Annual Environmental Report 2010

Licence Registration No.:	W0198-01
Licencee:	Bord na Móna Plc.
Location of Activity:	Kilberry, Athy, Co. Kildare.
Attention:	Office of Environmental Enforcement Environmental Protection Agency P.O. Box 3000 Johnstown Castle Co. Wexford

BORD NA MÓNA

BORD NA MÓNA HORTICULTURE LIMITED

CONTENTS

SECTION 1

INTRODUCTION

1.1 INTRODUCTION

The following document represents the Annual Environmental Report (AER) for Bord na Móna Kilberry Compost facility for the period January 2009-December 2009. Detailed within this report is a summary of all monitoring, and any activities and on-going improvements at the facility during this period that has had an influence on the environmental performance of the company.

Through the continued compliance with the conditions of their Waste licence register No. W0198-01, Bord na Móna continues to express their commitment of environmental improvement through out the site.

An Environmental and Quality Management System is established at the facility, which incorporates procedures of operational activities on site, emergency preparedness and response, reporting, dealing with unacceptable wastes and an public access to the site and site's environmental performance. Through the on-going achievement and reviewing of the objectives and targets, Bord na Móna facilitate on-going environmental improvements.

Bord na Móna's commitment is expressed in the company's Environmental Management policy, as given overleaf.

1.1.2 – Environmental Policy

BORD NA MÓNA

Environmental Policy

BORD NA MÓNA

Introduction

A licence from the Environmental Protection Agency (WI 198-1) was granted on the 16th of December 2004. This licence is for the construction and operation of a Composting Facility at Kilberry, Athy, Co. Kildare. The quantity of waste to be accepted is 50,000 tonnes in the first year rising to 96,000 tonnes by the 5th year. Non-hazardous biodegradable wastes (Shredded Green waste, Brewery By-Product, Sawdust, Bark and Cocoa Husk) will be accepted at this facility.

The process leading to the production of usable, composted material will require the completion of a series of stages as follows, acceptance procedures and tipping, mixing and formulation of windrows, turning / composting, screening of stabilised material and shredding and re-use of oversize material. The wastes are combined together to form windrows for composting. The average composting period will be 10 weeks during which time the composting process will stabilise a range of organic waste materials / by-products which will then be incorporated into horticultural growing media produced on the adjoining site.

Policy

Environmental care is a Bord na Móna core value. BnM seeks to be recognised in the compost supply business as a leader in terms of environmental care. Bord na Móna's environmental programmes shall be an integrated approach focused on continuous improvement. The environmental programmes in Bord na Móna will seek to achieve the following:

- Ensure compliance with the requirements of the EPA Waste Licence and National/European legislation.
- Review Environmental performance and establish environmental objectives and targets on an annual basis to improve the environmental performance of our composting facility
- Minimise potential negative environmental impacts through activities that are designed for the prevention of pollution
- Encourage the involvement of employees through training and awareness programmes to promote and ensure an environmentally friendly workplace.
- Audit practices and programmes to help ensure continuous improvement

The company values and promotes environmental leadership, responsibility and innovation in the management of all company facilities and operations. Management team are expected to provide sound environmental leadership, to maintain appropriate records and demonstrate compliance with programmes and practices.

