



**Green Isle Foods Ltd  
IDA Industrial Estate  
St Joseph's Road  
Portumna  
Co Galway**

**IPPC Licence Reg No. P0816-01**

**Annual  
Environmental  
Report  
2010**

# Contents

<u>Section</u>	<u>Title</u>	<u>Page No.</u>
<b>1.0</b>	<b>Introduction</b>	
1.1	Introduction	3
1.2	Site Description	4
1.3	Site Process	4
1.4	Company Organisation Structure	5
<b>2.0</b>	<b>Summary Information</b>	
2.1	Emissions to Water	6-9
2.2	Emissions to Sewer	10-11
2.3	Emissions to Air	12
2.4	Waste Management	13-15
2.5	Energy Consumption Fuel Oil	16
2.6	Energy Consumption Electricity	16
2.7	Water Consumption	16
2.8	Environmental Complaints	17
2.9	Environmental Incidents	17
<b>3.0</b>	<b>Management of Activity</b>	
3.1	Environmental Objectives & Targets	18
3.2	Environmental Management Programme	18
3.3	Public Access to Environmental Information	18
<b>4.0</b>	<b>Pollution Emission Register</b>	18
<b>5.0</b>	<b>Licence Specific Reports</b>	
5.1	Residuals Management	19
5.2	Noise Report	19
5.3	ELRA Report 2011 Review	19
5.4	Fire Water Risk Assessment Report	19
<u>Attachments</u>		
3.21	Environmental Management Programme	20-23

## **Section 1.1 Introduction**

The following is the Annual Environmental Report in accordance with condition of the IPPC Licence Reg. P0816-01, concerning the activities of Green Isle Foods Ltd, IDA Industrial Estate, St Joseph's Road, Portumna, Co Galway.

The current IPPC Licence was granted by the Agency on the 3rd August 2007 and this AER report has taken information from Jan 2010 to Dec 2010.

Under the standard S.I. No.279 of 2006 the class of activities for the site are the following:

### **7.8 Treatments of processes for the purpose of the production of food products from**

- a) Animal raw materials (other than milk) with a finished product production capacity greater than 75 tonnes per day
- b) Vegetable raw material with a finished product production capacity greater than 300 tonnes per day (Average value on a quarterly basis)

## **Section 1.20 Site Description**

Green Isle Foods Ltd part of the Northern Foods Group plc; is situated in Portumna, Co Galway on a 30 acre site with a production floor space of 7,400 sq/metres, and commenced operation in 1987.

The plant is a supplier of frozen savoury pastry products primarily to the Irish and UK retail and catering market. There are over 160 different products.

The manufacturing facility operates mainly on shift pattern covering an average of 5-6 days per week. This is contingent upon customer demand. There were approximately 250 employees at the facility during 2010.

The production output is currently approximately 300 tonnes per week.

## **1.21 Process Description**

The following Main processes are carried out at the Green Isle Foods facility:

- Cooking of sauces
- Preparation and cooking of meat
- Pastry production
- Blending and depositing of fillings
- Freezing
- Packaging Process
- Goods Outwards
- Services
- Effluent Treatment Plant
- Microbiology Laboratory / Offices / Amenities / Administration.

## **1.3 Company Organisation & Site Management**

### **Company Organisation**

Green Isle Foods has a structured Management approach to the operation of the business in terms of Environment, Product Quality, Process Control, Safety, Training and Analytical Capability.

The installation has maintained BRC accreditation since 2003 and is licensed with the Department of Agriculture as a food plant.

Training of personnel is a key function in the successful operation of the installation.

Central to this structured approach is the Quality, Health & Safety and Environmental Management Systems, which provide the structured framework for operational and quality control at the plant and provide for the maintenance and improvement in the plants environmental and Health & Safety performance.

The Quality Management System is audited on an ongoing basis by a combination of internal audits and external certification surveillance audits.

## **Section 2 Summary Information**

The following section relates to a summary of environmental information related to the items listed, in accordance with the Guidance Note for Annual Environmental Report. The information contained is for the year January 2010 to December 2010.

- 2.1 Emissions to Water
- 2.2 Emissions to Sewer
- 2.3 Emissions to Air
- 2.4 Waste Management
- 2.5 Natural Gas Consumption
- 2.6 Electricity Consumption
- 2.7 Water Consumption
- 2.8 Environmental Complaints
- 2.9 Environmental Incidents

## **Section 2.1 Emission to Water**

There are 3 emission points directly to surface water from the site – SW1, SW2 and SW3.

