

# ANNUAL ENVIRONMENTAL REPORT 2011

Heineken Ireland  
Murphy Brewery  
Leitrim Street  
Cork

<b>Prepared by:</b>		<b>Approved by:</b>		<b>Authorised by:</b>	
Environmental Engineer: <i>Theresa Kiely</i>		Supply Chain Director: <i>Petra Hissink</i>		Managing Director: <i>David Forde</i>	
Date:	Signature:	Date:	Signature:	Date:	Signature:

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**1.1**

**Licence Registration No**

**P0445-01**

**Name: Heineken Ireland**

**Site Location: Murphy Brewery**

**Leitrim Street**

**Cork**

## 1.2 Production Process

### Production

The environmental effect of the brewery is directly related to the amount of beer produced. More production usually means more consumption of materials, more emissions, and more energy used to produce and transport finished product.

### Brewing Process

The finest raw materials are used to make Heineken, Murphy's Irish Stout (MIS), Coors Light, Amstel, Fosters and Beamish. The ingredients are malted barley, roasted barley, hops, yeast and water. The barley contains starch from which alcohol is eventually produced. The barley has to be malted before it is suitable for brewing. During the malting process, the enzymes, which convert starch to sugar, are activated.

The brewing process involves seven stages, with strict quality controls enforced at each stage of the process.

#### *Stage 1*

Pale malt and roasted barley are cleaned, weighed, milled and then mixed with hot water in the mash tun, a large mixing vessel. (Roasted barley is only used for the brewing of stout.)

#### *Stage 2*

This mixture is stirred, the conversion from starch to sugar is completed and the sugars are then extracted from the grains.

#### *Stage 3*

The resulting liquid – now called sweet wort – is then transferred to a boiling vessel called a copper. The spent grains remain in the mash tun and are used for animal feed.

#### *Stage 4*

Hops are added to the wort in the boiling copper to give it its typical taste and aroma. The brew is then transferred to a whirlpool where it is rotated at high speed. This results in the hop residues (called trub) in the brew setting in the middle. This trub is later reintroduced back into the brew.

#### *Stage 5*

The hopped wort is then cooled and pumped to the fermentation tanks where yeast is added. The yeast grows and ferments the sugars to alcohol, flavour components are developed and carbon dioxide produced. The carbon dioxide is recovered and reused in the process at a later stage.

#### *Stage 6*

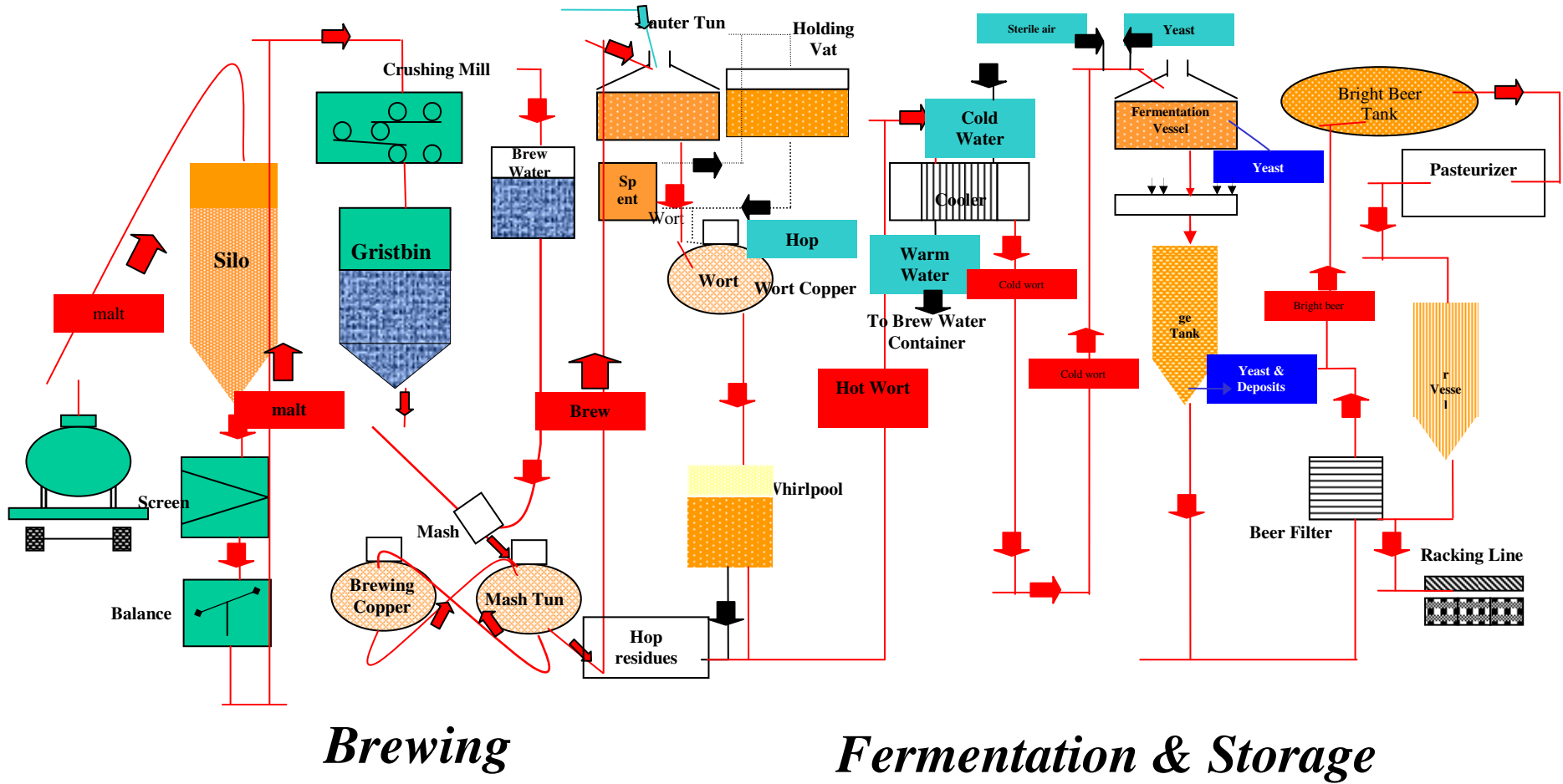
After fermentation is complete, the lager and stout are held in storage to allow the flavour to mature and develop. The yeast is removed and sent for recycling.