Authorised as of November 25th 2009

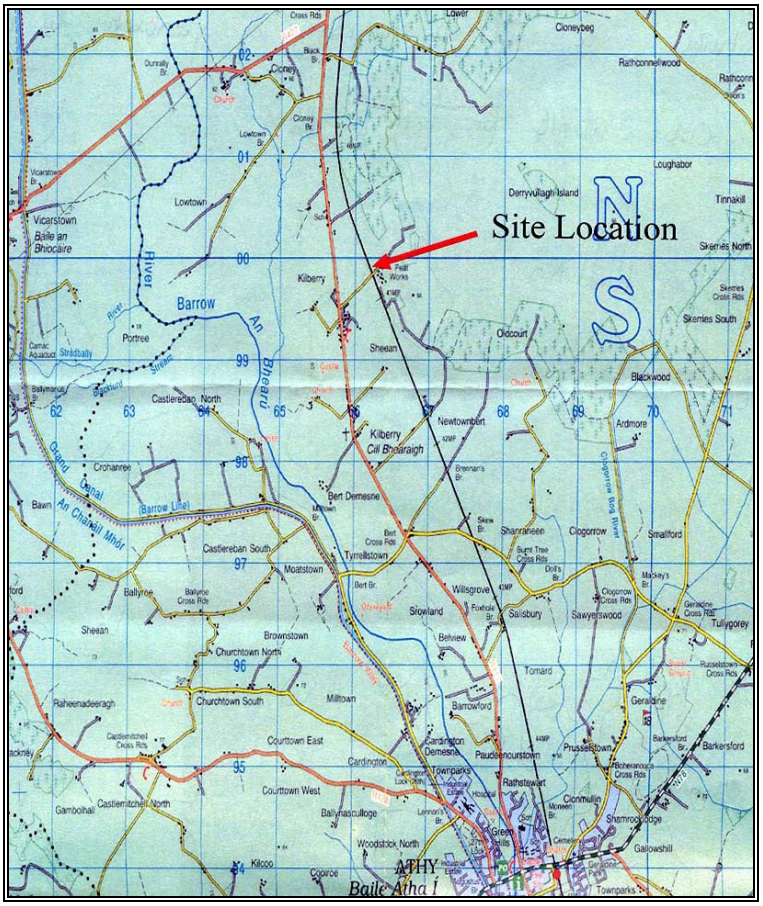
_____

Michael Delaney
General Manager

1.2 SITE DESCRIPTION

1.2.1 Site Location

The proposed development is located on the eastern portion of Kilberry townland, approximately 4 km north of Athy, Co. Kildare. It is located along the R417 between Athy and Monasterevin.



Regional Location of Bord na Mona Kilberry Compost Site

The total area the site occupies is ca. 2.5 hectares. The topography of the area is flat peat land and agricultural land with a gradual rise to the north. The land on the site is relatively level with a fall of 1:200 over the total site from south to north. The surrounding land is a mixture of agricultural, forestry and peat land with the southern boundary adjoining the Bord na Móna Moss Peat production site.

1.2.1 General

A licence from the Environmental Protection Agency (W0198-01) was granted on the 16th of December 2004. This licence was for the construction and operation of a Composting Facility at Kilberry, Athy, Co. Kildare. The quantity of waste to be accepted was 50,000 tonnes in the first year rising to 96,000 tonnes by the 5th year. Non-hazardous biodegradable wastes (Shredded Green waste, Brewery By-Product, Sawdust, Bark and Cocoa Husk) were the initial waste types accepted at this facility. In the intervening five years a number of additional waste streams have been identified and added to the waste licence with agreement from the EPA. The current waste list is as follows:

Shredded / Unshredded Green Waste
Brewery By-Product
Sawdust
Bark
Cocoa Husk
Spent Mushroom Compost
Christmas Trees
Wood Pulp Sludge
Fruit and Vegetables
Dairy Products Sludge

1.2.2 Method of Working

1.2.2.1 Composting Process

The process leading to the production of usable, composted material requires the completion of a series of stages as follows:

1. Acceptance procedures and tipping
2. Mixing and formulation of windrows
3. Turning / Composting
4. Screening of stabilised material
5. Shredding and re-use of oversize material

1. Acceptance Procedures:

All vehicles entering the site firstly report to compost coordinator. A delivery note will accompany each vehicle detailing:

- Vehicle registration number
- Driver / Company
- Material type and origin
- Quantity of waste

These details will be entered on to the Bord na Móna MRP system along with the recorded weight of the vehicle. A hard copy of this information will be issued to the driver as a POD (Proof of Delivery).

2. Discharge/Mixing and formation of windrows.

On completion of acceptance procedures vehicles will be directed to a specific tipping area in the composting facility. Where they will tip the feedstock in such a fashion as to provide a linier strip of material. Unshredded material is directed to the shredder in phase 2.

3. Turning / Composting

The current average composting period is 12 weeks, during which time the piles are turned approximately 20 times as follows:

Week 1 - 2	4 times per week
Week 3 – 6	2 times per week
Week 7-10	1 turn per week

A series of parameters are monitored during the composting cycle as follows:

- Temperature (using deep probes)
- CO_2 evolution (an index of microbial activity)
- Moisture content

The results of ongoing monitoring can trigger a number of interactions such as:

- Increased turning frequency

- Addition of water. Lagoon water is used as the source of this water.

4. Screening

Following the completion of composting the material is transported from the stockpile to the screening area, which is located in Phase 2 using the Volvo loader.

The composted material is screened, material below 10mm will be stockpiled for use in growing media plants, whilst material over this size will be set aside for shredding and composting.

5. Shredding:

Oversized material is collected at the screening plant and is reincorporated into the new windrows.

