECT					
	SELECT			SELECT	SELECT					
	SELECT			SELECT	SELECT					

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

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:	P0809-01	Year	2018			
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	

 For inspection purposes only.
 Consent of copyright owner required for any other use.

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0809-01 Year 2018

1 Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If you do not have licensed emissions you only need to complete table W1 and or W2 for storm water analysis and visual inspections

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

Additional information	
Yes	
Yes	

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
	SELECT	SELECT	SELECT			SELECT		SELECT	SELECT	
	SELECT	SELECT	SELECT			SELECT		SELECT	SELECT	

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

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

Location Reference	Date of inspection	Description of contamination	Source of contamination	Corrective action	Comments
			SELECT		
			SELECT		

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

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

4 Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box

External/Internal Lab Quality Assessment of results checklist

Additional information	
No	
Yes	

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 thereof ^{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
SE-01	Wastewater/Sewer	BOD	composite	Monthly	24 hour	8000	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	968	mg/L	yes	red Oxygen Meter (Electrode)	I.S. (Irish Standard)	SMEWW 5210B	130111	Calculated based on actual flow of 54,119m ³ and average BOD reading over 12 monthly readings.
								4725							
								2903							
								1879							
								1008							
								845							
								837							
								1740							
								3220							
								5445							
								870							
								4410							
								2290							
SE-01	Wastewater/Sewer	COD	composite	Monthly	24 hour	16000	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	6580	mg/L	yes	spectrophotometer	I.S. (Irish Standard)	SMEWW 5220D	203686	Calculated based on actual flow of 54,119m ³ and average COD reading over 12 monthly readings.
								4580							
								3180							
								2405							
								1510							
								1354							
								2720							
								5200							

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)															
						Lic No:	P0809-01	Year	2018						
								6685							
								1370							
								7290							
								128							
								805							
								260							
								230							
								126							
								103							
								130							
								187							
								267							
								190							
								80							
								206							
								75							
								123							
								31							
								43							
								37							
								17							
								24							
								95							
								203							
								32							
								52							
								43							
								15							
								1							
								2							
								2							
								<5							
								1							
								<5							
								3							
								<5							
								<5							
								<5							
								141.9							
								99.79							
								107							
								134.43							
								182.9							
								181.1							
								199.32							
								128.94							
								118.2							
								92.2							
								230.93							
								160.13							
SE-01	Wastewater/Sewer	Suspended Solids	composite	Monthly	24 hour	4000	All results < 1.2 times ELV, plus 8 from ten results must be < ELV		mg/L	yes	Gravimetric analysis	I.S. (Irish Standard)	SMEWW 2540D	12231	Calculated based on actual flow of 54,119m3 and average TSS reading over 12 monthly readings.
SE-01	Wastewater/Sewer	Fats, Oils and Greases	composite	Monthly	24 hour	400	All results < 1.2 times ELV, plus 8 from ten results must be < ELV		mg/L	yes	Gravimetric analysis	I.S. (Irish Standard)	SMEWW 5520B	3603	Calculated based on actual flow of 54,119m3 and average OFG reading over 12 monthly readings.
SE-01	Wastewater/Sewer	Ortho-phosphate (as PO4)	composite	Monthly	24 hour	50	All results < 1.2 times ELV, plus 8 from ten results must be < ELV		mg/L	yes	Ion Chromatography	I.S. (Irish Standard)	SMEWW 4110B	97	Calculated based on actual flow of 54,119m3 and average Phosphate reading over 12 monthly readings.
SE-01	Wastewater/Sewer	volumetric flow	composite	Continuous	Monthly	382	All results < 1.2 times ELV, plus 8 from ten results must be < ELV		m3/day	yes	Flow meter			54119	Monthly readings are daily average for that month. Annual mass load is actual metered reading for 2018

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)	Lic No:	P0809-01	Year	2018
--	---------	----------	------	------

Continuous monitoring

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

Yes	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

No	
----	--

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

Yes	
-----	--

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

No

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			
SE-01	Wastewater/Sewer	volumetric flow	382	Monthly	No flow value shall exceed the .specific limit	m3/day								
SE-01	Wastewater/Sewer	pH	6-10	Monthly	No pH value shall deviate from the .specified range	pH units								
SE-01	Wastewater/Sewer	Temperature	42°C	Monthly	No temperature value shall exceed the limit .value	degrees C								

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

dropdown menu click to see options

Additional information

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

- 1 Do all sumps and chambers have high level liquid alarms?
- 2 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
- 3 Is the Fire Water Retention Pond included in your integrity test programme?