#### *Stage 7*

After maturation, either centrifugation or filtration removes any remaining yeast cells. The beer is adjusted to sales gravity. Thereafter the carbon dioxide and nitrogen levels are adjusted to desirable levels and the product is filled into kegs. After some final quality control checks, the product is ready for distribution.

## 1.2 Production Process

### Brewing Process



Theresa Kiely

## Heineken Ireland Environmental Policy Statement

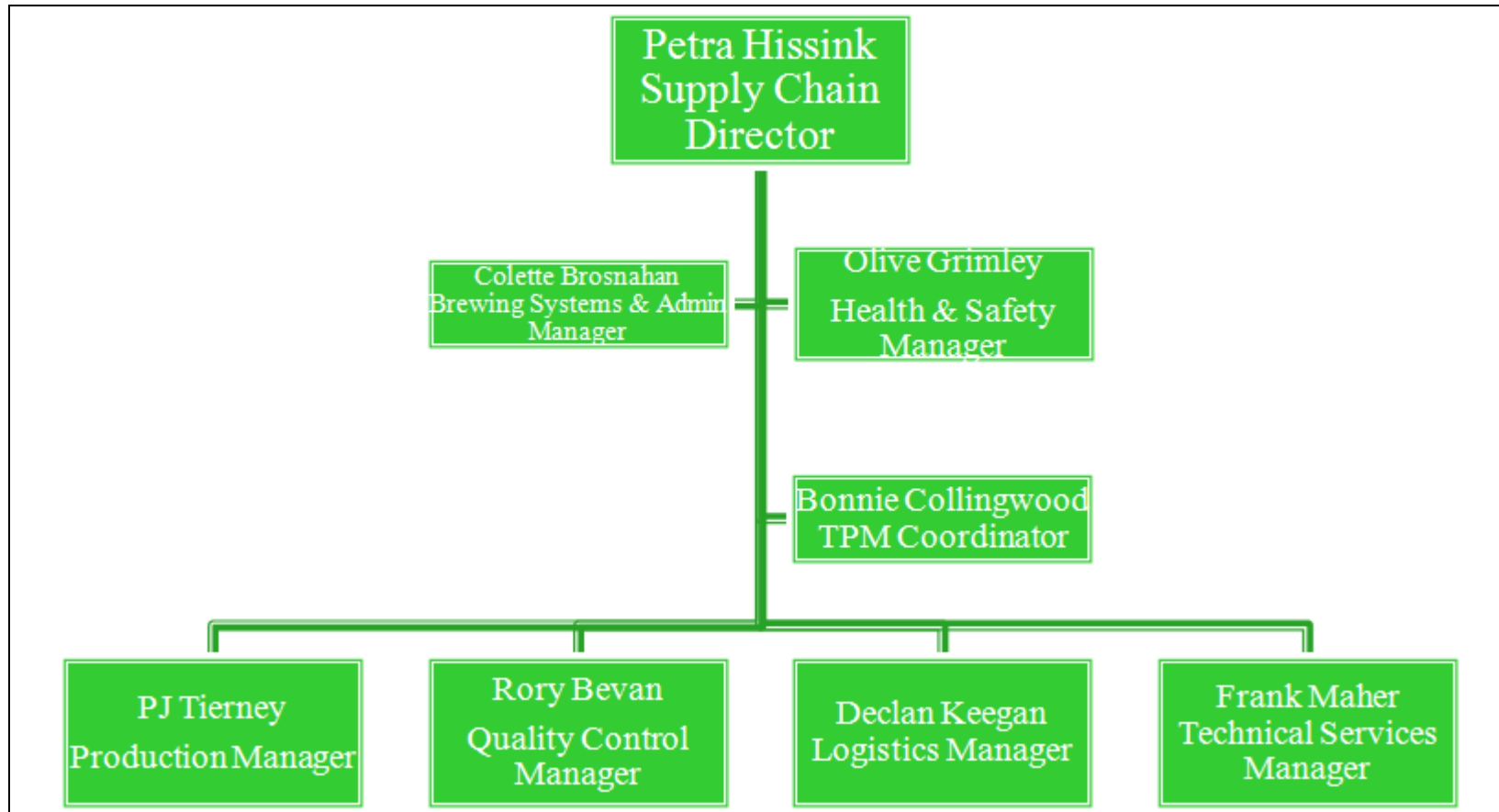
- **Heineken Ireland recognises its responsibility towards the environment and manifests this by committing itself to the following environmental Policy Statement and also to its environmental management system, I.S EN ISO:14001:2004. Heineken Ireland is committed to its Corporate Sustainability programme 2020**
- Environmental aspects are an integral element of our business.
- Relevant current legislation and all associated derived regulations regarding the Environment will be complied with and Heineken Ireland will comply with all conditions of the site's Integrated Pollution Prevention & Control License.
- Where such regulations do not (yet) exist, Heineken Ireland will take its own responsibility based on good corporate responsibility, and set its own standards accordingly. These standards will be appropriate to the nature, scale and impact of its activities and products.
- The manufacturing of our Products will take place with efficient use of the required materials, water, electricity and energy. Continual improvement will be pursued in our handling of environmental issues. These will be approached from a supply chain and engineering perspective, including purchased materials and services, our site operations, as well as distribution and the servicing of bar equipment. Continual attention will be paid to the avoidance and reduction of waste, nuisance and pollution.
- Implementation of the Company Environmental Policy Statement will further be ensured by assigning responsibilities at every management level and installing appropriate checking procedures. A key instrument will be the annual review of objectives and targets in the environmental elements of the operational plans of the Company. TPM will be one of the effective tools being used to help attain the objectives and targets.
- The results of our efforts related to the Company Environmental Policy Statement will be communicated to all employees and members of the Public.