Working Hours

Composting activities (Turning / Screening) will normally be undertaken during the hours of 08:00 and 18:00; Monday to Friday inclusive.

Delivery hours are confined to the hours of 08:00 to 18:00; Monday to Friday inclusive.

Reduced site activities such as maintenance and cleaning proceed until 22:00 Monday to Friday inclusive.

.

SECTION 2

DATA

2.1 SUMMARY DATA

2.1.1 Waste Recovery Data:

Waste Type	EWC Code	Annual Intake (Tonnes)
Greenwaste	20 02 01	9917
Bark	03 03 01	1455
Brewery by-Product	02 07 01	18185
Fruit and Vegetables	02 01 03	1655
Dairy Sludge	02 05 02	4694
Brewery Sludge	02 07 05	1532

2.1.2 Summary Report on Emissions:

There are no emission points within the facility.

2.1.3 Summary Reports on Environmental Monitoring:

2.1.3 (A) Surface Water Analysis Results – Tables A.1 – A.4 below show results of 2010 Surface water analysis.

Table A.1 - Surface Water Q1 2010					
Parameter	**SW1**	**SW2**	**SW3**	**SW4**	**SW5**
pH	7.7	7.4	6.9	7.5	7.9
Suspended Solids (mg/l)	7	144	93	8	5
DRO (mg/l)	<10	11	249	<10	<10
Mineral Oil (mg/l)	<10	<10	<10	<10	<10

Table A.2 - Surface Water Q2 2010					
Parameter	**SW1**	**SW2**	**SW3**	**SW4**	**SW5**
pH	7.7	7.7	7.8	7.9	8.2
Suspended Solids (mg/l)	24	8	11	15	<5
BOD (mg/l)	4	3	2	<2	<2
DRO (mg/l)	<10	<10	<10	<10	<10
Mineral Oil (mg/l)	<10	<10	<10	<10	<10

Table A.3 - Surface Water Q3 2010					
Parameter	**SW1**	**SW2**	**SW3**	**SW4**	**SW5**
pH	7.4	7.4	7.5	7.3	8.0
Suspended Solids (mg/l)	6	5	<5	<5	<5
BOD (mg/l)	3	<2	<2	<2	<2
DRO (mg/l)	<10	<10	<10	<10	<10
Mineral Oil (mg/l)	<10	<10	<10	<10	<10

Table A.4 - Surface Water Q4 2010					
Parameter	**SW1**	**SW2**	**SW3**	**SW4**	**SW5**
pH	7.4	7.2	7.3	7.3	7.7
Suspended Solids (mg/l)	<5	<5	<5	<5	7
BOD (mg/l)	5	2	2	<2	<2
DRO (mg/l)	<10	<10	<10	<10	<10
Mineral Oil (mg/l)	<10	<10	<10	<10	<10

2.1.3 (B) Ground Water Analysis Results

Groundwater Results Q1 2010					
Laboratory ID.	**MW1**	**MW2**	**MW3**	**MW4**	**MW5**
pH	7.4	7.2	7.3	7.0	6.9
Conductivity µS/cm	481	578	665	1571	1860
Ammonia as N mg/l	2.0	5.9	6.1	18	18
Chloride mg/l	18.27	17.71	15.85	10.39	24.13
Sulphate mg/l	0.52	<0.5	<0.5	<0.5	<0.5
Nickel ug/l	6	6	17	34	12
Manganese ug/l	487	161	155	890	812

Groundwater Results Q2 2010					
Laboratory ID.	**MW1**	**MW2**	**MW3**	**MW4**	**MW5**
pH	7.5	7.1	7.0	7.1	7.0
Conductivity µS/cm l	519	590	676	1672	1393
Ammonia as N mg/l	1.94	5.90	6.10	24.00	15.00
Chloride mg/l	19.27	18.21	16.39	11.96	14.94
Sulphate mg/l	8.27	<0.50	<0.50	<0.50	<0.50
Nickel ug/l	7	7	19	46	23
Manganese ug/l	543	185	174	1245	699

Groundwater Results Q3 2010					
Laboratory ID.	**MW1**	**MW2**	**MW3**	**MW4**	**MW5**
pH	7.4	7.2	7.1	6.7	6.7
Conductivity µS/cm l	601	619	663	1971	1056
Ammonia as N mg/l	1.87	6.3	6.2	24.0	11.0
Chloride mg/l	23.05	18.65	16.74	40.01	24.78
Sulphate mg/l	43.42	4.93	<0.50	<0.50	<0.50
Nickel ug/l	8	7	18	59	25
Manganese ug/l	563	202	224	1235	744

