

**DIAGEO**

**GLOBAL SUPPLY**

Dundalk Brewery

**Dundalk Brewery**

IPPC Licence Register No.: P0440-01

**ANNUAL ENVIRONMENTAL REPORT**

**2009**

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## **1. Introduction**

### **1.1 General**

This Annual Environmental Report (AER) is submitted to the Environmental Protection Agency (EPA) in compliance with Condition 2.8.2 of the IPPC Licence Register No. P0440-01. The AER contains summary information on the environmental performance of Dundalk Brewery (previously trading under the name The Great Northern Brewery), Carrick Road, Dundalk, Co. Louth for the calendar year 2009.

Dundalk Brewery is part of Diageo Global Supply and is located in the centre of Dundalk town. The Brewery produces beer in keg and bulk beer for bottling and canning for both domestic and export markets. While all keg beer requirements are racked on site, all bottling and canning beer are packaged at other Diageo sites. In addition, products in bulk from other Diageo breweries are kegged at Dundalk Brewery.

Dundalk Brewery operates an environmental, health & safety management system which is certified to ISO 14001 and OHSAS 18001.

## **1.2 Dundalk Brewery Environmental Policy**

We will operate in an environmentally responsible way to protect and enhance our people, brands and the communities in which we work and live.

We will seek to comply with the spirit as well as the letter of legislative and regulatory requirements. Where none exists, we will set ourselves appropriately high standards.

We will consider the environmental implication of every significant business decision.

We will educate and motivate our employees to conduct activities in an environmentally responsible manner.

We will encourage our business partners to achieve a high level of environmental performance.

We will communicate our environmental policy and performance to all interested parties and make them publicly available.

We will maintain emergency preparedness plans in conjunction with local and national authorities.

We are committed to continual improvement in our environmental policy with and emphasis on pollution prevention, the management of performance and monitoring our progress against best practice to ensure this.

These aims will be achieved through the implementation of the site Environmental Management System to manage the environmental impacts of our operation.

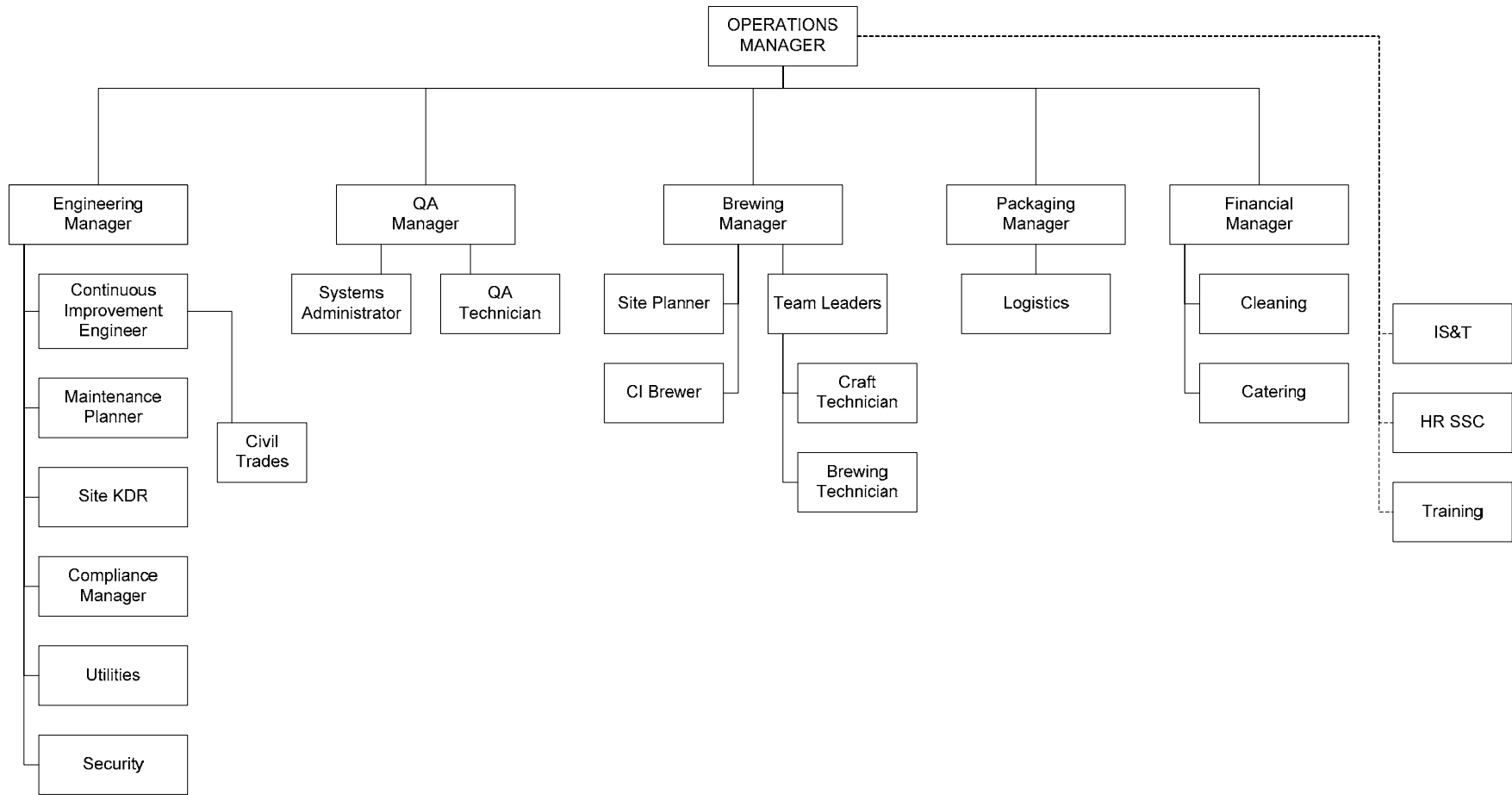
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P. Treacy  
Operations Manager  
The Dundalk Brewery  
October 2008

## **1.3 Company Organisation Chart**

The Dundalk Brewery's Company Organisation Chart is shown in Figure 1. Responsibility for Environmental and Health and Safety matters comes under the Engineering Manager.

Figure 1: Company Organisation Chart



## 2. Summary Information

### 2.1 Self Monitoring Data

Summary information is provided for the period from 1<sup>st</sup> January 2009 to 31<sup>st</sup> December 2009. The information is presented in line with the Guidance Note for the Annual Environmental Report as an annualised mass emission figure, derived from the average measured mass emission value multiplied by the duration of the emission.

#### 2.1.1 Emissions to Sewer Summary

Emission limit values for emissions to sewer are set out in Schedule 2(i) of the IPPC licence for emission point SE-1. Schedule 2(iii) of the licence specifies the frequency of monitoring for each parameter at that emission point.