**David Forde**  
Managing Director

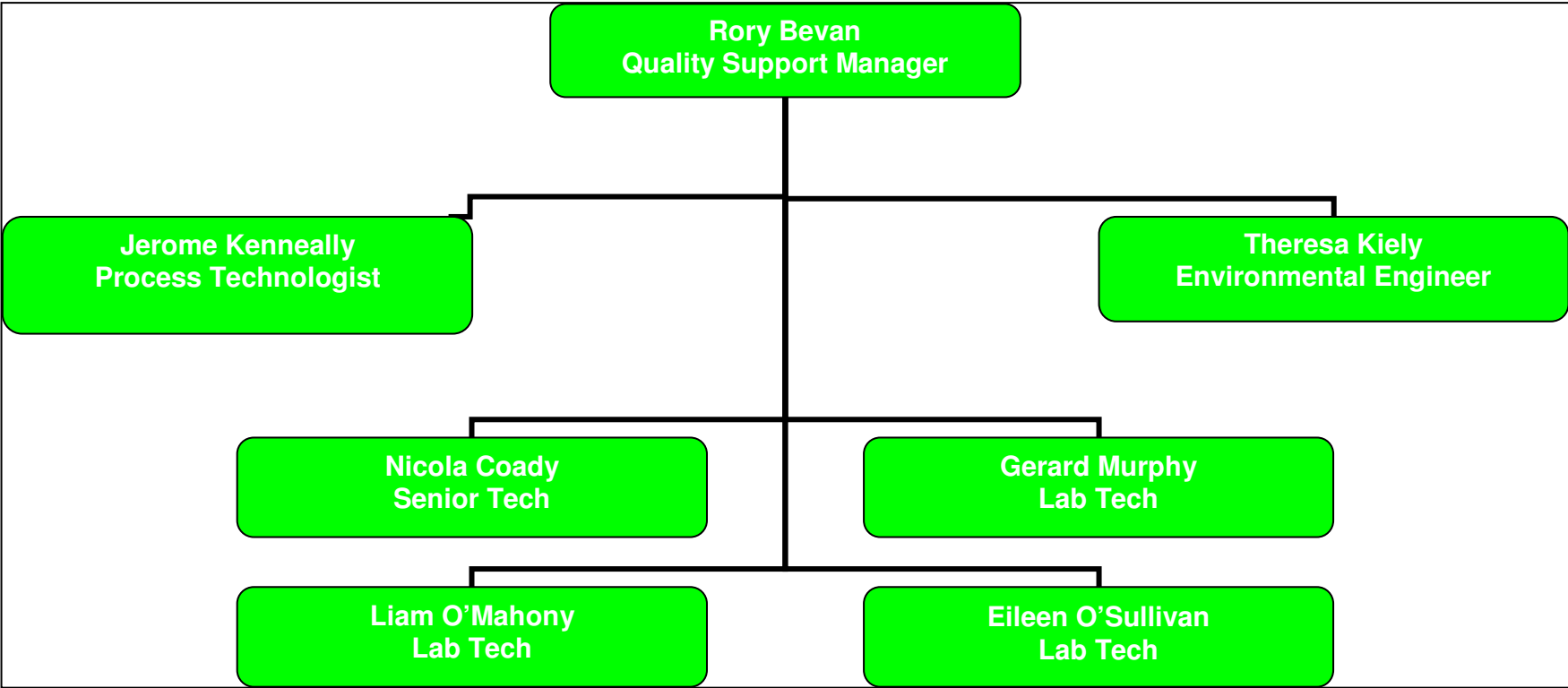
March 09<sup>th</sup> 2010

1.4 Company Organisation Chart for Environmental Management

## Supply Chain Management



# Quality Support



## 2.0 Summary Information

### 2.1 Self – Monitoring Data

#### 2.1.1 Emissions to Sewer

Table 1: Summary table of Emission to sewer

Parameter	Mass Emissions (Kg) (2010)	Mass Emissions (Kg) (2011)	Licensed Mass Emissions
Volume (M3)	163986 (M3)	163455 (M3)	657000 (M3)
pH	100% compliant	100% compliant	6 – 10 pH units
BOD	1058521 (kg)	5482260 (kg)	1095000 (kg)
COD	808020 (kg)	965324 (kg)	2190000 (kg)
Phosphate (P)	3256 (kg)	4562 (kg)	10950 (kg)
Total N	7883 (kg)	9055 (kg)	54750 (kg)
Detergents (as MBAS)	15 (kg)	8 (kg)	10 mg/l
Fats, oils, grease	2656 (kg)	3792 (kg)	50 mg/l
Temperature	100% compliant	100% compliant	≥ 30° C
Toxicity	100% compliant	100% non – compliant Exceeded by between 6% to 12%	5 TU
Suspended Solids	205225 (kg)	190811 (kg)	547500 (kg)

Table 2 Summary of non – compliance

Date	Non-compliance	Cause	Corrective Action
13/05/2011	BOD & COD exceeded ELV 3000 v's 4097 - BOD 6000 v's 6584 – COD	Not established	
01/06/2011	Suspended Solids exceeded 1500 v's 2501	Not established	
17/06/2011	Suspended Solids exceeded 1500 v's 1979	A planned TCO is suspected	
14/07/2011	BOD exceeded ELV 3000 v's 3880	Not established	
02/08/2011	COD exceeded ELV 6000 v's 7655	Not established	
18/08/2011	Suspended Solids exceeded 1500 v's 1910	Not established	

### 2.1.2 Ambient Surface Water Monitoring

	ASW1 – up stream		ASW2 – down stream	
	COD	pH	COD	pH
June			19	7.8
July			81	7.2
Aug			300	8.6
Nov	76	7.6	23	10
Nov			19	7.5
Dec	243	7.6	32	7.7
Dec	68	7.8	52	8.1

Visual inspection varied from opaque to clear, all samples contained a lot of suspended solids during 2011. Due to a diversion of the stream in 2004, the water in the stream now varies from being stagnant to some flow. In the warm weather the odour from this stream is not good. ASW1 samples are often not available due to the lack of flow.