Additional Information	
Yes	
3 years	
Yes	
29	7 Not in use
22	
11	3 not in use
Yes	
8	
1	
0	Small Sump; visual inspection only
No	
N/A	
Yes	

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)
01.00	reinforced concrete		Diesel	36.7	42	Hydraulic test	British Standard BS EN 1992-3	Mar-17	Yes	Pass		SELECT	Mar-20	
01.00A	reinforced concrete	Double Walled Tank incorporating a concrete containment wall	Waste Oil	3	3.3	Hydraulic test	British Standard BS EN 1992-3	Mar-17	Yes	Pass			Mar-20	
02.00	reinforced concrete		Glucose	70	100	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Pass			Jul-21	
03.00	reinforced concrete		LFO	30	34.075	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Sep-16	Yes	Pass			Sep-19	
05.00	reinforced concrete		Butter	270	134	Hydraulic test	British Standard BS EN 1992-3	Jun-17	Yes	Pass			Jun-20	
06.00	reinforced concrete		Chocolate	30	39	Hydraulic test	British Standard BS EN 1992-3	Jun-17	Yes	Pass			Jun-20	
07.00	reinforced concrete		Chocolate	20	23	Hydraulic test	British Standard BS EN 1992-3	Jun-18	Yes	Pass			Jun-20	
08.00	general purpose concrete	Metal sump set in concrete	Sump Food grade oil - for compressors	0		Other (please specify)	Not in use		No	Not in use				
09.00	prefabricated		IBC storage of chemicals	4	4.4		Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Pass			Jul-21	
10.00	other (please specify)	Sugar Silo - containment area for sugar	Sugar	N/A		Other (please specify)	Visual		Yes	Pass				
11.00	prefabricated		2% caustic solution	2	2.2	Structural assessment	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Pass			Jul-21	
12.00	reinforced concrete		Unused	61	77.1	Other (please specify)	Not in use	Jun-17	Yes	Not in use			Jun-20	
13.00	reinforced concrete		Unused	26.55	29.5	Other (please specify)	Not in use		Yes	Not in use				
14.00	prefabricated		Unused	0.2	0.22	Other (please specify)	Not in use	Jul-18	Yes	Not in use			Jul-21	
15.00	prefabricated	Plastic	Glycol Storage bund 9Blue	0.2	0.22	Other (please specify)	Not in use		Yes	Pass				
16.00	prefabricated		Unused	0.2	0.22	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Not in use			Jul-21	
17.00	reinforced concrete	Double Walled Tank incorporating a concrete containment wall	HG7 Detergent	5.3	9.5	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Fail			Jul-21	
18.00	prefabricated		Glycol overflow storage only (Blue)	0.2	0.22	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Pass			Jul-21	
19.00	prefabricated		Waste chemicals for disposal	4	4.4	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Pass			Jul-21	
20.00	prefabricated		Chemical Storage	4	4.4	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Pass			Jul-21	
21.00	prefabricated		Chemical Storage	2	2.2	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Pass			Jul-21	
22.00	prefabricated		30% caustic solution	4	4.4	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Pass			Jul-21	
23.00	prefabricated		Caustic/Acid solution	2	4.4	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Pass			Jul-21	
24.00	prefabricated		Waste chemicals for disposal	0.2	2.2	Hydraulic test	Eurocode 2 – BS EN 1992-3:2006	Jul-18	Yes	Pass			Jul-21	
25.00	reinforced concrete		30% caustic solution for Effluent plant	5	6.6	Hydraulic test	BS8007 Section 9	Jul-18	Yes	Pass			Jul-21	
26.00	reinforced concrete		30% caustic solution for Effluent plant	5	6.6	Hydraulic test	BS8007 Section 9	Jul-18	Yes	Pass			Jul-21	
27.00	prefabricated		Process Effluent - Effluent plant		636	Hydraulic test	BS8007 Section 9	Jul-18	Yes	Pass			Jul-21	
28.00	other (please specify)	2.5mm Geomembrane lined purpose built retention pond	Storm Wate/Fire water retention	900	900	Hydraulic test		Jul-18	Yes	Pass			Jul-21	
	SELECT					SELECT			SELECT	SELECT		SELECT		