The site's IPPC licence requires that monitoring of surface water be carried out Biannually for pH, BOD, COD, Suspended Solids, Mineral oil, Fats, oils & Greases and a weekly visual inspection as per schedule C.2.3.

All laboratory analysis is being carried out by an external certified laboratory.

A weekly inspection log is in place.

The following section summarises all data collected relating to emissions to water.

\* No Emission Limit Value specified in licence

<b>Emission Point Reference No.</b>	<b>Description</b>	<b>Source of storm-water</b>
SW –1	Surface Water Discharge to a tributary stream to Lough Derg	Water from storm drains on East side of site.

### **Emission Point Reference No. SW 1**

Parameter	Emission Limit Value	Monitoring Frequency	Biennial 1 Emission (mg/l)	Biennial 2 Emission (mg/l)
pH	*	Biannually	7.7	7.7
BOD	*	Biannually	<2	<2
COD	*	Biannually	8	7
Suspended Solids	*	Biannually	<2	4
Mineral oils	*	Biannually	<2.5ug/L	17.39ug/L
Fats, oils & Greases	*	Biannually	<1	<1
Visual Inspection	*	Weekly	All ok	All ok

Emission Point Reference No.	Description	Source of storm-water
SW -2	Surface Water Discharge to a tributary stream to Lough Derg	Water from storm drains on West side of site.

#### Emission Point Reference No. SW 2

Parameter	Emission Limit Value	Monitoring Frequency	Biennial 1 Emission (mg/l)	Biennial 2 Emission (mg/l)
pH	*	Biannually	7.7	7.3
BOD	*	Biannually	2	<2
COD	*	Biannually	14	11
Suspended Solids	*	Biannually	5	2
Mineral oils	*	Biannually	<2.5ug/L	10.71ug/L
Fats, oils & Greases	*	Biannually	<1	<1
Visual Inspection	*	Weekly	All ok	All ok

SW-2: In September 2008, the storm drains in the goods inwards yard were diverted to the underground storage tank for onward pumping to effluent plant.

Emission Point Reference No.	Description	Source of storm-water
SW -3	Surface Water Discharge to a tributary stream to Lough Derg	Water from storm drains in car park and roadway on site.

#### Emission Point Reference No. SW 3

Parameter	Emission Limit Value	Monitoring Frequency	Biennial 1 Emission (mg/l)	Biennial 2 Emission (mg/l)
pH	*	Biannually	8.0	7.7
BOD	*	Biannually	2	<2
COD	*	Biannually	5	6
Suspended Solids	*	Biannually	<2	2
Mineral oils	*	Biannually	<2.5ug/l	8.88ug/L
Fats, oils & Greases	*	Biannually	<1	<1
Visual Inspection	*	Weekly	All ok	All ok



**Note from 2008 AER:**

The SW3 line connects up with a County Council storm drain from the main road and there is an interceptor on this line.

The restriction filter on this interceptor was removed in order to allow the required flows to pass through this interceptor.

A new interceptor was also installed directly in to the SW3 line, between the car-park and the County Council line.

Going forward, monitoring of SW-3 outlet will be from the manhole prior to discharge to the County Council storm line.

## **Section 2.2 Emission to Sewer**

The following section summarises all data collected relating to emissions to sewer.

There are two emissions to the town sewer as follows:

1. Foul drains.
2. Effluent plant discharge SE-1.

The site's foul lines lead directly to a foul pumping station on site and is pumped directly into the Town County Council sewer line.

<b>Emission Point Reference No.</b>	<b>Description</b>
SE -1	Treated Effluent Final Discharge to sewer

### **Emission to Sewer - Emission Point Reference No. SE-1**

All process wastewater is collected in the designated process water drainage system and conveyed to the effluent plant crude sump prior to pumping to the effluent treatment plant balancing tank.

Effluent treatment on site is Primary and Biological treatment.

Final effluent is pumped to the Town County Council sewer line.

Process effluents arise from the following areas:

- CIP system (Clean In Place)
- Boilers
- General washing within the processing areas

### Emission Point Reference No. SE 1

Parameter	IPPC ELV's	Monitoring Frequency	Q1 Emission (mg/l)	Q2 Emission (mg/l)	Q3 Emission (mg/l)	Q4 Emission (mg/l)
Flow	864 M <sup>3</sup> / day	Continuous	253	221	419	208
Temperature	20°C	Quarterly	9	11	12	9
pH	6 – 9	Quarterly	8.3	7.8	7.6	7.6
BOD	25	Quarterly	<2	<2	<2	<2
COD	125	Quarterly	28	69	37	23
Suspended Solids	35	Quarterly	<2	47	15	<2
Oils, Fats & Grease	50	Quarterly	<1	7	<1	<1
Total Phosphorus (as P)	2	Quarterly	0.121	1.057	0.267	0.092
Total Nitrogen (as N)	15	Quarterly	2.33	17.02	5.58	5.289

As per table above, the emission limit values (ELV's) are set as per Schedule B.3 of the site's IPPC licence.