The most likely explanation for the high COD in Dec is sampling when very little water was available.

### 2.1.3 Boiler Emissions to Air

Table 3: Summary of table of boiler emissions to atmosphere

Parameter	Mass Emissions (Kg) (2010)	Mass Emissions (Kg) (2011)	Licensed Mass Emissions (Kg)
Sulphur dioxide	N/A	N/A	N/A
Nitrogen oxide	1,166	1,049	N/A
Particulates	N/A	N/A	N/A
Carbon dioxide	2,620,943	2,672,239	N/A
VOC halogenated	N/A	N/A	N/A
VOC non-halogenated	N/A	N/A	N/A
Other (including Greenhouse Gases where appropriate)	N/A	N/A	N/A

Table 4: summary of non – compliance

Date	Non-compliance	Cause	Corrective Action
N/A	N/A	N/A	N/A

#### 2.1.4 Waste Arisings. Non-Hazardous Waste Sent for Recycling

Heineken Ireland is a member of Repak.

Segregation of on-site waste is an important factor in enabling recycling or reuse.

Below is a list of wastes that are segregated on site and sent for recycling.

Item	EWC Code	Quantity 2009 kgs	Quantity 2010 kgs	Quantity 2011 kgs
Cardboard	15 01 01	26,310	6,810	9420
Metal	15 01 04	14,680	11,340	7405
Paper	20 01 01	29,690	30,160	18056
Redundant wood	15 01 03	50,330	10,590	2920
Kegs	15 01 04	15,040	6,000	10920
Cans	20 01 40	190	67700	76
Glass	20 01 02	3,960	2,130	959
Brewers grains	02 07 99	11,738,170	12,150,260	12264000
Malt dust	02 07 99	60,030	95,470	66250
Spent yeast	02 07 99	995,940	1,069,550	1023000
Electrical non haz	16 02 14	2,315	774	699
Plastic	15 01 02	7,125	22,410	38880
Print toner non haz	08 03 18	0	0	0
Other compostable	20 03 01	11,592	6,350	28290*
Edible oil	20 01 25	700	1,560	1170
Batteries	16 06 04	31	0	0
Biodegradable canteen waste	20 01 08	6,198	1,713	3570
Mixed C&D	17 09 04	33,837	15,980	0
Rubble	17 01 07	-	19,380	0

Heineken Ireland is registered with the WEEE Society of Ireland

- **Included the spill incident reported 11/02/2011**

### 2.1.5 Waste Arising. Hazardous Waste Sent for Recycling

In 2006 the non- recycled hazardous waste sent offsite decreased. This was due mainly to the reporting system. The report only records waste leaving the site and not as it is generated on site so the collection routine influences the report.

Item		EWC Code	Quantity 2009 kgs	Quantity 2010 kgs	Quantity 2011 kgs
Lamps/tubes	Recycle	20 01 21*	87	36	150
Lab. Chems	Disposal	16 05 06*	639	-	---
DBS coolers	Recycle	20 01 23*	----	16,135	----
Ink / solvent	Disposal	08 03 12*	25	37	50
Containers	Disposal	15 01 10*	20	61	300
C&D (oily)	Recycle	15.01.10*	-----	-	1000
Monitors	Recycle	16 02 13*	297	168	17
Oily material	Disposal	15 02 02*	410	960	----
DBS coolers	Recycle	16.02.11*	21372	-	31440
Asbestos	Disposal	17.06.01*	---	280	---

## 2.2 Energy and water consumption

### 2.2.1 Energy Consumption

Heavy fuel oil	N/A
Light fuel oil	N/A
Natural gas	0.0166667 (megawatt-hour/hl)
Electricity	0.0067 (megawatt-hour/hl)
Coal, etc	N/A

### 2.2.2. Water Consumption

On-site ground water	N/A
On-site surface water	N/A
Municipal supply water supply (M3)	3.3 hl / hl

## **2.3 Environmental Incidents and Complaints**

### **2.3.1 Introduction**

Heineken Ireland continues to receive noise complaints from the local residents. This form of complaint contributes to all environmental complaints for 2010. While Heineken Ireland has reduced the level of complaints drastically over the years by investing large amounts of money in noise abatement installations and awareness training, it will continue to do everything possible to reduce this figure even further

The complaints as listed below have already been submitted to the Agency.

### **2.3.2 Environmental incidents**

Heineken Ireland had incidents relating to ELVs in the wastewater and they are listed in section 2.1.1 of this 2011 report.

### **2.3.3 Complaints Report Summary**

Total number of complaints 2009 07 all noise related  
Total number of complaints 2010 04 all noise related  
Total number of complaints 2011 06 all noise related

### 2.3.3 Complaints Report

<b>Environmental Complaints 2011</b>					
1	31/05/2011 ' 10pm. This was received on the reception voice mail	Mr. Daniel Cregg	Reversing noise of forklifts	Receipt of this complainant was acknowledged by letter	Options are being looked at to see if there is a way of reducing the reversing noise level without compromising safety in the distribution yard. The Annual Noise Survey is due to take place shortly
2	12/07/2011 @ 16.14 on voice mail	Mrs. Carol Goulding, Eason's Hill	Forklifts making noise @ 06.20 am	Apologised and admitted that this shouldn't have happened	A reminder to all drivers that forklifts should not be operating before 07.00 am
3	24/07/2011 @09.30 am	Mrs. Carol Goulding, Eason's Hill	A banging noise from near her house	Apologised, explained the reason for the hammering and then the venting of the water from the steam line	Water was released from the steam line
4	28/07/2011 @ 11.40 am	Mrs. Carol Goulding, Eason's Hill	A lot of noise from forklifts at 06.00 this Thursday morning	Apologised but explained I was not able to establish who was or could be on a forklift before 07.00 as there was only one driver on site and he did not start before 07.00	The noise source was not established
5	28/08/2011 @ 18.38	Deirdre Joyce	Noise coming from top of boiler house area	Telephoned Deirdre, apologised and explained that a bearing went in a condenser water pump.	An engineer was brought on site to switch off the water pump (this was on a Sunday so no engineer on site) Work commenced on the Monday to fully replace the bearing.
6	06.40 am on 07/12/11	Deirdre Joyce, Upper John Street	Noise coming from Ullage area	Apologised by telephone. Unable to identify noise source. The area was checked at the time.	Increase awareness and see if noise is heard again. As there was nobody working in the area at the time the noise has to be plant related rather than operator related.