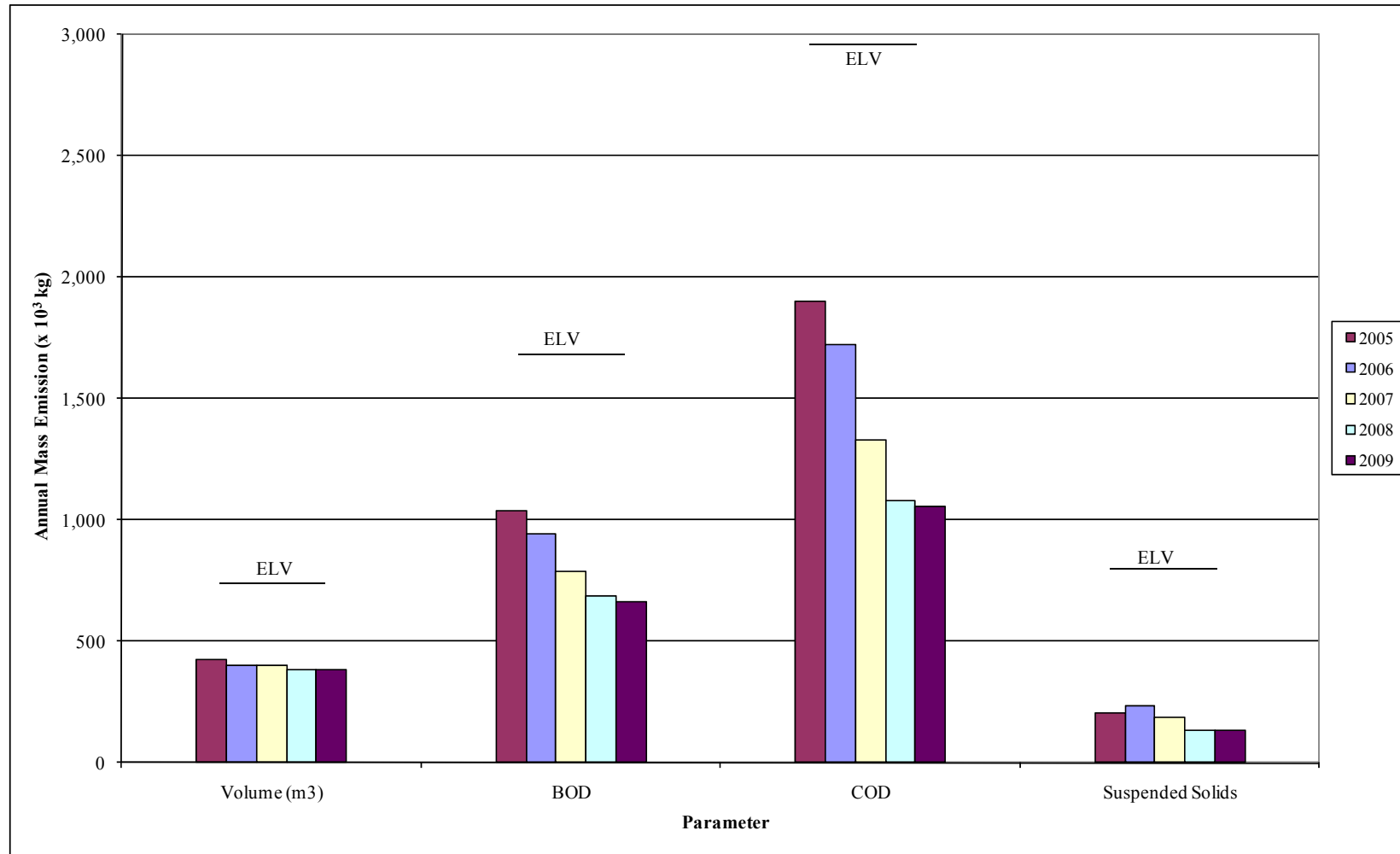
Summaries of the 2009 emissions to sewer via SE-1, showing average mass emissions and mass emission limits, are given in Table 1.

**Table 1: Summary Table for Emissions to Sewer at SE-1**

Parameter	Annual Load (m <sup>3</sup> ; kg) / Average Measured Value (mg/l)					
	2005	2006	2007	2008	2009	Emission Limit Value
Volume (m <sup>3</sup> )	428,129	399,532	402,132	384,142	384,405	730,000
BOD (kg)	1,041,279	941,812	788,251	686,369	663,785	1,689,950
COD (kg)	1,901,819	1,724,396	1,333,301	1,078,179	1,058,802	2,956,500
Suspended Solids (kg)	204,931	237,643	185,278	136,482	132,795	803,000
Oils, Fats & Grease (mg/l)	44.65	42.0	29.9	21.5	26.0	100

Figure 2 shows the respective loads of BOD, COD and Suspended Solids for 2005 to 2009 (inclusive) in chart form for trending purposes.

Figure 2: Trending of Emissions to Sewer



A summary of the non-compliances in respect of emissions to sewer is given in Table 2.

**Table 2: Details of Non-Compliance for Emissions to Sewer**

Date	Non-Compliance	Cause	Corrective Action
25/05/09	COD concentration 18,000 mg/l -v- 10,000 mg/l	An accidental discharge of a full brew from the brewhouse directly to drain due to a failure of the PLC control system in the area (a fault with the 'handshake' system that communicates between the brewhouse and the fermentation area).	The control software was updated to include two extra layers of security checking to prevent a reoccurrence of the malfunction. 1. A watchdog timer was installed which freezes all discharges if valid 'handshake' signals are not received within a specified time. 2. The handshake signals have been upgraded to include an extra acknowledgement signal which must be received prior to beer discharge from the brewhouse.
25/05/09	COD load 18,306 kg -v- 8,100 kg		
25/05/09	BOD concentration 5,960 mg/l -v- 5,690 mg/l		
25/05/09	BOD load 9,916 kg -v- 4,630 kg		

### 2.1.2 Report on Use of TOC Meter

As reported in the AER for 2008, there is a TOC meter installed in the New Block at the site which is used to monitor the level of TOC in the effluent prior to its discharge to the sewer via emission point SE-1. The use of this meter enables the Brewery to manage its discharge in relation to both BOD and COD concentrations and loads.

The TOC meter detected the high TOC content in the effluent discharged on 25<sup>th</sup> May 2009 following the accidental release.

### 2.1.3 Surface Water Monitoring Summary

The surface water and effluent drainage systems are combined on site prior to discharge. A specific environmental objective has been to separate these surface and effluent drainage systems. However, in correspondence dated 9<sup>th</sup> October 2006, Louth County Council has requested that the brewery storm water is not separated from the foul outflow for the foreseeable future. The Brewery has requested that the Agency defer Condition 9.1 of the licence, requiring separation of surface and effluent drainage, pending approval from the Local Authority.

Condition 9.1.3 of the Brewery's IPPC Licence requires surface water monitoring to be carried out after the installation of a separate surface water collection and disposal system. As such a separate system cannot be installed for the reason set out above, and as all surface waters were routed to the foul discharge, which is monitored daily, no surface water monitoring was carried out by the Brewery in 2009.

### **2.1.4 Groundwater Monitoring Summary**

In compliance with Condition 9.3.3 of the IPPC licence, annual groundwater monitoring was undertaken on boreholes BH-A, BH-B and BH-C on 14<sup>th</sup> October 2009. The licence requires the samples to be tested for Diesel Range Organics only. However, as requested in the Agency's site inspection report of 28<sup>th</sup> October 2008, we have included the results for additional parameters that are tested for as part of the monitoring programme in Table 3.