Commentary

Bund/Pipeline testing template		Lic No:	P0809-01	Year	2018
Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?					
15 Are channels/transfer systems to remote containment systems tested?		<input type="text" value="Yes"/>			
16 Are channels/transfer systems to remote containment systems tested?		<input type="text" value="SELECT"/>			
17 Are channels/transfer systems compliant in both integrity and available volume?		<input type="text" value="SELECT"/>			

Pipeline/underground structure testing

Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc ? If yes please fill out table 2 below listing all

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

2. Please provide integrity testing frequency period

*please note integrity testing means water tightness testing of all underground pipelines (as required under your licence)

<input type="text" value="SELECT"/>	
<input type="text" value="3 years"/>	

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)
Storm Water Pipeline	Storm	concrete	No	SELECT	CCTV	Yes	Fail	In 2016 entire system was tested; the majority of the system passed with some defects which were identified for repair	Reapirs carried out as per corrective action programme continued through 2018	Retest due in 2019; Repairs in the interim will be tested upon completion	SELECT
Domestic Wastewater drainage	Foul	concrete	No		CCTV	Yes	Fail	In 2018 entire system was tested; the majority of the system passed with some defects which were identified for repair	Reapirs carried out as per corrective action programme continued through 2018	Retest due in 2021; Repairs in the interim will be tested upon completion	
Process Water pipeline	Process	concrete	No		CCTV	Yes	Fail	In 2017 entire system was tested; the majority of the system passed with some defects which were identified for repair	Reapirs carried out as per corrective action programme continued through 2018	Retest due in 2022; Repairs in the interim will be tested upon completion	

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

Groundwater/Soil monitoring template	Lic No: P0809-01	Year 2018
---	------------------	-----------

		Comments
1 Are you required to carry out groundwater monitoring as part of your licence requirements?	no	Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretaion as an additional section in this AER
2 Are you required to carry out soil monitoring as part of your licence requirements?	no	
3 Do you extract groundwater for use on site? If yes please specify use in comment section	no	
4 Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Groundwater monitoring template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	SELECT	Please enter interpretation of data here
5 Is the contamination related to operations at the facility (either current and/or historic)	SELECT	
6 Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	SELECT	
7 Please specify the proposed time frame for the remediation strategy	SELECT	
8 Is there a licence condition to carry out/update ELRA for the site?	SELECT	
9 Has any type of risk assesment been carried out for the site?	SELECT	
10 Has a Conceptual Site Model been developed for the site?	SELECT	
11 Have potential receptors been identified on and off site?	SELECT	
12 Is there evidence that contamination is migrating offsite?	SELECT	

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	Upward trend in pollutant concentration over last 5 years of monitoring data
							SELECT			SELECT
							SELECT			SELECT

.+ where average indicates arithmetic mean

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

Table 2: Downgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTV's*	SELECT**	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
							SELECT			SELECT
							SELECT			SELECT

Groundwater/Soil monitoring template		Lic No:	P0809-01	Year	2018
<p>*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed by the EPA.</p> <p>More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance (see the link in G31)</p>		<p>Groundwater monitoring template</p> <p>Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites (EPA 2013).</p>			
<p>**Depending on location of the site and proximity to other sensitive receptors alternative Receptor based Water Quality standards should be used in addition to the GTV e.g. if the site is close to surface water compare to Surface Water Environmental Quality Standards (SWEQS), If the site is close to a drinking water supply compare results to the Drinking Water Standards (DWS)</p>		<p> Groundwater Drinking water Surface regulations (private supply) Drinking water (public Interim Guideline water EQS GTV's standards supply) standards Values (IGV) </p>			

For inspection purposes only.
 Consent of copyright owner required for any other use.

Groundwater/Soil monitoring template			Lic No:	P0809-01	Year	2018
--------------------------------------	--	--	---------	----------	------	------

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

For inspection purposes only.
Consent of copyright owner required for any other use.