Groundwater Q4 2010					
Parameter	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**
pH	7.4	7.2	7.2	6.9	6.8
Ammonia as N mg/l	1.87	7.60	6.1	26	18
Chloride mg/l	19.62	17.96	17.70	31.35	79.13
Orthophosphate mg/l	<0.16	<0.16	<0.16	<0.16	17.74
Nitrate as N mg/l	0.05	<0.05	0.05	0.05	<0.05
Total Phosphorous mg/l	0.24	0.15	0.14	2.7	19.96
Antimony µg/l	<2	<2	<2	<2	<2
Arsenic µg/l	43	84	90	12	3
Aluminium µg/l	14	<2	2	37	47
Berylium µg/l	<2	<2	<2	<2	<2
Barium µg/l	462	369	484	466	185
Calcium mg/l	80	94	112	286	233
Chromium µg/l	<2	<2	<2	<2	<2
Cadmium µg/l	<2	<2	<2	<2	<2
Cobalt µg/l	3	2	2	<2	<2
Copper µg/l	<2	<2	<2	<2	<2
Iron mg/l	9.9	5.4	6.4	39	6.7
Potassium mg/l	1.1	1.3	1	47	171
Manganese µg/l	518	93	151	1135	868
Silver µg/l	<2	<2	<2	<2	<2
Sodium mg/l	8	7	7	18	37
Nickel µg/l	7	8	17	49	9
Lead µg/l	<2	<2	<2	<2	<2
Selenium µg/l	<2	<2	<2	<2	<2
Tin µg/l	<2	<2	<2	<2	<2
Zinc µg/l	13	31	11	16	26
Mercury µg/l	<1	<1	<1	<1	<1
Total Coliforms cfu/100mls	2	40	<1	35	1
E.Coli cfu/100mls	<1	<1	<1	30	<1

Groundwater Q4 2008-*VOC Analysis*					
VOC's (µg/l)	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**
Dichlorodifluoromethane	<10	<10	<10	<10	<10
Chloromethane	<10	<10	<10	<10	<10
Vinyl chloride	<10	<10	<10	<10	<10
Bromomethane	<10	<10	<10	<10	<10
Chloroethane	<10	<10	<10	<10	<10
Trichlorofluoromethane	<10	<10	<10	<10	<10
1,1-Dichloroethene	<10	<10	<10	<10	<10
Dichloromethane	<10	<10	<10	<10	<10
trans-1,2-Dichloroethene	<10	<10	<10	<10	<10
1,1-Dichloroethane	<10	<10	<10	<10	<10
2,2-Dichloropropane	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	<10	<10	<10	<10	<10
Bromochloromethane	<10	<10	<10	<10	<10
Chloroform	<10	<10	<10	<10	<10
1,1,1-Trichloroethane	<10	<10	<10	<10	<10
Carbon Tetrachloride	<10	<10	<10	<10	<10
1,1-Dichloropropene	<10	<10	<10	<10	<10
Benzene	<10	<10	<10	<10	<10
1,2-Dichloroethane	<10	<10	<10	<10	<10
Trichloroethene	<10	<10	<10	<10	<10
1,2-Dichloropropane	<10	<10	<10	<10	<10
Dibromomethane	<10	<10	<10	<10	<10
Bromodichloromethane	<10	<10	<10	<10	<10
Toluene	<10	<10	<10	<10	<10
1,1,2-Trichloroethane	<10	<10	<10	<10	<10
1,1,1,2-Tetrachloroethane	<10	<10	<10	<10	<10
m,p-Xylene	<10	<10	<10	<10	<10
Styrene	<10	<10	<10	<10	<10
Isopropylbenzene	<10	<10	<10	<10	<10
n-propylbenzene	<10	<10	<10	<10	<10