## Management of the Activity

### 3.1 Environmental Objectives and Targets

#### Raw Material

The usage of raw materials, energy, electricity and process aids is dependent on the volume of beer produced.

Annually the target for the next three years are reviewed and revised based on the planned activities. This is to make our targets realistic. It also keeps us focused on continual improvement

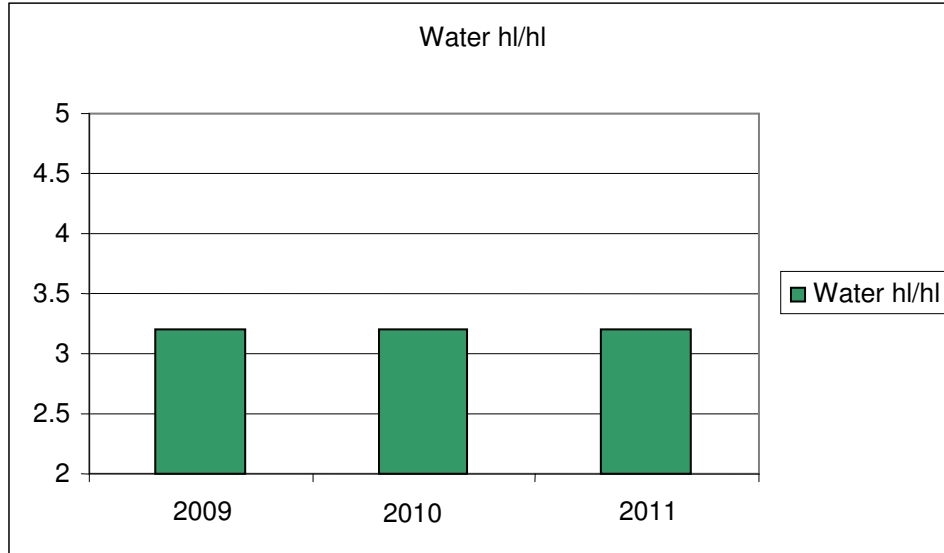
Heineken Ireland engage outside consultants from time to time to review the optimisation of the process and its use of raw materials

#### 3.1.1 Water

Water is one of the main raw materials used to brew beer. It is also used to clean plant and equipment. The local authority from The Lee Road Water Works supplies the water used by the brewery. This water is further treated on site for use as process water.

Usage	
Year	Actual (hl/hl)
2009	3.3
2010	3.3
2011	3.3

Target	
Year	Target (hl/hl)
2012	3.2
2013	3.1
2014	3.1

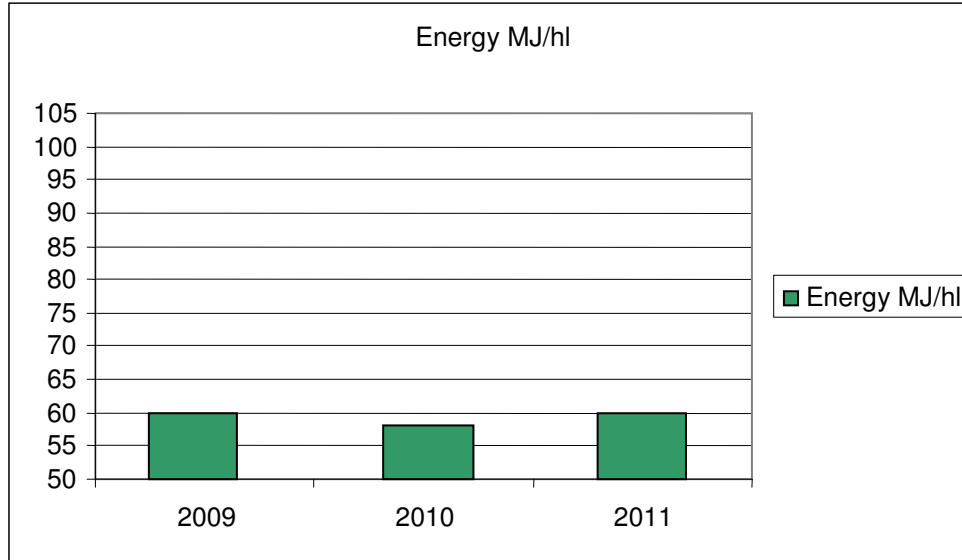


### 3.1.2 Energy

#### Natural Gas

Usage	
Year	Actual (MJ/hl)
2009	60
2010	59
2011	61

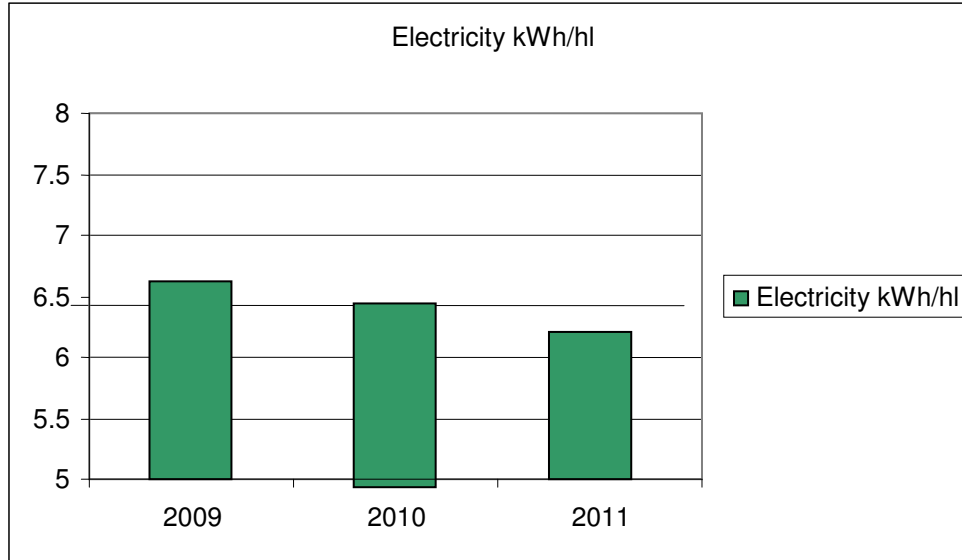
Target	
Year	Target(MJ/hl)
2012	54.5
2013	52.5
2014	51.5