All analysis is carried out externally in an accredited laboratory.

There was one reported licence exceedance during 2010.

- This was due to reduced production and less feed going to the effluent plant. This resulted in a reduced F/M ratio and therefore a temporary reduction in final effluent quality. This was corrected by the addition of molasses to the aeration basin until production increased back to normal levels.

## Section 2.3 Emission to Air

The following section summarises all data collected relating to emissions to Air.

**Main Emission Points** – There are no main emission points as all are deemed as minor as boiler thermal input is below the 20 MW cut-off point.

**Minor Emission Points - Boiler Emissions** - There is one Light fuel Oil boiler on site which is used to generate steam to a pressure of 10bar. This steam is used in the manufacturing process and supply of hot water for washing and cleaning purposes.

Reference No.	Location	Emission Point
A1 - 1	Roof Area Over main steam boiler house	Boiler Stack

One boiler efficiency test was carried out for 2009 by Pillinger of Ireland. Results of this analysis are shown below.

Table 6 Emissions to Atmosphere Summary

Emission Pt	Mid Fuel	Parameter	Value Recorded
Boiler A1-1	Light Fuel Oil	Efficiency	85.5%
		CO	2 ppm

A combustion efficiency is required annually as per Schedule C.1.2 of the IPPC licence. No guidance values or ELV's are given in the IPPC licence with regards to atmospheric emissions.

An efficiency of more than 80% is usually taken to be acceptable so the boiler's efficiencies are above acceptable limits.

NOx and SOx levels are both low.

## **Section 2.4 Waste Management**

This section summarises all data relating to waste emissions and recycling of waste products for this site. Waste Management forms part of the site's Environmental Management Programme. The following waste streams are generated from the site.

<b>Waste Material</b>	<b>Method of Disposal</b>	<b>Transport Company Responsible</b>	<b>Handling Facility Permit No.</b>	<b>2010 Total Tonnage</b>
Effluent Sludge	Land Injection	Eamon Gaynor WCP-MO-09-0436-01	Eamon Gaynor sludge storage facility WCP-MO-09-0436-01	1125
Food Waste CAT 3	Licensed Rendering	Food Surplus Management. DOA Ref No. ID 9	Food Surplus Management. DOA Ref No. ID 9	1781
Landfill waste	Landfill	AES Ltd Monread Road, Naas WCP-OY-08-601-01	AES, Nenagh W0240-01	283.92
Cardboard / Paper	Recycling	AES Ltd WCP-OY-08-601-01	AES, Nenagh W0240-01	216.74
Plastic	Recycling	AES Ltd WCP-OY-08-601-01	AES, Nenagh W0240-01	38
Wood (Pallets)	Re- Use	AES Ltd Monread Road, Naas WCP-OY-08-601-01	AES, Nenagh W0240-01	108.83
Steel / Tin	Recycling	AES Ltd Monread Road, Naas WCP-OY-08-601-01	AES, Nenagh W0240-01	0
Waste Oil	Hazardous Disposal	Envva Waste Oil, Portlaoise 184-1	Envva Waste Oil, Portlaoise 184-1	2

Full details of the above waste streams are provided for reference, in the PRTR.

## **Section 2.4 Waste Management - Sludge**

### **Introduction -Sludge Holding Facility**

All Green Isle Foods process effluent and associated wastewater is piped to the on site's Primary and Secondary treatment plant. This effluent comprises only of those arising from general processing operations, as all domestic sewage is discharged direct to County Council sewer.

The associated food-based sludge is collected in a Sludge Holding Tank and passed through a belt-press giving a solid content of 22%. This sludge is then transported off-site for storage and consequent land injection as a nutrient substitute.

Any sludge going for storage is stored at a licensed unit at the farm of Eamon Gaynor, Lahorna, Ardcroney, Nenagh, Co Tipperary.

Mayo County Council renewed this licence in January 6<sup>th</sup> 2010 and this is valid until January 2015.

The 2010 NMP for the site was submitted in February 2010.

In 2010, the sludge was land-injected on three farms as per the table below.

This section summarises all data relating to Land Injection of Sludge for Green Isle Foods. The information contained is for the year January 2010 to December 2010.