Environmental Liabilities template	Lic No:	P0809-01	Year	2018
---	---------	----------	------	------

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

			Commentary
1	ELRA initial agreement status	Submitted and not agreed by EPA;	
2	ELRA review status	Review required and completed	
3	Amount of Financial Provision cover required as determined by the latest ELRA	Specify	€1,127,086
4	Financial Provision for ELRA status	Submitted and not agreed by EPA;	
5	Financial Provision for ELRA - amount of cover	Specify	€1,127,086
6	Financial Provision for ELRA - type	bank guarantee	
7	Financial provision for ELRA expiry date	Enter expiry date	Renewed annually
8	Closure plan initial agreement status	Closure plan submitted and not agreed by EPA	
9	Closure plan review status	Review required and not completed	Due 2019
10	Financial Provision for Closure status	Required but not submitted	
11	Financial Provision for Closure - amount of cover	Specify	€2,519,298
12	Financial Provision for Closure - type	bank guarantee	
13	Financial provision for Closure expiry date	Enter expiry date	Renewed annually

For internal purposes only.
Consent of copyright owner required for any other use.

Environmental Management Programme/Continuous Improvement Programme template			Lic No:	P0809-01	Year	2018
---	--	--	---------	----------	------	------

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	
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
Energy Efficiency/Utility conservation	Reduction of 28% per Tonne of Finished Goods on baseline year 2013	90	Lighting replacement programme installed LED lighting; target was met at 32% reduction	Section Head	Reduced emissions
Waste reduction/Raw material usage efficiency	Reduction in waste generated of 48% on baseline year 2013	90	Process improvements in stock management; 67% reduction achieved	Individual	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Reduction of water used: Target of 5% per Tonne of Finished goods	90	Review of water use on site and addressing leaks; Reduction of 14% achieved	Individual	Improved Environmental Management Practices
SELECT		SELECT		SELECT	SELECT

Noise monitoring summary report

Lic No: P0809-01

Year

2018

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

If yes please fill in table N1 noise summary below

SELECT

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](#)

SELECT

3 Does your site have a noise reduction plan

SELECT

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?

SELECT

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 <u>site</u> compliant with noise limits (day/evening/night)?
19/03/2019	00:31 - 01:01	BN1	N/A	64.7	40.1	67.8	87	No		External traffic was main source of noise. No discernible noise from Cadburys.	Yes
19/03/2019	23:53 - 00:23	BN2	N/A	56.1	39.3	44.4	97.4	No		Cadburys AHU audible at site boundary throughout survey but below the night-time limit of 45dB (real time readings observed by noise field staff when no other devernable noise was evident). LAmax is from test of meter.	Yes
20/03/2019	01:11 - 01:41	BN3	N/A	57.3	40.7	68.8	75.7	No		External traffic was main source of noise, location is near a busy crossroads significant volume trucks drive by. No discernible noise from Cadburys.	Yes

20/03/2019	01:55 - 02:25	BN4	N/A	51.1	44.4	51.4	74.6	No		Audible hum coming from site but was below the 45dB threshold (real time readings observed by noise field staff when no other deventable noise was evident). External traffic and birds in nearby trees were main sources of noise.	Yes
19/03/2019	23:03 - 23:33	BN5	N/A	58.7	44.2	61.7	79.3	No		External traffic nearby car doors closing and pedestrians walking by the meter were main sources of noise. No discernible noise from Cadburys.	Yes
21/03/2019	12:30 - 12:50	BN1	N/A	71	58.4	74.4	92.3	No		External traffic and passing pedestrians and birds were the main source of noise. No discernible noise from Cadburys.	Yes
21/03/2019	11:28 - 11:58	BN2	N/A	67.6	45.7	51	91.5	No		Cadburys AHU audible at site boundary throughout survey below the day-time limit of 55dB. Builders drilling and cutting nearby along with deliveries and birds were the main external sources.	Yes

21/03/2019	09:21 - 09:51	BN3	N/A	61.4	55.2	67.7	81.6	No		External traffic and passing pedestrians and birds were the main source of noise. Location is near busy crossroads with large volumes of trucks going by and motorbikes. No discernible noise from Cadburys.	Yes
21/03/2019	10:04 - 10:34	BN4	N/A	66.1	56.2	69.9	81.2	No		Sound of engines from delivery trucks audible from site but below the 55db level. External traffic, birds and pedestrians in nearby trees were main sources of noise.	Yes
21/03/2019	10:45 - 11:15	BN5	N/A	67.9	58	71.5	85.9	No		External traffic and passing pedestrians and birds were the main source of noise. No discernible noise from Cadburys.	Yes

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained on site 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:	P0809-01	Year	2018
---	---------	----------	------	------