Table 3 shows that in 2009, the measured level of ammonia, chloride, COD, conductivity, fluoride, nitrate, Kjeldahl nitrogen and total nitrogen increased in borehole BH-A. The parameters measured in boreholes BH-B and BH-C were consistent with those measured during the 2008 round of monitoring.

There were no incidents at the site during 2009 that had the potential to result in increases in the parameters in borehole BH-A, in particular chlorides and conductivity. However, during a site investigation being carried out in order to assist in the preparation of a Closure, Restoration and Aftercare Management Plan for the site, a blockage was discovered in borehole BH-A, preventing a sample from being taken. This blockage was subsequently removed and the borehole repaired prior to collection of the October 2009 sample.

The National Draft Bedrock Aquifer Map classifies the aquifer underlying the site as a poor aquifer, with bedrock which is generally unproductive except for local zones.

**Table 3: Summary of Groundwater Monitoring Results**

Parameter	EPA Interim Guideline Value	BH-A				BH-B				BH-C			
		2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
Ammonia (mg/l as N)	0.15	0.16	1.09	<0.06	1.39	<0.09	<0.09	<0.06	0.07	<0.09	<0.09	<0.06	0.08
Chloride (mg/l)	30	661	767	47	3,119	137	68.6	59.0	51.5	23	13.7	47.5	24.3
COD (mg/l)	-	32	20	9	23	14	6	7	<5	19	5	15	9
Conductivity (µS/cm)	1,000	2,780	6,600	490	9,010	1,300	1,176	976	1,020	390	258	974	329
Diesel Range Organics (µg/l)	10 <sup>Note 1</sup>	10.2	<1	<2.5	<2.5	9.4	<1	<2.5	<2.5	14.6	<1	<2.5	<2.5
Fluoride (mg/l)	1	0.639	<0.09	0.2	0.65	0.16	<0.09	0.19	0.23	0.22	<0.09	0.19	0.2
Nitrate (mg/l as N)	25 <sup>Note 2</sup>	0.12	<0.09	<0.09	<0.27	2.59	4.99	6.5	7.61	<0.09	<0.09	<0.09	<0.27
Nitrogen (Total Kjeldahl) (mg/l as N)	-	3	2.8	<1	2.24	2	1.12	1.68	1.68	3	2.24	<1	1.68
Nitrogen (Total Oxidised) (mg/l as N)	-	0.12	<0.03	<0.03	<0.28	2.58	4.97	6.5	7.61	0.04	0.04	<0.03	<0.28
Nitrogen (Total) (mg/l as N)	-	3.12	2.8	<1	2.24	4.58	6.09	8.18	9.29	3.04	2.28	<1	1.68
pH	6.5 – 9.5	7.7	7.2	7.7	7.4	7.5	7.5	7.2	7.5	7.0	7.7	7.7	7.8
Semi Volatile Compounds (µg/l)	-	6.57	<1	<1	<0.5	3.09	<1	<1	<0.5	3.59	<1	<1	<0.5
Volatile Organic Compounds (µg/l)	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Note 1: This is the Interim Guideline Value for Total Petroleum Hydrocarbons; there is no IGTV specifically for Diesel Range Organics.

Note 2: The IGTV is expressed as NO<sub>3</sub>.

### 2.1.5 Emissions to Atmosphere Summary

Schedule 1(i) of the licence requires discharges to atmosphere to be monitored at the following emission point:

A2-1 : Cyclone

Monitoring of the emissions to atmosphere from emission point A2-1 was conducted on 30<sup>th</sup> July 2009 and the results are shown in Table 4. The mass emission figures are based on the cyclone operating for 40 hours per week.

**Table 4: Total Particulate Matter Emissions to Atmosphere for A2-1**

Parameter	Average Concentration (mg/Nm <sup>3</sup> )	Annual Mass Emission (kg)	Licensed Emission Limit Value (mg/m <sup>3</sup> )	Licensed Emission Limit Value (kg/yr)
Total Particulate Matter	24	314	50	655.2

Note 1: This annual mass emission is based on the average measured particulate concentration by the maximum licensed hourly volumetric flow rate (6,300 m<sup>3</sup>/hour) over a forty hour week.

Schedule 1(ii) of the licence requires discharges to atmosphere to be monitored at the following emission points:

A1-1 : Gas Boiler 1  
 A1-2 : Gas Boiler 2  
 A1-3 : Gas Boiler 3  
 A1-4 : Diesel Generator

The diesel generator (Emission Point A1-4) is no longer in service and is unlikely to be in service in the future.

The gas-fired boilers (Emission Points A1-1, A1-2 and A1-3) were monitored for the parameters set out in Table 5. It should be noted that Boilers 1 & 3 are fitted with two burners whereas Boiler 2 is fitted with one.

**Table 5: Summary of Emissions to Atmosphere for A1-1, A1-2 & A1-3**

Emission Point Reference No.	Burner 1					
	Low Fire			High Fire		
	NOx (mg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	Efficiency (%)	NOx (mg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	Efficiency (%)
A1-1 (Boiler 1)	114	0	82.6	103	1	82.0
A1-2 (Boiler 2)	73	0	82.4	89	0	81.9
A1-3 (Boiler 3)	102	0	83.9	94	0	81.5

Emission Point Reference No.	Burner 2					
	Low Fire			High Fire		
	NOx (mg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	Efficiency (%)	NOx (mg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	Efficiency (%)
A1-1 (Boiler 1)	100	0	83.2	101	0	81.6
A1-2 (Boiler 2)	n/a	n/a	n/a	n/a	n/a	n/a
A1-3 (Boiler 3)	102	0	86.7	98	0	82.9

### 2.1.6 Waste Management Report

Condition 7.3 of the IPPC Licence requires a waste register to be maintained on Dundalk Brewery's site to record the following details:

- The names of the agent and the transporter of the waste;
- The names of the persons responsible for the ultimate disposal/recovery of the waste;
- The ultimate destination of the waste;
- Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site;
- The tonnages and EWC Code for the waste materials listed in *Schedule 3(i) Hazardous Wastes for Disposal/Recovery* and *Schedule 3(ii) Other Wastes for Disposal/Recovery*, sent off-site for disposal/recovery;
- Details of any reject consignments.

Table 6 presents a summary of the annual waste arising for hazardous and non-hazardous wastes for Dundalk Brewery. The table also provides details of the Waste Collection Permits under which waste was collected from the site.