Groundwater Q4 2008 - *Cont'd VOC Analysis*					
VOC's (µg/l)	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**
2-Chlorotoluene	<10	<10	<10	<10	<10
4-Chlorotoluene	<10	<10	<10	<10	<10
1,2,4-Trimethylbenzene	<10	<10	<10	<10	<10
4-Isopropyltoluene	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	<10	<10	<10	<10	<10
Naphthalene	<10	<10	<10	<10	<10
1,3-Dichloropropane	<10	<10	<10	<10	<10
cis-1,3-Dichloropropene	<10	<10	<10	<10	<10
trans-1,3-Dichloropropene	<10	<10	<10	<10	<10
Dibromochloromethane	<10	<10	<10	<10	<10
Chlorobenzene	<10	<10	<10	<10	<10
Ethyl Benzene	<10	<10	<10	<10	<10
o-Xylene	<10	<10	<10	<10	<10
Bromoform	<10	<10	<10	<10	<10
1,2,3-Trichloropropane	<10	<10	<10	<10	<10
Bromobenzene	<10	<10	<10	<10	<10
Tert-Butylbenzene	<10	<10	<10	<10	<10
Sec-Butylbenzene	<10	<10	<10	<10	<10
1,3,5-Trimethylbenzene	<10	<10	<10	<10	<10
1,2- Dibromo-3-chloropropane	<10	<10	<10	<10	<10
Hexachlorobutadiene	<10	<10	<10	<10	<10
1,2,3-Trichlorobenzene	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	<10	<10	<10	<10	<10
Tetrachloroethene	<10	<10	<10	<10	<10
n-butylbenzene	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	<10	<10	<10	<10	<10

Groundwater Q4 2008 – *SVOC Analysis*					
SVOC's (µg/l)	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**
Phenol	<1	<1	<1	<1	<1
2-Chlorophenol	<1	<1	<1	<1	<1
2-Methylphenol	<1	<1	<1	<1	<1
4-Methylphenol	<1	<1	<1	<1	<1
2-Nitrophenol	<1	<1	<1	<1	<1
4-Nitrophenol	<1	<1	<1	<1	<1
2,4-Dichlorophenol	<1	<1	<1	<1	<1
2,4-Dimethylphenol	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol	<1	<1	<1	<1	<1
2,4,6-Trichlorophenol	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol	<1	<1	<1	<1	<1
Pentachlorophenol	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	<1	<1	<1	<1	<1
Nitrobenzene	<1	<1	<1	<1	<1
Azobenzene	<1	<1	<1	<1	<1
Hexachlorobenzene	<1	<1	<1	<1	<1
Naphthalene	<1	<1	<1	<1	<1
Acenaphthalene	<1	<1	<1	<1	<1
Acenaphthene	<1	<1	<1	<1	<1
Flourene	<1	<1	<1	<1	<1
Phenanthrene	<1	<1	<1	<1	<1
Anthracene	<1	<1	<1	<1	<1
Fluoranthrene	<1	<1	<1	<1	<1
Pyrene	<1	<1	<1	<1	<1
Benzo(a)anthracene	<1	<1	<1	<1	<1
Chrysene	<1	<1	<1	<1	<1
Benzo(b)fluoranthrene	<1	<1	<1	<1	<1
Benzo(k)fluoranthrene	<1	<1	<1	<1	<1

Groundwater Q4 2008 - *Cont'd SVOC Analysis*					
SVOC's (µg/l)	**MW1**	**MW2**	**MW3**	**MW4**	**MW-05**
Benzo(a)pyrene	<1	<1	<1	<1	<1
Indenol(1,2,3-cd)pyrene	<1	<1	<1	<1	<1
Dibenzo(a,h)anthracene	<1	<1	<1	<1	<1
Benzo(ghi)perylene	<1	<1	<1	<1	<1
2-Chloronaphthalene	<1	<1	<1	<1	<1
Carbazole	<1	<1	<1	<1	<1
2-Methylnaphthalene	<1	<1	<1	<1	<1
Isophorone	<1	<1	<1	<1	<1
Dibenzofuran	<1	<1	<1	<1	<1
Dimethyl phthalate	<1	<1	<1	<1	<1
Diethyl phthalate	<1	<1	<1	<1	<1
Di-butylphthalete	<1	<1	<1	<1	<1
Di-octylphthalate	<1	<1	<1	<1	<1
Bis(2-ethylhexyl)phthalate	<1	<1	<1	<1	<1
Butylbenzylphthalate	<1	<1	<1	<1	<1
4-Chloroaniline	<1	<1	<1	<1	<1
2-Nitroaniline	<1	<1	<1	<1	<1
3-Nitroaniline	<1	<1	<1	<1	<1
4-Nitroaniline	<1	<1	<1	<1	<1
2,4-Dinitroaniline	<1	<1	<1	<1	<1
2,6-Dinitroaniline	<1	<1	<1	<1	<1
Bis(2-Chloroethyl)ether	<1	<1	<1	<1	<1
4-Bromophenylphenylether	<1	<1	<1	<1	<1
4-Chlorophenylphenylether	<1	<1	<1	<1	<1
Hexachloroethane	<1	<1	<1	<1	<1
Hexachlorobutadiene	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	<1	<1	<1	<1	<1
Bis(2-chloroethoxy)methane	<1	<1	<1	<1	<1
N-nitrosodi-n-propylamine	<1	<1	<1	<1	<1