<b>Year</b>	<b>Total Sludge Landspread</b>	<b>Farmer</b>
2010	704 Tonnes	William Burns, Clashaniskera, CloghJordan, Nenagh, Co Tipperary.
2010	245.2 Tonnes	Sean Gaynor, Ballinamurragh, Ardcroney, Nenagh, Co Tipperary

### **Organic Waste Analysis (effluent plant sludge)**

According to Schedule C.4, organic waste must be analysed Bi-annually by standard methods to determine the % Dry Matter, Total N, Total P, Total K and checked monthly to determine the volume/mass in storage.

On 27<sup>th</sup> August 2008, the agency has requested that sludge monitoring be carried out quarterly.

A two-monthly report on the sludge register which details volumes of sludge removed from site and also details available storage is submitted to the agency on a bi-monthly basis.

Results for waste analysis are quoted in the Nutrient Management Plan for 2010. A summary of the results quoted in the NMP is shown in the Table below.

**Table 9** Summary of % Dry Matter and Total N/P/K Data

	Dry Matter	Total N	Total P	Total K
	%	Mg/kg	Mg/l	Mg/kg
Q1	20.18	11478.32	568.45	No analysis
Q2	15.9	9546.88	1015.23	235
Q3	No Analysis	9882.32	598.9	No analysis
Q4	17.4	9770.32	808.24	No analysis

On review of the 2010 sludge analysis, it was noted that Total K was not analyzed during Q1, Q3 and Q4.

It was noted that % Dry Matter was not analyzed during Q3.

All relevant parameters as per schedule C.4 of the sites IPPC licence will be analyzed during 2011.

## **Section 2.5      Boiler oil Consumption 2010**

The table below details the annual Boiler oil (Light Fuel oil) usage for Green Isle Foods for 2010.

<b>Year</b>	<b>Total Boiler oil Usage</b>
2010	664,128Litres

## **Section 2.6      Electricity Energy Consumption 2010**

Electricity usage forms part of our Environmental Management Programme.

The table below details the annual Electricity usage for Green Isle Foods for 2010

<b>Year</b>	<b>Total Electricity Usage</b>
2010	8,000,307KWh

## **Section 2.7      Water Consumption 2010**

This section summarises all data relating to Water usage for Green Isle Foods during 2010.

All Green Isle Foods water is provided by the mains supply.

<b>Total Water Usage For 2010</b>	
<b>On Site Water Extraction</b>	<b>0 M<sup>3</sup></b>
<b>Municipal Water Supply</b>	<b>134,379M<sup>3</sup></b>



## **Section 2.8 Environmental Complaints**

This section summarises all data relating to Environmental Complaints received during the period January 2010 to December 2010.

**There were No Environmental Complaints received during 2010.**

<b>Complaint</b>	<b>Odour</b>	<b>Noise</b>	<b>Water</b>	<b>Procedural</b>	<b>Dust</b>	<b>Miscellanea</b>
<b>Total</b>	0	0	0	0	0	0

## **Section 2.9 Environmental Incidences**

This section summarises all data relating to Environmental Incidents received during the period January 2010 to December 2010.

**There were No Environmental Incidences during 2010.**

<b>Reporting Year</b>	<b>Total No. Incidences</b>	<b>Type of Incident</b>	<b>Date of Incident</b>	<b>Authorities Informed</b>	<b>Incident Follow Up</b>
2010	0	0	0	0	N/A

## **Section 3.0 Management of the Activity**

This section summarises all data relating to Environmental Management of the Facility for the period January 2010 to December 2010.

## **Section 3.1 Environmental Objectives and Targets**

The purpose of this procedure is to define the process of setting out environmental objectives and quantify applicable targets in the production of frozen savoury pastry products [including the minimisation, (and where possible) elimination of wastes from the production processes].

The procedure also defines the process for establishing and maintaining an Environmental Management Programme (EMP) that will successfully meet the stated environmental objectives and targets.

## **Section 3.2 Environmental Management Programme**

The procedure referred to in section 3.1 defines the process for establishing and maintaining an Environmental Management Programme (EMP) that will successfully meet the stated environmental objectives and targets.

See the EMP for 2011 attachment 3.21

**See Attachment 3.21 –Environmental Management Programme**

## **Section 3.3 Public Access to Environmental Information**

The purpose of this procedure is to outline the procedure involved in showing a member of the public information on the Sites Environmental performance.

## **Section 4.0 Pollutant Release and Transfer Register 2010**

This section summarises all data relating to the Pollutant Release and Transfer Register during the period January 2010 to December 2010 which has been electronically uploaded onto the EPA reporting website.