**Table 6: Summary of Annual Waste Arisings for 2009**

EWC Code	HAZ (y/n)	Description of waste	Quantity (Tonnes / annum)	Method of Disposal / Recovery	Location of Disposal / Recovery	Name of Waste Disposal/Recovery Contractor (if applicable)	Waste Collection Permit No.	Issuing Local Authority
02 07 01	N	Waste Yeast	709	Not applicable (animal feed) Note 1	Not applicable (animal feed) Note 1	KW Forage Systems, Ballymountain, Waterford	Not applicable (animal feed) Note 1	Not applicable (animal feed) Note 1
02 07 01	N	Squeezings	1,915	Not applicable (animal feed) Note 1	Not applicable (animal feed) Note 1	KW Forage Systems, Ballymountain, Waterford	Not applicable (animal feed) Note 1	Not applicable (animal feed) Note 1
02 07 01	N	Spent Grains	5,592	Not applicable (animal feed) Note 1	Not applicable (animal feed) Note 1	KW Forage Systems, Ballymountain, Waterford	Not applicable (animal feed) Note 1	Not applicable (animal feed) Note 1
02 07 04	N	Waste Beer	1,733	Not applicable (animal feed) Note 1	Not applicable (animal feed) Note 1	KW Forage Systems, Ballymountain, Waterford	Not applicable (animal feed) Note 1	Not applicable (animal feed) Note 1
02 07 04	N	Grain Dust	26.9	R3	(b) Oxigen Environmental, Coe's Road Dundalk	Oxigen Environmental Ltd.	WCP-DC-08-1106-01	Dublin City Council
15 01 03	N	Wooden Pallets	14.3	R3	(b) Panda Waste, Dublin.	David Burlingham	WCP/MH/2003/31C	Meath Co. Co.
15 01 06	N	Packaging Waste	9.8	D1	(b) Whiteriver Landfill, Dunleer, Co. Louth.	Oxigen Environmental Ltd.	WCP-DC-08-1106-01	Dublin City Council
15 02 03	N	Spent Filter Material	337	R3	(b) Waddock Composting, Carlow	Ormonde Organics Limited	WCP-OY-08-0595-01	Offaly County Council
17 01 07	N	Building Rubble	12.5	R5	(b) Oxigen Environmental, Coe's Road Dundalk	Oxigen Environmental Ltd.	WCP-DC-08-1106-01	Dublin City Council

Note 1: As advised by the EPA, the disposal / recovery code assigned to waste yeast, squeezings, spent grains and waste beer in the AER Returns Webform is R11.

Table 6: Summary of Annual Waste Arisings for 2009 (cont/d)

EWC Code	HAZ (y/n)	Description of waste	Quantity (Tonnes / annum)	Method of Disposal / Recovery	Location of Disposal / Recovery	Name of Waste Disposal/Recovery Contractor (if applicable)	Waste Collection Permit No.	Issuing Local Authority
20 01 01	N	Paper & Cardboard	13.6	R3	(b) Oxigen Environmental, Coe's Road Dundalk	Oxigen Environmental Ltd.	WCP-DC-08-1106-01	Dublin City Council
20 01 02	N	Laboratory glass	16.5	R5	(b) Oxigen Environmental, Coe's Road Dundalk	Oxigen Environmental Ltd.	WCP-DC-08-1106-01	Dublin City Council
20 01 40	N	Hop Cans	5.2	R4	(b) Oxigen Environmental, Coe's Road Dundalk	Oxigen Environmental Ltd.	WCP-DC-08-1106-01	Dublin City Council
20 02 01	N	Biodegradable Waste	24.3	R3	(b) Oxigen Environmental, Coe's Road Dundalk	Oxigen Environmental Ltd.	WCP-DC-08-1106-01	Dublin City Council
20 03 01	N	General Waste	18.4	D1	(b) Whiteriver Landfill, Dunleer, Co. Louth.	Oxigen Environmental Ltd.	WCP-DC-08-1106-01	Dublin City Council
15 02 02*	Y	Waste Oil	3.6	R9	(b) ENVA Ireland, Clonminam Industrial Estate, Co Laois	ENVA Ireland Ltd.	WCP-DC-08-1116-01	Dublin City Council
15 02 02*	Y	Waste spill kits	0.06	R2	(c) Lindenschmidt KG, Germany	ENVA Ireland Ltd.	WCP-DC-08-1116-01	Dublin City Council

Table 6: Summary of Annual Waste Arisings for 2009 (cont/d)

EWC Code	HAZ (y/n)	Description of waste	Quantity (Tonnes / annum)	Method of Disposal / Recovery	Location of Disposal / Recovery	Name of Waste Disposal/Recovery Contractor (if applicable)	Waste Collection Permit No.	Issuing Local Authority
16 02 13*	Y	PC Monitors	0.002	R4/R5	(b) FMW Recycling, Unit 1, IDA Industrial Estate, Balbriggan, Co Dublin	Fingal D&D Limited t/a FMW Recycling	WCP-DC-09-1167-02	Dublin City Council
16 02 14	N	Electrical Waste	0.004	R4/R5	(b) FMW Recycling, Unit 1, IDA Industrial Estate, Balbriggan, Co Dublin	Fingal D&D Limited t/a FMW Recycling	WCP-DC-09-1167-02	Dublin City Council
16 05 06*	Y	Laboratory chemicals	0.11	D10	(c) AVG, Germany	Indaver Ireland Ltd.	WCP-DC-08-1121-01	Dublin City Council
20 01 21*	Y	Fluorescent Tubes	0.11	R4/R5	(b) Irish Lamp Recycling Co. Ltd, Athy, Co. Kildare	Irish Lamp Recycling Co. Ltd.,	WCP-DC-08-1115-01	Dublin City Council

## 2.2 Agency Monitoring & Enforcement

### 2.2.1 Site Inspection

The EPA visited the site in 2009 and carried out a site inspection. As at 31<sup>st</sup> March 2010 the site inspection report had not been received; we will report the findings from the inspection in our AER for 2010.

### 2.2.2 Effluent Monitoring

On 5<sup>th</sup> May 2009 the Agency visited Dundalk Brewery and sampled the effluent discharged via emission point SE-1 by way of a grab sample. The results for all of the parameters analysed for (temperature, BOD concentration, COD concentration, pH and suspended solids concentration) were within the licence limits

## 2.3 Energy & Water Consumption

Energy consumption at Dundalk Brewery for the year 2009 is summarised in Table 7. Energy usage for 2005 to 2008 is included for comparison. All values are expressed in Megawatt-hours (MWh).

**Table 7: Energy Consumption Summary**

Energy Source	2005	2006	2007	2008	2009
Natural gas	35,422	33,022	26,503	25,531	25,175
Electricity	12,366	12,927	12,796	12,560	11,842
Gas oil	557	605	679	758	710
LPG	60	73	67	46	37
Total	48,405	46,642	40,045	38,895	37,764

Water consumption at Dundalk Brewery for the year 2009 is summarised in Table 8. The water usage per hectolitre of beer produced is also given in the table. Data for 2005 to 2008 is included for comparison.

**Table 8: Water Consumption Summary**

	2005	2006	2007	2008	2009
<b>Total (hl)</b>	$5.87 \times 10^6$	$5.6 \times 10^6$	$4.9 \times 10^6$	$5.1 \times 10^6$	$4.9 \times 10^6$
<b>hl/hl beer</b>	4.06	3.75	3.3	3.5	3.5

## 2.4 Environmental Incidents & Complaints

In compliance with Condition 12.3 of the IPPC licence, a record of all complaints received by the Dundalk Brewery is maintained on site. There were no environmental complaints received in 2009.

A summary of the 2009 complaint history is presented in Table 9.