Groundwater Q4 2007 – *Pesticide Suite*					
Pesticides (µg/l)	**MW-01**	**MW-02**	**MW-03**	**MW-04**	**MW-05**
Dichlorvos	<0.01	<0.01	<0.01	<0.01	<0.01
Mevinphos	<0.01	<0.01	<0.01	<0.01	<0.01
Alpha - BHC	<0.01	<0.01	<0.01	<0.01	<0.01
Gamma - BHC	<0.01	<0.01	<0.01	<0.01	<0.01
Diazinon	<0.01	<0.01	<0.01	<0.01	<0.01
Delta - BHC	<0.01	<0.01	<0.01	<0.01	<0.01
Ethyl Parathion	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01	<0.01	<0.01	<0.01	<0.01
Fenitrothion	<0.01	<0.01	<0.01	<0.01	<0.01
Aldrin	<0.01	<0.01	<0.01	<0.01	<0.01
Malathion	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor Epoxide	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulphan I	<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	<0.01	<0.01	<0.01	<0.01	<0.01
4, 4’ - DDE	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulphan II	<0.01	<0.01	<0.01	<0.01	<0.01
4, 4’ - DDD	<0.01	<0.01	<0.01	<0.01	<0.01
Ethion	<0.01	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulfan Sulphate	<0.01	<0.01	<0.01	<0.01	<0.01
4, 4’ - DDT	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	<0.01	<0.01	<0.01	<0.01	<0.01
Azinphos Methyl	<0.01	<0.01	<0.01	<0.01	<0.01

2.1.3 (C) Dust Analysis Results

2010 Dust Results				
Location	**Q1 Dust ($mg/m^2/day$)**	**Q2 Dust ($mg/m^2/day$)**	**Q3 Dust ($mg/m^2/day$)**	**Q4 Dust ($mg/m^2/day$)**
AM-01	200	488	282	1735*
AM-02	35	312	59	102
AM-03	112	449	154	23
AM-04	364	477	65	96

* - These dust bottles were all heavily contaminated with bird droppings and the result is therefore not considered to be representative of the dust generation at the site.

2.1.3 (D) Odour Analysis Results

Odour Sampling Results Q1 - 9th March 2010			
Locations	**On site observations**	**Results**	
OD 1 (Upwind)	No smell detected	<60	ou_E/m^3
OD 2 (Sensitive Receptor)	No smell detected	<60	ou_E/m^3
OD 3 (Downwind)	No smell detected	<60	ou_E/m^3

Odour Sampling Results Q2 – 24th May 2010			
Locations	**On site observations**	**Results**	
OD 1 (Upwind)	No smell detected	<60	ou_E/m^3
OD 2 (Sensitive Receptor)	No smell detected	<60	ou_E/m^3
OD 3 (Downwind)	No smell detected	149	ou_E/m^3

Odour Sampling Results Q3 – 29th July 2010			
Locations	**On site observations**	**Results**	
OD 1 (Downwind)	Strong Odour noticeable	814	ou_E/m^3
OD 2 (Sensitive Receptor)	Medium Odour noticeable	465	ou_E/m^3
OD 3 (Upwind)	No smell detected	<60	ou_E/m^3

Odour Sampling Results Q4 – 24th Novemeber 2010			
Locations	**On site observations**	**Results**	
OD 1 (Downwind)	No smell detected	<60	ou_E/m^3
OD 2 (Sensitive Receptor)	No smell detected	<60	ou_E/m^3
OD 3 (Upwind)	Slight odour	<60	ou_E/m^3

2.1.4 (E) Air Emissions Results

Air Analysis Q1 2010				
Location	Amines (ppm)	Ammonia (ppm)	Hydrogen Sulphide (ppm)	Mercaptens (ppm)
Centre of Site	<2	<5	<0.2	<0.5

Air Analysis Q2 2010				
Location	Amines (ppm)	Ammonia (ppm)	Hydrogen Sulphide (ppm)	Mercaptens (ppm)
Centre of Site	<2	<5	<0.2	<0.5

Air Analysis Q3 2010				
Location	Amines (ppm)	Ammonia (ppm)	Hydrogen Sulphide (ppm)	Mercaptens (ppm)
Centre of Site	<2	<5	<0.2	<0.5

Air Analysis Q4 2010				
Location	Amines (ppm)	Ammonia (ppm)	Hydrogen Sulphide (ppm)	Mercaptens (ppm)
Centre of Site	<2	<5	<0.2	<0.5

2.3.1 (E) Noise Emissions

Noise:

The annual noise-monitoring programme was carried out on the 1st and 2nd December 2009. The results of same are presented in Table E.1 and E.2.