## **Section 5.0 Licence Specific Reports**

### **Section 5.1 Residuals Management Plan Report**

As per conditions 10.2, 10.3 and 10.4 of the site's IPPC licence, an RMP report was prepared for the site in 2008.

This report has being reviewed and updated.

### **Section 5.2 Noise report 2010**

According to Condition 6.12 of the licence, environmental noise must be monitored annually. A noise survey was conducted 28<sup>th</sup> October 2009 by Panther Environmental Ltd and the results submitted to the EPA (Report No. EN09124). Due to this survey a number of recommendations were made which were to be implemented during 2010. However, due to severe weather conditions these improvements were deferred to April 2011. Once these are implemented the annual noise survey will then be carried out and submitted to EPA3.

### **Section 5.3 ELRA report**

According to Condition 12.3 of the licence, an Environmental Liabilities Risk Assessment (ELRA) report was prepared for the site on 14-10-08, report no. 08EL17 by Panther Environmental Solutions Ltd and this report was submitted to the EPA.

The risks identified in 2008 as high were related to the following:

1. Underground drainage lines – potential leaks – Drainage survey due to be completed in 2011 on all drains.
2. Filling of forklifts – potential groundwater contamination – in 2010 the filling station area has been concreted with a bund surround to prevent any potential runoff.
3. Refrigeration compressors – noise emissions. Improvements made in 2009 and further plans in place for April 2011 to provide appropriate acoustics for this area.

As described above, the ELRA was reviewed in January 2011 and action plans for all of the above are in place.

The combined resources of Northern Foods Group are such as to underwrite the liabilities and financial commitments associated with the remedying of the risks identified in this report.

### **Section 5.4 Firewater Risk Assessment report**

According to Condition 3.9 of the licence, a Firewater Risk Assessment (FRA) report was prepared for the site on 24-11-08, report no. FR0815 by Panther Environmental Solutions Ltd and this report was submitted to the EPA.

This report was amended in March 2009 to include potential firewater volumes, retention capacity on site and potential surface drain contamination and measures in place.

The Firewater Report was reviewed in January 2011.



## **Environmental Management Plan January 2011 – December 2011**

### **1.1 Effluent Treatment Plant**

Priority No: 1

#### 1.2 Objective:

- To comply with all effluent discharge parameters as per the site's IPPC licence limits.

#### 1.3 Strategy:

- To manage the F/M ratio if production volumes decrease.  
**Action: Engineering as required.**
- Investigate the benefits of a diffused air system in aeration tank and also a centrifuge for sludge drying.  
**Action: Engineering by August, 2011.**
- Conservation through metering and awareness communication, driven by Northern Foods Corporate and Social Responsibility ( CSR ) Policy.  
**Action: Green Isle Energy Strategy team on-going in 2011.**

#### 1.4 Monitoring:

- Monitoring of final effluent and water usage on a daily basis.

#### 1.5 Target:

- To comply with all relevant parameters as per the IPPC licence, by end of EMP year 3, December 2011.
- To reduce water usage by 10% by December 2011.



**2.1 Landfill waste and Food Waste – CAT 3**

Priority No: 2

2.2 Objective:

- Objective is to minimise disposal of general waste to landfill and CAT 3 Food waste to rendering.

2.3 Strategy:

- Review all relevant waste collection and waste facility permits.  
**Action: EOS / SR by April end 2011**
- Manage the new waste management and segregation system.  
**Action: Ongoing by production management.**

2.4 Monitoring:

- Record details of all Food waste, including landfill and sludge leaving the site.

2.4 Target:

- To reduce wastes going to landfill to zero by end 2011.



3.0 **Resource Consumption**  
Priority No: 3

3.1 Objective:

- To assess energy usage per unit production based on January 2010 – December 2010 levels.

3.2 Strategy:

- **Continue monthly energy consumption reduction group meetings.**  
Action: Engineering on-going.
- **Continue assessing and maintaining the sites energy reduction plan.**  
Action: Engineering ongoing.

3.3 Monitoring:

- Monitoring of electricity and oil usage on a weekly basis.  
Action: Engineering.

3.4 Targets:

- To examine and evaluate all available data.



4.0 **Noise**

Priority No: 4

4.1 Objective:

- To maintain noise level below 55 dB (A) outside boundary during daytime hours.
- To maintain noise level below 45 dB (A) outside boundary during night-time hours.

4.2 Strategy :

- Fit out refrigeration plant room with appropriate acoustics  
**Action: Engineering April, 2011.**
- Conduct noise surveys at boundaries annually.  
**Action: EOS May, 2011.**

4.3 Targets :

As objectives above.