**Table 9: Reported Complaints Summary**

<b>Complaint Class</b>	<b>Noise</b>	<b>Odour</b>	<b>Water</b>	<b>Air</b>	<b>Procedural</b>	<b>Miscellaneous</b>	<b>Total</b>
No. of complaints	0	0	0	0	0	0	0

## 2.5 AER Returns Webform

The AER Returns Webform for the Dundalk Brewery is attached in Annex A to this report.

### **3. Management of the Activity**

#### **3.1 Introduction**

The following sections present a report on our Environmental Management Programme (EMP) covering the period 2009 – 2013 and our EMP proposal for the period 2010 – 2014. Our environmental objectives are listed in Section 3.2. Progress made on the individual projects in the EMP in 2009 is described in Section 3.3. Our proposed EMP for the period 2010 – 2014 is described in Section 3.4.

Our Environmental Objectives and Targets have been prepared with regard to the conditions of the IPPC licence. Our core objectives are:

- Cleaner Production
- Recovery, Re-Use and Recycling of Waste
- Emissions Abatement, Monitoring and Control
- Energy and Utilities Usage
- Emergency Planning
- Environmental Management

#### **3.2 Environmental Management Programme Report for 2009**

The projects set-out to achieve the six core objectives of the EMP are discussed in Table 10 in terms of the associated targets and the achievements to date, and describes difficulties encountered and corrective action, where appropriate.

**Table 10: Achievements of Environmental Management Programme 2009 to 2013**

Objective	Target	Achievement
<b>1. Cleaner Production</b>		
1.1 Reduce beer bottoms discharged to waste water system	Install Kaiku intelligent pipe system on filter plant feed pipe-work.	The system has been installed, as reported last year, and is operating, monitoring the bottoming of storage vessels.
1.2 Reduce the utilities and waste beer produced in the keg plant.	Develop a system to accurately record the quantity of beer recycled in the keg plant daily.  Target reduction in quantity recycled once accurate records are available.	A metering system has been installed to record the quantity of beer recycled in the keg plant.  No targets were set pending the availability of accurate records. This target is being on hold in light of the review of keggings operations at the site.
1.3 Reduce beer waste at all stages of the process	Reduce beer waste by 0.3% through a reduction in the blending and rework of product throughout the process.	A tracking system has been put in place to track beer through the process. Records are being gathered to record the percentage of vessels that do not require blending and reworking of product.
<b>2. Recovery, Re-use and Recycling of Waste</b>		
2.1 Increase the recycling of all waste streams	Increase %-recycling year on year so as to achieve 100% recycling over 4 years.	Waste segregation processes on site continue to improve.  Dedicated waste collection points for Cap Boxes, scrap metal and WEEE have been established and the Keg Plant general waste skip has been removed from the site.
2.2 Reduce the quantity of waste sent to landfill to zero.	Develop a waste disposal strategy that delivers zero waste to landfill through the use of a waste recovery partnership with an established waste supplier.	A Waste Management Plan has been developed for the site. The Waste Contractor awarded the contract for the site has committed to reducing the quantity of waste sent to landfill to zero.
<b>3. Emissions Abatement, Monitoring and Control</b>		
3.1 Reduce CO2 emissions from Boilerhouse.	Reduce steam consumed in CO2 plant by 25% through the use of GEM steam traps.	The installation of GEM steam traps was completed during Q2 09. However, monitoring of the operation of some of the new traps identified that they were unsuitable for the particular application and the original steam traps were reinstated.
3.2 Develop utilities monitoring system using site MES system	Develop utilities monitoring system using site MES system	All data gathered through the MES system has been reviewed and the potential for this data to be used in monitoring energy usage has been analysed. A scope of work for the development of the MES system has been submitted to site management.

**Table 10: Achievements of Environmental Management Programme 2009 to 2013 (Cont/d)**

<b>Objective</b>	<b>Target</b>	<b>Achievement</b>
3.3 Reduce emissions of grains dust during grain delivery to site.	Install a dust suppression system in malt intake pit to collect dust developed during malt delivery and divert the dust collected to composting.	A dust suppression system has been installed in the malt intake area. All dust generated in this area is now collected and sent off site for composting.
<b>4. Energy and Utilities Usage</b>		
4.1 Reduce water consumption in vessel and line CIP	Reduce flushing volumes used during CIP as a result of the introduction of Closure Sanitisation System and thereby reduce CIP water consumption by 5%.	<p>The Closure Sanitation System has been installed on all CIP systems and the flushing rates were reduced during the initial trial in Q1 09.</p> <p>Flushing rates returned to the original levels following a review of the effectiveness of CIP.</p> <p>Detergent suppliers are in the process of auditing the plant to identify opportunities for water reduction.</p>
4.2 Reduce Site CO2 consumption by 300t	Optimise CO2 usage in the Keg Plant.	Dissolved oxygen trials have been completed to identify possible sources of contamination. Further trials are required to confirm the source of contamination identified. The trials will be completed following the overhaul of the plant in Q1 10.
<b>5. Emergency Planning</b>		
5.1 To minimise the frequency of environmental incidents and the impact of such incidents should they occur.	<p>Carry out testing and inspection of underground tanks and pipelines.</p> <p>Carryout integrity testing of banded areas per 3 year schedule in licence.</p> <p>Carryout Emergency Response Exercises</p>	<p>The 3 year schedule of inspection has been developed and the first round of inspections under this schedule have been completed.</p> <p>A site bund register has been developed and the first round of inspections under this schedule were completed in 2008 (reported in the 2008 AER).</p> <p>A schedule of Emergency Response Exercises has been developed and is managed by the Administration Department.</p> <p>Chemical spill training and fire drills were completed during 2009.</p>

**Table 10: Achievements of Environmental Management Programme 2009 to 2013 (Cont/d)**

Objective	Target	Achievement
<b>6. Environmental Management</b>		
6.1 Develop IS 393 system for site	Develop IS 393 Energy Management System to manage energy usage on site and to target continuous improvement in energy usage performance.	Development of the IS 393 system was put on hold during 2009 pending the review of operations at the site.
6.2 Identify current priority environmental aspects.	Carry out review of Brewing Department environmental aspects and impacts.	All aspects and impacts have been reviewed to take into account developments at the site over the last 3 years and the records and register have been updated accordingly.

### **3.3 Proposed Environmental Management Programme for 2010 – 2014**

Our EMP for 2010 - 2014 will continue the work we have set out in our previous EMPs. The structure of the EMP will remain the same, viz.:

- top tier environmental objectives;
- environmental targets set against each objective;
- responsibilities for individual targets;
- start and finish dates for each target;

Our internal work sheets for the EMP show the timescale for each target, broken down into the following phases where practicable: Assessment, Development, Implementation & Review.

Our programme for achieving our environmental objectives and targets is set out in the following pages, with targets and schedules grouped under individual objectives.

The programme covers the five-year period from 2010 to 2014. It will be updated annually as part of our Annual Environmental Report to the Agency.

We acknowledge that not all the activities in the programme will have successful outcomes and that it may be necessary to terminate some studies and investigations earlier than planned, when preliminary data becomes available. The scope of other activities may need to be amended as the implementation of the programme progresses. However, the results of all such activities will be reported to the EPA in the Annual Environmental Report.