### 3.1.3 Electricity

Usage	
Year	Actual (kWh/hl)
2009	6.7
2010	6.5
2011	6.3

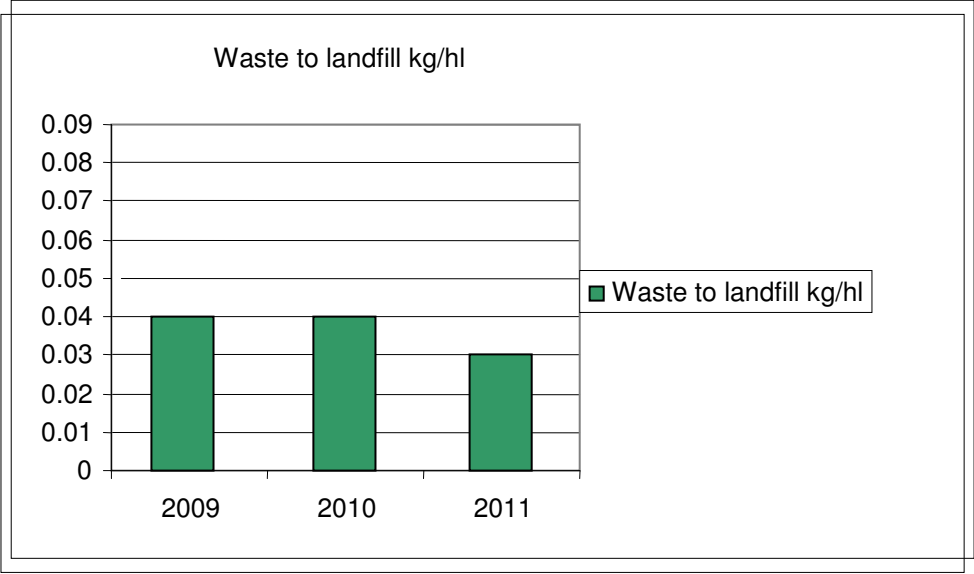
Target	
Year	Target (kWh/hl)
2012	6.2
2013	6.1
2014	6.0



### 3.1.4 Waste to Landfill

Actual	
Year	Actual kg/hl
2009	0.04
2010	0.04
2011	0.03

Target	
Year	Target kg/hl
2012	0.03
2013	0.03
2014	0.03



**Environmental Management Programme (EMP) 2011**

	<b>EMP Project</b>	<b>Rationale</b>	<b>Licence Requirements</b>	<b>Relationship to Objectives and Targets</b>	<b>Relationship to Aspects</b>	<b>Programme</b>	<b>Timeframe</b>	<b>Responsibility</b>	<b>Status</b>
<b>1</b>	Upgrading of energy monitoring equipment	Energy reduction expected	Condition 5		Aspects no 1 & 3	Feasibility study Investment application Installation Commissioning	Qtr 1 Qtr 1 Qtr 2 Qtr 2	TSM	Completed Completed Now in 2012 budget so new programme to be put in place for 2012
<b>2</b>	Increased target for CO2 recovery	Reduction in the purchase of CO2	Condition 5		Aspects no 1	Feasibility study Investment application Installation Commissioning	Qtr 1 Qtr 1- 2012 Qtr 2 - 2012 Qtr 2 - 2012	TSM	Completed No plans to replace due to capex
<b>3</b>	Heat recovery programme 1 (air compressors)	Reduce heat loss and also heat production	Condition 5	Electrical savings 0.31kWh/hl and 1.08 MJ/hl	Aspects no 1 & 3	Feasibility study Investment application Installation Commissioning	Qtr 1 Qtr 2 - 2011 Qtr 3 - 2011 Qtr 4 - 2011	TSM	Completed Completed Completed Completed
<b>4</b>	Heat recovery project (Refrig. plant)	Reduce heat loss and also heat production	Condition 5	Electrical savings 0.31kWh/hl and 1.08 MJ/hl	Aspects no 1 & 3	Feasibility study Investment application Installation Commissioning	Qtr 1 Qtr 2 - 2011 Qtr 3 - 2011 Qtr 4 - 2011	TSM	Completed Completed Completed

### Environmental Management Programme (EMP) 2012

	<b>EMP Project</b>	<b>Rationale</b>	<b>Licence Requirements</b>	<b>Relationship to Objectives and Targets</b>	<b>Relationship to Aspects</b>	<b>Programme</b>	<b>Timeframe</b>	<b>Responsibility</b>	<b>Status</b>
<b>1</b>	Brew water heat recovery	Reduction in thermal energy.	Condition 5	4Mj / hl	Aspects no 1 & 3	Investment application Installation Commissioning	Qtr 1 Qtr 2 Qtr 3	TSM	
<b>2</b>	Energy management system installation	Proactive management of energy usage	Condition 5	0.5% reduction of energy expected	Aspects no 1 & 3	Investment application Installation Commissioning	Qtr 1 Qtr 2 Qtr 2	.TSM	
<b>3</b>	CO2 recovery plant	To continue monitoring the feasibility of replacing present plant	Condition 5		Aspects no 1 & 3	Feasibility study	Qtr 1	TSM	
<b>4</b>	Steam metering in wort kettle	Steam control	Condition 5	Reduction of energy expected	Aspects no 1 & 3	Investment application Installation Commissioning	Qtr 1 Qtr 2 Qtr 2	TSM	

### **3.4 Pollution Emission Register**

This is included in the electronic PRTR data, this is submitted electronically to the Agency and a copy included with this report.