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

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)	33850.31	35759.54	12.00%	-5.68%
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	18145.69	18639.07	12.00%	-8.29%
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	0	0		
Natural gas (m3)	1488589.62	1536744.33	12.00%	-7.83%
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

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

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

Table R2 Water usage on site					Water Emissions	Water Consumption
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr
Groundwater						Unaccounted for Water:
Surface water						
Public supply	69068.2	92256.4	12.00%	19.26%		
Recycled water	246	246				
Total	69314.2	92502.4	12.00%		54119	5805.69

* 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)	4.4				4.4
Non-Hazardous (Tonnes)	761.485				

Resource Usage/Energy efficiency summary			Lic No: P0809-01		Year		2018		
	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
	01/08/2008	Install energy efficiency high bay lighting	Upgrade older light units to newer more efficient ones	energy audit	100%	Q1 2009	Technical Manager	On-going	This is a rolling programme.
	01/08/2008	Install energy efficiency high bay lighting	Upgrade older light units to newer more efficient ones	energy audit	100%	Q1 2009	Technical Manager	On-going	This is a rolling programme.
	01/10/2012	Install sensor on conveyors to stop once no product is detected after a period of time	Reduce electrical consumption	energy audit	200%	Q2 2013	Technical Manager	TBC	Programme under development.
	01/10/2012	Install VSD's on C Block AHU	Reduce electrical consumption	energy audit	<1	Q2 2013	Technical Manager	TBC	This project will be reviewed as part of 2015 EMP.
	01/10/2012	Consider load on cooling towers	Consider operating cooling towers CT02/03 on a duty/standby configurations	energy audit	100%	Q2 2013	Technical Manager	TBC	Project under development.
	01/10/2012	Rationalise Cooling Tower Water Loops	Link to VSD controls for pumps and fans	energy audit	<1	Q2 2013	Technical Manager	Q1 2014	Due to financial constraints this project has been pushed into 2015.
	For inspection purposes only. No part of copyright owner required for any other use.								

Resource Usage/Energy efficiency summary				Lic No:	P0809-01	Year		2018
01/10/2012	Optimise the Crunchie Granulation Heating Service in K Block	Review of the requirement of this area	energy audit	<1	Q2 2013	Technical Manager	NA	No longer applicable. Crunchie Heating Service moved to A Block and so is no longer running within K Block. This has resulted in termination of steam running and therefore a shut down of the boilers in the K Block.
01/09/2013	Rationalisation of steam generation to the site	Review current boiler set up with a view to upgrading the existing ageing boilers	energy audit	20% - Gas	Q3 2013	Environmental Manager	Q4 2015	In Progress. An initial concept design has taken place to assist the organisation raise the capital required to carry out this project. Two new boilers are expected to be obtained.
01/10/2012	Review the status of site refrigeration across site, rationalisation and consolidation	Ageing refrigeration equipment some containing R22	energy audit	100%	Q2 2013	Environmental Manager	Complete	Resulted in the removal and consolidation of some refrigeration equipment.
01/09/2014	No close down procedures in place at end of shift/closedown procedures not monitored	Closedown check sheets to be installed as a management tool to ensure correct equipment close-down	energy audit	10%	Q4 2014	Environmental Manager & Factory Managers	On-going	This is a rolling programme that audited on a continuous basis. The next audit is scheduled for June 2015.

Resource Usage/Energy efficiency summary				Lic No:	P0809-01	Year		2018
01/09/2014	Difficult to see where to turn off items e.g. main air circulation/air conditioning	Factory personnel to be made aware of equipment switches and which ones can be turned off when not in use	energy audit	10%	Q4 2016	Environmental Manager & Factory Managers	On-going	This is a rolling programme. To be constantly monitored and subject to inspection.
01/09/2014	Difficult to locate light switches	Factory personnel to be made more aware of location of light switches	energy audit	100%	Q4 2014	Environmental Manager & Factory Managers	On-going	This is a rolling programme. To be constantly monitored and subject to inspection.
01/05/2015	Introduction of close-down procedures or improve adherence where procedures are in place.	Training to be provided to staff on proper closedown procedures	energy audit	<1	Q4 2016	Environmental Manager & Factory Managers	On-going	This is a rolling programme. To be constantly monitored and subject to inspection.
01/05/2015	Locate and repair air leaks	Work was carried out in this respect and is ongoing as part of a compressor upgrade	energy audit	100%	Q4 2016	Environmental Manager & Factory Managers	On-going	This is a rolling programme. To be constantly monitored and subject to inspection.
01/05/2015	Turn off equipment in areas where no production is taking place	Training to be provided to staff on proper closedown procedures	energy audit	100%	Q4 2016	Environmental Manager & Factory Managers	On-going	This is a rolling programme. To be constantly monitored and subject to inspection.
01/06/2016	Minimise air leaks on wrappers	Work was carried out in this respect and is ongoing as part of a compressor upgrade	energy audit	100%	Q4 2017	Environmental Manager & Factory Managers		This is a rolling programme. To be constantly monitored and subject to inspection.