## **Environmental Management Programme 2010 – 2014**

### **1. Cleaner Production**

<b>Objective</b>	<b>Target</b>	<b>Responsibility</b>	<b>Reference No.</b>	<b>Start Date</b>	<b>Completion Date</b>
1.1 Reduce beer waste at all stages of the process	Reduce beer waste by 0.3% through a reduction in the blending and rework of product throughout the process.	Quality Manager	09-CP-023-JB	Q1 09	Q4 10
1.2 Reduce beer waste in the tanker station.	Upgrade the tanker station to a fully automated Fill and CIP of all vessels, lines and tankers.	Brewing Manager	09-CP-024-SJL	Q3 09	Q4 10

## **Environmental Management Programme 2010 – 2014**

### **2. Recovery, Re-use and Recycling of Waste**

<b>Objective</b>	<b>Target</b>	<b>Responsibility</b>	<b>Reference No.</b>	<b>Start Date</b>	<b>Completion Date</b>
2.1 Increase the recycling of all waste streams.	Increase %-recycling year on year so as to achieve 100% recycling over 4 years.	Engineering Manager.	04-RU-007-RPL	Q1 04	Ongoing
2.2 Reduce the quantity of waste sent to landfill to zero.	Develop a waste disposal strategy that delivers zero waste to landfill through the use of a waste recovery partnership with an established waste supplier.	Engineering Manager.	09-RU-008-RPL	Q1 09	Q3 10

## **Environmental Management Programme 2010 – 2014**

### **3. Emissions Abatement, Monitoring and Control**

<b>Objective</b>	<b>Target</b>	<b>Responsibility</b>	<b>Reference No.</b>	<b>Start Date</b>	<b>Completion Date</b>
3.1 Develop utilities monitoring system using site MES system.	Develop utilities monitoring system using site MES system.	Engineering Manager	09-EA-008-RPL	Q1 09	Q4 10
3.2 Reduce waste beer to drain through recovery of sample keg volume.	Develop a system and procedures to facilitate the capture and reuse of sample keg volumes, avoiding the discharge of waste beer to drain.	Quality Manager	09-EA-010-JB	Q3 09	Q3 10

## Environmental Management Programme 2010 – 2014

### 4. Energy and Utilities Usage

Objective	Target	Responsibility	Reference No.	Start Date	Completion Date
4.1 Reduce water consumption in vessel and line CIP	Reduce flushing volumes used during CIP as a result of the introduction of Closure sanitisation system and thereby reduce CIP water consumption by 5%.	Brewing Manager	09-EU-023-SJL	Q1 09	Q4 10
4.2 Reduce Site CO <sub>2</sub> consumption by 300t	Optimise CO <sub>2</sub> usage in the Keg Plant.	Packaging Manager	09-EU-024-JCW	Q2 09	Q3 10
4.3 Reduce energy consumption during filtration and final preparation of product.	Remove head foam stabiliser with a saving of 200 tonnes of steam per annum.	Brewing Manager	10-EU-025-JCW	Q1 10	Q4 10

## Environmental Management Programme 2010 – 2014

### 5. Emergency Planning

Objective	Target	Responsibility	Reference No.	Start Date	Completion Date
5.1 To minimise the frequency of environmental incidents and to minimise the impact of such incidents should they occur.	Carryout testing and inspection of underground tanks and pipelines.	Engineering Manager.	07-EP-009-RPL	Q1 07	Ongoing
	Carry out integrity testing of bunded areas as per 3 year schedule in licence.	Engineering Manager.	09-EP-010-RPL	Q1 09	Q4 11
	Carry out Emergency Response Exercises	Engineering Manager.	09-EP-011-RPL	Q1 09	Ongoing
	Carry out comprehensive spill control training with the spill emergency response team.	Training Manager	10-EP-012-RK	Q1 10	Q2 10
	Review the requirements for the use of Breathing Apparatus at the site. Review all emergency plans to ensure that the current equipment and training provides the level of cover required.	Training Manager	10-EP-013-RK	Q2 10	Q4 10

**Environmental Management Programme 2010 – 2014****6. Environmental Management**

Objective	Target	Responsibility	Reference No.	Start Date	Completion Date
6.1 Develop IS EN 16001 system for site	Develop Energy Management System to IS EN 16001 to manage the energy usage on site and to target continuous improvement in energy usage performance.	Engineering Manager.	07-EM-004-RPL	Q1 07	Q2 10

### 3.4 Pollutant Release and Transfer Register

Table 11 lists the emissions reported to the Agency in the AER Returns Webform under the Agency's Web-Based Reporting System and the PRTR in accordance with EC Regulation 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register and following correspondence from the Agency outlining the requirements of this new reporting framework. These emissions are included in Annex A and are submitted to the Agency electronically.

**Table 11: Emissions Reported in the AER Returns Webform for 2009**

Emission	Release Medium	Type of Emission / Potential Emission
Carbon Monoxide*	Air	Routine (combustion)
Nitrogen Oxides*	Air	Routine (combustion)
Total Particulate Matter*	Air	Routine (process)
Ammonia (refrigerant)	Air	Accidental
Carbon Dioxide	Air	Routine (combustion & process)
Chlorofluorocarbons (refrigerants)	Air	Accidental
Hydroflouorocarbons (refrigerants)	Air	Accidental
Methane (natural gas)	Air	Accidental
Nitrogen Oxides	Air	Routine (combustion)
Particulate matter (PM10)	Air	Routine (process)
Sulphur Oxides <sup>Note 1</sup>	Air	Routine (combustion)
BOD*	Water (sewer)	Routine (process)
COD*	Water (sewer)	Routine (process)
Suspended solids*	Water (sewer)	Routine (process)
Oils, fats and grease*	Water (sewer)	Routine (process)
Ammonia (as N)	Water (sewer)	Routine (process)
Chlorides (as total Cl)	Water (Sewer)	Routine (process)
Copper & compounds	Water (Sewer)	Routine (process)
Total Nitrogen (Kjeldahl)	Water (sewer)	Routine (process)
Total organic compounds (as C or COD/3)	Water (sewer)	Routine (process)
Total phosphorus (as P)	Water (sewer)	Routine (process)
Zinc & compounds	Water (sewer)	Routine (process)
Asbestos	Land	Non-routine (demolition work)

\* The emissions marked with an asterisk are licenced emissions.

Note 1: Monitoring of sulphur oxides is required for the diesel generator (Emission Point A1-4) in the IPPC licence. This generator was not in operation during 2009 and is unlikely to be in operation in the future.

### 3.5 PRTR Proposal for 2010

Dundalk Brewery's proposal for reporting under the PRTR and the Agency's Web Based Reporting System for 2010 is attached in Annex B to this report.

## **4. Licence-Specific Reports**

### **4.1 Report on Bund Testing**

In our AER for 2008, we reported on the bund testing carried out during that period. The remaining bunded areas at the site were tested in April 2009 in accordance with our bund testing schedule, in compliance with Condition 9.4.1 of the licence. All of the bunded areas passed the test. The next round of bund testing will be carried out in 2011.