### **3.5 Agency monitoring and Enforcement**

#### **3.5.1 Emissions sampling and analysis by Agency**

##### **Site visit and inspections carried out by Agency Inspector**

An inspection of the site was conducted in 2010

#### **3.5.2 Analysis Results Differences**

**The differences between Heineken Ireland and the Agency analysis results were not significant.**

### **4.0 Licence – Specific Reports**

#### **4.1 Integrity Testing**

The product tanks (similar to the bunds) are on the preventative maintenance plan

The electronic system PEMAC is in operation at the site

The integrity test for the underground tanks and pipelines was due in 2010 but Heineken Ireland requested to the EPA that this be delayed until 1<sup>st</sup> quarter 2011 for logistical reasons in production. The permission was granted and the survey was completed in 2011. A plan is in place to address the corrective actions arising from the survey report starting with the ones identified as needing attention in the short term.

#### **4.2 Noise Surveys**

The Annual Noise Survey Report for 2011 was completed on July 20<sup>th</sup> 2011 – the report is available on site

An additional noise survey was also carried out at the request of the Agency and the report was submitted to The Agency.

#### **4.3 Facilities being used by HI**

List of waste Facilities being used by Heineken Ireland is maintained and available at the site.

#### **4.4 ERLA report for the Facility**

The report was included in the 2009 AER

#### **4.5 The AER PRTR worksheet**

This was uploaded separately on to the EPA web site



[Guidance to completing the PRTR workbook](#)

# AER Returns Workbook

Version 1.1.13

<b>REFERENCE YEAR</b>	2011
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## 1. FACILITY IDENTIFICATION

Parent Company Name	Heineken Ireland Limited
Facility Name	Heineken Ireland Limited
PRTR Identification Number	P0445
Licence Number	P0445-01

### Waste or IPPC Classes of Activity

No.	class_name
7.3.1	Brewing (including cider and perry production) in installations where the production capacity exceeds 25 million litres per year, not included in paragraph 7.8.
7.3.1	Brewing (including cider and perry production) in installations where the production capacity exceeds 25 million litres per year, not included in paragraph 7.8.

Address 1	Murphy Brewery
Address 2	Leitrim Street
Address 3	Cork
Address 4	
	Leitrim
Country	Ireland
Coordinates of Location	-8.47297 51.9035
River Basin District	IESW
NACE Code	1105
Main Economic Activity	Manufacture of beer
<b>AER Returns Contact Name</b>	Theresa Kiely
<b>AER Returns Contact Email Address</b>	theresa.kiely@heineken.ie
<b>AER Returns Contact Position</b>	Environmental Engineer
<b>AER Returns Contact Telephone Number</b>	021 4514480 (direct) or 0214503371 (general)
<b>AER Returns Contact Mobile Phone Number</b>	
<b>AER Returns Contact Fax Number</b>	n/a
<b>Production Volume</b>	0.0
<b>Production Volume Units</b>	
<b>Number of Installations</b>	0
<b>Number of Operating Hours in Year</b>	0
<b>Number of Employees</b>	0
<b>User Feedback/Comments</b>	
<b>Web Address</b>	

## 2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General
8(b)(ii)	Vegetable raw materials

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

Is it applicable?	
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

**SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS**

POLLUTANT		METHOD			Please enter all quantities in this section in KGs					QUANTITY		
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Short cycle CO2	CO2 from fossil fuel				T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5			
08	Nitrogen oxides (NOx/NO2)	M	EN 14792:2005		0.0	1049.0	0.0	0.0	0.0	1049.0	0.0	0.0
03	Carbon dioxide (CO2)	M	ISO 12039:2001	Emission point 1 calc using measured and assumed data, emission point 2 as per SN:00926176/GB	3673818.0	2672239.0	0.0	0.0	0.0	6346057.0	0.0	0.0

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

**SECTION B : REMAINING PRTR POLLUTANTS**

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

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

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

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

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

**Additional Data Requested from Landfill operators**

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

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

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Please enter all quantities on this sheet in Tonnes