Resource Usage/Energy efficiency summary				Lic No:	P0809-01	Year		2018
01/06/2016	Ensure proper close down procedures are undertaken at end of every shift and ensure all unnecessary equipment is turned off.	Training to be provided to staff on proper closedown procedures	energy audit	100%	Q4 2017	Environmental Manager & Factory Managers	On-going	This is a rolling programme. To be constantly monitored and subject to inspection.
01/06/2016	Undertake review of installation of integrated local controlled lighting sensors	Review to be undertaken during 2017	energy audit	100%	Q4 2017	Environmental Manager & Factory Managers	On-going	This is a rolling programme. To be constantly monitored and subject to inspection.
01/03/2017	Better distribution/ positioning of fittings and reduction in numbers where possible	Tender to be released for fitting of LED lights to replacement current light fitting	energy audit	<1	Q1 2018	Project Manager	On-going	Tender released 20/02/2018 for rollout of replacement of current lighting to LED.
01/02/2018	Chilled Water System Optimisation	Centralise CHW systems; introduce variable volume pumping; Interconnect CHW distribution	energy audit	5%	Q4 2019	Engineering Manager	Q2 2020	
01/02/2018	Compressed Air System Optimisation	Upgrade compressors on site and remove dead legs	energy audit	5%	In progress	Site Engineering manager	Ongoing	New compressor installed alongside existing; leak surveys in progress
01/02/2018	CHP	Interconnect LPHW systems and install gas engine CHP to provide power to site and LPHW for process and space heating requirements	energy audit	48%	Under review	Site Management team	Q4 2021	Being reviewed for inclusion in a future upgrade project
			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					

Resource Usage/Energy efficiency summary				Lic No:	P0809-01	Year	2018
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							

For inspection purposes only.
Consent of copyright owner required for any other use.

Complaints and Incidents summary template	Lic No:	P0809-01	Year	2018
--	---------	----------	------	------

Complaints	
Additional information	
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below	
Yes	

Table 1 Complaints summary							
Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
25/07/2018	Noise		Whirring sound from site		Complete	01/08/2019	No noise identified: believed to be due to extended heatwave which increased cooling load on site
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
Total complaints open at start of reporting year							
Total new complaints received during reporting year							
Total complaints closed during reporting year							
Balance of complaints end of reporting year							

Incidents	
Additional information	
Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below	
No	

*For information on how to report and what constitutes an incident [What is an incident](#)

Table 2 Incidents summary														
Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurrence
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
Total number of incidents current year														
Total number of incidents previous year														
% reduction/increase														

WASTE SUMMARY	Lic No:	P0809-01	Year	2018
----------------------	---------	----------	------	------

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

Additional Information

Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility?; (waste generated within your boundaries is **1 to be captured through PRTR reporting**)

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

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

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)	EWIC code European Waste Catalogue EWIC codes	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWIC code European Waste Catalogue EWIC codes	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/ Increase over previous year +/- %	Reason for reduction/ increase from previous reporting year	Packaging Content (%)- only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -

SECTION B-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

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

6 Does your facility have relevant nuisance controls in place?

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

8 Do you maintain a sludge register on site?

SECTION C-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

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	
Cell 8													

WASTE SUMMARY	Lic No:	P0809-01	Year	2018
----------------------	---------	----------	------	------

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

Was meteorological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under S53(A)(5) of WMA been submitted in reporting year	Comments

→ 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					

*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?

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

SELECT
SELECT

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

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

Table 7 Landfill Gas-Landfill only

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

For inspection purposes only.
Consent of copyright owner required for any other use.

Waste Summary Continued

Please insert a copy of your Waste Management Record for waste transferred off site

[illegible]