**Annex A**  
**2009 AER Returns Webform**



Environmental Protection Agency

| PRTR# : P0440 | Facility Name : Diageo Ireland Limited t/a The Great Northern Brewery | Filename : P0440\_2009.xls | Return Year : 2009 |

# AER Returns Worksheet

Version 1.1.10

<b>REFERENCE YEAR</b>	2009
-----------------------	------

## 1. FACILITY IDENTIFICATION

Parent Company Name	Diageo Ireland Limited t/a The Great Northern Brewery
Facility Name	Diageo Ireland Limited t/a The Great Northern Brewery
PRTR Identification Number	P0440
Licence Number	P0440-01

### 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.

Address 1	Carrick Road
Address 2	Dundalk
Address 3	Co. Louth
Address 4	
Country	Ireland
Coordinates of Location	-6.41119 54.003
River Basin District	GBNIIENB
NACE Code	1105
Main Economic Activity	Manufacture of beer
<b>AER Returns Contact Name</b>	Robbie Linehan
<b>AER Returns Contact Email Address</b>	robbie.linehan@diageo.com
<b>AER Returns Contact Position</b>	Engineering Manager
<b>AER Returns Contact Telephone Number</b>	042- 9388000
<b>AER Returns Contact Mobile Phone Number</b>	
<b>AER Returns Contact Fax Number</b>	042- 9388195
<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

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

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

If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4.1 RELEASES TO AIR

[ PRTR# : P0440 | Facility Name : Diageo Ireland Limited t/a The Great Northern Brewery | Filename : P0440\_2009.xls | Return Year : 2009 ]

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR									
No. Annex II	POLLUTANT Name	M/C/E	METHOD		QUANTITY				
			Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
						0.0	0.0	0.0	0.0

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

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR										
No. Annex II	POLLUTANT Name	M/C/E	METHOD			QUANTITY				
			Method Code	Designation or Description	A1-1 Emission Point 1	A1-2 Emission Point 2	A1-3 Emission Point 3	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
06	Ammonia (NH3)	E	Estimate		0.0	0.0	0.0	0.0	0.0	0.0
03	Carbon dioxide (CO2)	C	OTH	Application of CO2 emission factor for combustion of natural gas and fermentation of product.	1725327.0	1725327.0	1725327.0	11591201.0	0.0	6415220.0
02	Carbon monoxide (CO)	M	OTH	Measurement of CO concentration in exhaust gas and applied to estimated volumetric throughput	2.1	0.0	0.0	2.1	0.0	0.0
15	Chlorofluorocarbons (CFCs)	E	Estimate		0.0	0.0	0.0	0.0	0.0	0.0
04	Hydro-fluorocarbons (HFCs)	E	Estimate		0.0	0.0	0.0	0.0	0.0	0.0
01	Methane (CH4)	E	Estimate		0.0	0.0	0.0	0.0	0.0	0.0
08	Nitrogen oxides (NOx/NO2)	M	OTH	Measurement of NOx/NO2 concentration in exhaust gas and applied to estimated volumetric throughput	880.0	683.0	834.0	2397.0	0.0	0.0
11	Sulphur oxides (SOx/SO2)	E	Estimate		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)

RELEASES TO AIR									
Pollutant No.	POLLUTANT Name	M/C/E	METHOD		QUANTITY				
			Method Code	Designation or Description	A2-1 Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
244	Total Particulates	M	ALT	BS 3405	314.0	314.0	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:	Diageo Ireland Limited t/a The Great Northern Brewery			
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

4.2 RELEASES TO WATERS

| PRTR# : P0440 | Facility Name : Diageo Ireland Limited t/a The Great Northern Brewery | Filename : P0440\_2009.xls | Return Year : 2009 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this or

RELEASES TO WATERS								
POLLUTANT		Method Used			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

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

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS								
POLLUTANT		Method Used			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

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

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

RELEASES TO WATERS								
POLLUTANT		Method Used			QUANTITY			
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

4.3 RELEASES TO WASTEWATER OR SEWER

| PRTR# : P0440 | Facility Name : Diageo Ireland Limited 1/a The Great Northern Brewery | Filename : 30/03/2010 18:10

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER									
POLLUTANT			METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Used		Designation or Description	SE-01			
			Method Code			Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
12	Total nitrogen	M	OTH		3rd Party laboratory method (SOP P215) 3rd Party INAB accredited laboratory method (Spectrometer method based on APHA 2005, 5220 D, SOP P210)	8380.0	8380.0	0.0	0.0
76	Total organic carbon (TOC) (as total C or COD/3)	M	CRM		3rd Party laboratory method (SOP P215) 3rd Party INAB accredited laboratory method (Spectrometer method based on APHA 2005, 5220 D, SOP P210)	352934.0	352934.0	0.0	0.0
13	Total phosphorus	E	Estimate			10275.0	10275.0	0.0	0.0
24	Zinc and compounds (as Zn)	M	OTH		3rd Party laboratory method	18.9	18.9	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									
POLLUTANT			METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Used		Designation or Description	SE-01			
			Method Code			Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
238	Ammonia (as N)	M	CRM		3rd Party INAB accredited laboratory method (Phenate method based on APHA 2005, 4500 NH3F, SOP P236)	269.0	269.0	0.0	0.0
303	BOD	M	CRM		3rd Party INAB accredited laboratory method (5 day test based on APHA 2005, 4500-OC, 5210B, SOP P204)	663785.0	663785.0	0.0	0.0
306	COD	M	CRM		3rd Party INAB accredited laboratory method (Spectrometer method based on APHA 2005, 5220 D, SOP P210)	1058802.0	1058802.0	0.0	0.0
314	Fats, Oils and Greases	M	OTH		3rd Party laboratory method (SOP P238) 3rd Party INAB accredited laboratory method (Gravimetric method based on APHA 2005, 2540 D, SOP P202)	9995.0	9995.0	0.0	0.0
240	Suspended Solids	M	CRM			132795.0	132795.0	0.0	0.0

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

4.4 RELEASES TO LAND

| PRTR# : P0440 | Facility Name : Diageo Ireland Limited t/a The Great Northern Brewery | Filename : P0440\_2009.xls | Return Year : 2009 |

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SECTION A : PRTR POLLUTANTS

RELEASES TO LAND							
POLLUTANT		METHOD			QUANTITY		
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
			Method Code	Designation or Description			
						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 B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO LAND							
POLLUTANT		METHOD			QUANTITY		
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
			Method Code	Designation or Description			
						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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : P0440 | Facility Name : Diageo Ireland Limited t/a The Great Northern Brewery | Filename : P0440\_2009.xls | Return Year : 2009 |