TABLE E.1: NOISE MEASUREMENT RESULTS (DAYTIME) 24th May 2010						
Location No.	Measurement Period (minutes)	Time	L_{eq} dB(A)	L_{10} dB(A)	L_{90} dB(A)	L_{AFMax} dB(A)
N1	30	09:58 – 10:28	60	60	53	78
N2	30	10:54 – 11:24	51	55	41	63
N3	30	11:29 – 11:59	59	63	46	83
N4	30	12:37 – 13:07	47	50	42	62
NSL 1	30	12:04 – 12:34	59	59	48	84

TABLE E.2: NOISE MEASUREMENT RESULTS (NIGHT TIME) 25th May 2010						
Location No.	Measurement Period (minutes)	Time	L_{eq} dB(A)	L_{10} dB(A)	L_{90} dB(A)	L_{AFMax} dB(A)
N1	10	06:54 – 07:04	59	62	37	72
N2	10	07:07 – 07:17	44	47	36	66
N3	10	07:20 – 07:30	66	70	54	83
N4	10	07:44 – 07:54	47	49	41	61
NSL 1	10	07:32 – 07:42	53	54	46	77

2.1.4 Environmental Incidents & Complaints

All environmental incidents and complaints are recorded and actioned upon in accordance with the specific procedures as outlined in the Bord na Móna Kilberry Compost facility documented environmental management system.

Environmental Complaints	Number of complaints
Complaints received	Two
Complaints requiring corrective action	None - New Odour Management Plan commenced August 2010
Categories of complaint	
Odour	Two
Noise	
Water	
Air	
Procedural	
Miscellaneous	

2.1.5 Environmental Spending

The itemised spend on environmental issues at Bord na Móna Kilberry are listed below.

January 2010 to December 2010	
	€
EPA Fees	11,037
Consultancy & Monitoring	33,000
Equipment	350
Total Cost	

2.1.6 Resource and Energy Consumption

Fuel Usage 2010 – See table below

Machine Type	Engine Type	Total (L)
Komptech Topturn X67 Turner	Cat C9	84,822
Komptech Crambo 6000 Shredder	Cat C16	
Komptech L3 Multistar Screen	Dieselelectric 44KVA	
L110E Volvo Front Loader	Volvo D7D LB E2	
L110E Volvo Front Loader 2	Volvo D7D LB E2	

Electricity Usage 2010 – recorded at compost site metre.

28/01/2010	**192676**
22/03/2010	**210484**
13/04/2010	**218329**
04/06/2010	**227098**
21/07/2010	**234587**
30/09/2010	**243592**
04/01/2011	**257988**

SECTION 3

ENVIRONMENTAL MANAGEMENT

BORD NA MÓNA KILBERRY COMPOST FACILITY ENVIRONMENTAL OBJECTIVES AND TARGETS 2011

Item No	Objective	Target	Responsible Function
1	Meet Operating Capacity Requirements.	• Increase tonnage entering site – investigate new waste types. • Implement new marketing strategies to increase customer base	Horticulture (Newbridge)
2	Improve efficiency of site operations	• Ensure pumps remain clear to increase drainage of site. • Install 'units' at each pump station within P1 to improve access to pumps.	Environmental (Kilberry)
3	Water Management	• Apply to Kildare County Council for planning permission to change site boundary • Undertake licence review to include excess water disposal within new site boundary	Environmental (Kilberry)
4	Once off Projects	• Assess potential for local farmers to use excess water as a fertiliser substitute • BnM Environmental to assess sewage treatment plants onsite and adjacent to site. • Finalise Ammonia in GW assessment	Environmental. (Kilberry)
5	Carry out monitoring as per Licence 198-1	• Noise – Once per annum • Bioaerosols – Once per annum • Dust – four times per annum • SW - Quarterly • GW – Quarterly	Environmental (Newbridge / Kilberry)

3.1 Environmental Management Programme for 2011.

Review of Objectives and Targets for the period January to December 2010

Tables EMP 1.1 to 1.5 reviews the Objectives and Targets set for 2010. A number of the listed Objectives and their subsequent targets are cyclical as the company attempts to achieve continuous environmental improvement.