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Licence/Permit No of Next Destination Facility Licence/Permit No of Recover/Disposer	Licence/Permit No of Next Destination Facility Licence/Permit No 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	15 01 05	No	9.4	composite packaging	R3	M	Weighed	Offsite in Ireland	Greenstar,W0136-02	Sarsfields Court Industrial,Glanmire,Cork,,Irel and		
Within the Country	15 01 04	No	7.41	metallic packaging	R4	C	Volume Calculation	Offsite in Ireland	One 51 ES Metals Ireland Ltd,CK(S) 491/07	Dublin Hill,Blackpool,Cork,,Ireland Monahan		
Within the Country	20 01 01	No	18.58	paper and cardboard	R3	M	Weighed	Offsite in Ireland	Rehab Recycling,WP08/04	Road,,Cork,,Ireland		
Within the Country	15 01 03	No	2.92	wooden packaging	R3	C	Volume Calculation	Offsite in Ireland	Greenstar,W0136-02	Sarsfields Court Industrial,Glanmire,Cork,,Irel and		
Within the Country	15 01 04	No	10.92	metallic packaging	R4	C	Volume Calculation	Offsite in Ireland	Cork Metal (One51),CK WMC 26/01	Dublin Hill,Blackpool,Cork Metal (One51),,Ireland Monahan		
Within the Country	20 01 40	No	0.08	metals	R4	M	Weighed	Offsite in Ireland	Rehab Recycling,WP08/04	Road,,Cork,,Ireland		
Within the Country	20 01 02	No	0.96	glass	R5	M	Weighed	Offsite in Ireland	Rehab Recycling,WP08/04	Road,,Cork,,Ireland		
Within the Country	02 07 99	No	12264.0	waste not otherwise specified	R3	M	Weighed	Offsite in Ireland	P. Hayes haulage Ltd,CK - WMC - 343-06	Minane Bridge,,Cork,,Ireland		
Within the Country	02 07 99	No	66.25	waste not otherwise specified	R3	M	Weighed	Offsite in Ireland	Greenstar,W0136-02	Sarsfields Court Industrial,Glanmire,Cork,,Irel and		
Within the Country	02 07 99	No	1023.0	waste not otherwise specified	R3	M	Weighed	Offsite in Ireland	P. Hayes haulage Ltd,CK - WMC - 343-06	Minane Bridge,,Cork,,Ireland		
Within the Country	16 02 14	No	0.7	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighed	Offsite in Ireland	KMK Metals,W0113-02	Cappincur industrial Estate,Daingean Road ,Tullamore,Co. Offaly,Ireland		
Within the Country	15 01 02	No	38.8	plastic packaging	R4	M	Weighed	Offsite in Ireland	Greenstar,W0136-02	Industrial,Glanmire,Cork,,Irel and		
Within the Country	20 03 01	No	11.0	mixed municipal waste	R3	M	Weighed	Offsite in Ireland	P. Hayes haulage Ltd,CK - WMC - 343-06	Minane Bridge,,Cork,,Ireland		
Within the Country	20 03 01	No	17.29	mixed municipal waste	R3	M	Weighed	Offsite in Ireland	Greenstar,W0136-02	Sarsfields Court Industrial,Glanmire,Cork,,Irel and		
Within the Country	20 01 25	No	1.17	edible oil and fat	R9	M	Weighed	Offsite in Ireland	Fryrite (Dublin) Ltd,WCP - DC - 10 - 1297 - 01	3 Clearwater Kinnegan ,Rathmullan,Co. Donegal,Ireland		
Within the Country	20 01 08	No	3.57	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Greenstar,W0136-02	Industrial,Glanmire,Cork,,Irel and		
Within the Country	20 03 01	No	23.21	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Greenstar,W0136-02	Industrial,Glanmire,Cork,,Irel and		
Within the Country	13 05 01	Yes	1.0	solids from grit chambers and oil/water separators	D10	C	Weighed	Offsite in Ireland	Rilta Environmental,W0192-02	Block 402 Grant's drive,Greenogue Business park,Rathcoole,County Dublin,Ireland	Buhck GmbH & Co.,eg 0019 - Sudring,38 21405,Wentorf,Germany	Rappenberg 21502,,Wiershop,,Germany
Within the Country	20 01 21	Yes	0.15	fluorescent tubes and other mercury-containing waste	R4	M	Weighed	Offsite in Ireland	KMK Metals,W0113-02	Cappincur Industrial Estate,Daingean Road ,Tullamore,Co. Offaly,Ireland	Estate,Daingean Road,Tullamore,Co. Offaly,Ireland	
Within the Country	16 02 13	Yes	0.017	discarded equipment containing hazardous components (16) other than those mentioned in 16 02 09 to 16 02 12	R13	M	Weighed	Offsite in Ireland	KMK Metals,W0113-02	Cappincur industrial Estate,Daingean Road ,Tullamore,Co. Offaly,Ireland	KMK Metals,W0113-03,Cappincur Industrial Estate,Daingean Road,Tullamore,Co. Offaly,Ireland	Cappincur Industrial Estate,Daingean Road,Tullamore,Co. Offaly,Ireland
To Other Countries	08 03 12	Yes	0.05	waste ink containing dangerous substances	R2	M	Volume Calculation	Abroad	Enva Ireland Ltd,WO 184-01	Clonmiman Industrial Estate,Portlaoise,Co. Laois,,Ireland	Nehlsen GmbH & Co.D33300040,Louis-Krages-Strasse,1028237,Bremen,,Germany	Louis-Krages-Strasse,1028237,Bremen,,Germany
To Other Countries	15 01 10	Yes	0.3	packaging containing residues of or contaminated by dangerous substances	R3	M	Weighed	Abroad	Enva Ireland Ltd,WO 184-01	Clonmiman Industrial Estate,Portlaoise,Co. Laois,,Ireland	Nehlsen GmbH & Co.D33300040,Louis-Krages-Strasse,1028237,Bremen,,Germany	Louis-Krages-Strasse,1028237,Bremen,,Germany
To Other Countries	16 02 11	Yes	0.017	discarded equipment containing chlorofluorocarbons, HFC, PFC	R4	M	Weighed	Abroad	CBS (Midlands)Ltd,EPR/TP3996 ER	Unit 9 Dunchurch Trading Estate,Dunchurch,Warwickshire,CV23 9LN,United Kingdom	Trading Estate,Dunchurch,Warwickshire,CV23 9LN,United Kingdom	Unit 9 Dunchurch Trading Estate,Dunchurch,Warwickshire,CV23 9LN,United Kingdom

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

## 4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

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## SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
12	Total nitrogen	M	EN ISO 11905-1:1998		9055.0	9055.0	0.0	0.0
13	Total phosphorus	M	EN ISO 6878:2004		4562.0	4562.0	0.0	0.0
80	Chlorine and inorganic compounds (as HCl)	C	OTH	as per purchase	825.0	825.0	0.0	0.0
79	Chlorides (as Cl)	C	OTH	as per purchase	50.0	50.0	0.0	0.0

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

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

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
306	COD	M	ALT	ET 067 APHA 2005:5220:C	965324.0	965324.0	0.0	0.0
303	BOD	M	ALT	ET 066 APHA 2005:5210:B	548259.7	548259.7	0.0	0.0
308	Detergents (as MBAS)	M	ALT	APHA 2005 5540:C	8.17	8.17	0.0	0.0
314	Fats, Oils and Greases	M	ALT	ET 083 Based on APHA 5520 D	3792.144	3792.144	0.0	0.0
240	Suspended Solids	M	ALT	ET 042 Based on APHA 2540:D	190811.1	190811.1	0.0	0.0
237	<b>Volatile organic compounds (as TOC)</b>	M	EN 1484:1997	COD/3	321774.56	321774.56	0.0	0.0

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