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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	Haz Waste : Address of Next Destination Facility	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		Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Non Haz Waste: Address of Recover/Disposer		
Within the Country	02 07 01	No	709.0	Waste yeast	R11	M	Weighed	Offsite in Ireland	KW Forage Systems,Not applicable (animal feed)	Ballymountain,Waterford,....Ireland		
Within the Country	02 07 01	No	1915.0	Squeezings	R11	M	Weighed	Offsite in Ireland	KW Forage Systems,Not applicable (animal feed)	Ballymountain,Waterford,....Ireland		
Within the Country	02 07 01	No	5592.0	Spent grains	R11	M	Weighed	Offsite in Ireland	KW Forage Systems,Not applicable (animal feed)	Ballymountain,Waterford,....Ireland		
Within the Country	02 07 04	No	1733.0	Waste beer	R11	M	Weighed	Offsite in Ireland	KW Forage Systems,Not applicable (animal feed)	Ballymountain,Waterford,....Ireland		
Within the Country	02 07 04	No	26.9	Grain dust	R3	M	Weighed	Offsite in Ireland	Oxigen Environmental,W0144-01	Coes Road,Dundalk,Co. Louth,.,Ireland		
Within the Country	15 01 03	No	14.3	Wooden pallets	R3	M	Weighed	Offsite in Ireland	Panda Waste Services Ltd.,WPR 021/2	Ballymount Road,Walkinstown,Dublin 12,.,Ireland		
Within the Country	15 01 06	No	9.8	Packaging waste	D1	M	Weighed	Offsite in Ireland	Louth County Council,W0060-03	Whiteriver Landfill,Whiteriver & Gunstown Townland,Dunleer,Co. Louth,Ireland		
Within the Country	15 02 03	No	337.0	Spent filter material	R3	M	Weighed	Offsite in Ireland	Waddock Composting Facility Ltd.,WP 01/02 & WP 11/04	Killamaster,Carlow,Co. Carlow,.,Ireland		
Within the Country	17 01 07	No	12.5	Building rubble	R5	M	Weighed	Offsite in Ireland	Oxigen Environmental,W0144-01	Coes Road,Dundalk,Co. Louth,.,Ireland		
Within the Country	20 01 01	No	13.6	Paper & cardboard	R3	M	Weighed	Offsite in Ireland	Oxigen Environmental,W0144-01	Coes Road,Dundalk,Co. Louth,.,Ireland		
Within the Country	20 01 02	No	16.5	Laboratory glass	R5	M	Weighed	Offsite in Ireland	Oxigen Environmental,W0144-01	Coes Road,Dundalk,Co. Louth,.,Ireland		
Within the Country	20 01 40	No	5.2	Hop cans	R4	M	Weighed	Offsite in Ireland	Oxigen Environmental,W0144-01	Coes Road,Dundalk,Co. Louth,.,Ireland		
Within the Country	20 02 01	No	24.3	Biodegradable waste	R3	M	Weighed	Offsite in Ireland	Oxigen Environmental,W0144-01	Coes Road,Dundalk,Co. Louth,.,Ireland		
Within the Country	20 03 01	No	18.4	General waste	D1	M	Weighed	Offsite in Ireland	Louth County Council,W0060-03	Whiteriver Landfill,Whiteriver & Gunstown Townland,Dunleer,Co. Louth,Ireland		
Within the Country	15 02 02	Yes	3.6	Waste oil	R9	M	Weighed	Offsite in Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,County Laois,.,Ireland	Enva Ireland Ltd.,W0184-01,Clonminam Industrial Estate,Portlaoise,County Laois,.,Ireland	Clonminam Industrial Estate,Portlaoise,County Laois,.,Ireland
To Other Countries	15 02 02	Yes	0.06	Waste spill kits	R2	M	Weighed	Abroad	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate,Portlaoise,County Laois,.,Ireland	Umweltservice,04 714 98089,Krombacher Strasse 42 - 46,57223 Kreutzal,....Germany	Krombacher Strasse 42 - 46,57223 Kreutzal,....Germany
Within the Country	16 02 13	Yes	0.002	PC monitors	R5	M	Weighed	Offsite in Ireland	FMW Recycling,FG-08-0001-01	Unit 1 ,IDA Industrial Estate,Balbriggan,Dublin ,Ireland	Unit 1 ,IDA Industrial Estate,Daingean Road,Tullamore ,Co. Offaly,Ireland	Cappincur Industrial Estate,Daingean Road,Tullamore ,Co. Offaly,Ireland
Within the Country	16 02 14	No	0.004	Electrical waste	R5	M	Weighed	Offsite in Ireland	FMW Recycling,FG-08-0001-01	Unit 1 ,IDA Industrial Estate,Balbriggan,Dublin ,Ireland		
To Other Countries	16 05 06	Yes	0.11	Laboratory chemicals	R5	M	Weighed	Abroad	Indaver Ireland Limited,W0036-02	Tolka Quay Road,Dublin Port,Dublin 1,.,Ireland	AVG Abfall-Verwertungs-Gesellschaft mbH,11/05/2005 IB22347AVG-GENB-2,Borgstrasse 2,D-22113 Hamburg,....Germany	Borgstrasse 2,D-22113 Hamburg,....Germany

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	20 01 21	Yes	0.11	Fluorescent tubes	R5	M	Weighed	Offsite in Ireland	Irish Lamp Recycling Company,02/2000B	Woodstock Industrial Estate,Kilkenny Road,Athy,Co. Kildare,Ireland	Midland Scrap Metal & Crane Hire Co. Ltd., WMP005D,Harbour Street,Mountmellick,Co. Laois,,Ireland	Harbour Street,Mountmellick,Co. Laois,,Ireland

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

**Annex B**  
**2010 Proposal for Reporting under the**  
**AER Returns Webform**

IPPC Licensee: Dundalk Brewery  
Register No. P0440-01

### Pollution Release & Transfer Register (PRTR) Regulation

#### List of Substances to be Reported by Dundalk Brewery

Emission	Release Medium	Type of Emission / Potential Emission
Carbon Monoxide*	Air	Routine (combustion)
Nitrogen Oxides*	Air	Routine (combustion)
Total Particulate Matter*	Air	Routine (process)
Ammonia (refrigerant)	Air	Accidental
Carbon Dioxide	Air	Routine (combustion & process)
Chlorofluorocarbons (refrigerants)	Air	Accidental
Hydroflouorocarbons (refrigerants)	Air	Accidental
Methane (natural gas)	Air	Accidental
Nitrogen Oxides	Air	Routine (combustion)
Particulate matter (PM10)	Air	Routine (process)
Sulphur Oxides <sup>Note 1</sup>	Air	Routine (combustion)
BOD*	Water (sewer)	Routine (process)
COD*	Water (sewer)	Routine (process)
Suspended solids*	Water (sewer)	Routine (process)
Oils, fats and grease*	Water (sewer)	Routine (process)
Ammonia (as N)	Water (sewer)	Routine (process)
Chlorides (as total Cl)	Water (Sewer)	Routine (process)
Copper & compounds	Water (Sewer)	Routine (process)
Total Nitrogen (Kjeldahl)	Water (sewer)	Routine (process)
Total organic compounds (as C or COD/3)	Water (sewer)	Routine (process)
Total phosphorus (as P)	Water (sewer)	Routine (process)
Zinc & compounds	Water (sewer)	Routine (process)
Asbestos	Land	Non-routine (demolition work)

\* The emissions marked with an asterisk are licensed emissions.

Note 1: Monitoring of sulphur oxides is required for the diesel generator (Emission Point A1-4) in the IPPC licence. The generator is no longer in service and is unlikely to be in service in the future.