Tables EMP 2.1 to 2.5 set out the Objectives and Targets for 2011. A number of the listed Objectives and their subsequent targets are cyclical as the company attempts to achieve continuous environmental improvement.

Site Infrastructure EOT 1.1

Objective	Target	Target Date	2010 Review	Dept Responsible
Meet Operating Capacity Requirements.	Site operational for 5 years – capacity now 96,000 tonnes per annum	2010	Tonnage increased by 2 % in 2010	Kilberry (Environmental)
	Increase tonnage entering site – investigate new waste types.	Continuous 2010	One new waste type added 2010	Horticulture (Newbridge)

Site Management EOT 1.2

Objective	Target	Target Date	2010 Review	Dept Responsible
Improve efficiency of site operations	Install Stockpiler in phase 2 to reduce front-end loader movements.	Q2/Q3 2010	Complete Q4 2010. Stockpiler now used to transfer finished product to tippler.	Kilberry (Environmental)
	Install 'units' at each pump station within P1 and P2 to improve access to pumps.	2010	Complete for P2. All pumps on P2 have the units installed	Kilberry (Engineering)

Waste Management EOT 1.3

Objective	Target	Target Date	2010 Review	Dept Responsible
Water Management	Apply to Kildare County Council for planning permission to change site boundary	Q2 2010	This project was postponed until Q1 2011	Kilberry (Environmental)
	Undertake licence review to include excess water disposal within new site boundary	2010	Licence Review postponed till 2011	Kilberry (Environmental)

EPA Compliance EOT 1.4

Objective	Target	Target Date	2010 Review	Dept Responsible
Once off Projects	Carry out review of Environmental monitoring requirements.	Q2 2010	Complete. Licence review due in 2011 will request reduction in SW monitoring	Kilberry (Environmental)
	Investigate elevated ammonia in GW	Continuous 2010	Additional temporary GW wells installed in July.	Kilberry (Environmental)
	Install windsock or weather station.	Q3/Q4 2010	Windsock installed @ lagoons - Q3 2010	Kilberry (Environmental)

Licence Compliance EOT 1.5

Objective	Target	Target Date	2010 Review	Person Responsible
Carry out monitoring as per Licence W0198-1	Noise – Once per annum	2010	Complete	Newbridge (Environmental)
	Bioaerosols – Annually	2010	Complete	Newbridge (Environmental)
	Dust - Quarterly	2010	Complete	Kilberry (Environmental)
	Groundwater – Quarterly	2010	Complete	Kilberry (Environmental)
	Surface Water - Quarterly	2010	Complete	Kilberry (Environmental)

Operating Requirements EOT 2.1

Objective	Target	Target Date	Person Responsible
Meet Operating Capacity Requirements.	Increase tonnage entering site – investigate new waste types	Continuous 2011	Newbridge (Horticulture)
	Implement new marketing strategies to increase customer base	Q2 2011	Kilberry (Environmental)

Energy Management EOT 2.2

Objective	Target	Target Date	Person Responsible
Improve efficiency of site operations	Ensure pumps remain clear to increase drainage of site.	Continuous 2011	Kilberry (Environmental)
	Install 'units' at each pump station within P1 to improve access to pumps.	Q2/Q3 2011	Kilberry (Engineering)

Water Management EOT 2.3

Objective	Target	Target Date	Person Responsible
Water Management	Apply to Kildare County Council for planning permission to change site boundary	January 2011	Kilberry (Environmental)
	Undertake licence review to include excess water disposal within new site boundary	Q2 2011	Kilberry (Environmental)

Once Off Projects EOT 2.4

Objective	Target	Target Date	Person Responsible
Once off Projects	Assess potential for local farmers to use excess water as a fertiliser substitute.	Q1 2011	Kilberry (Environmental)
	BnM Environmental to assess sewage treatment plants onsite and adjacent to site.	Q2 2009	Kilberry (Environmental)
	Finalise Ammonia in GW assessment	Q2 2011	Kilberry (Environmental)

Licence Compliance EOT 2.5

Objective	Target	Target Date	Person Responsible
Carry out monitoring as per Licence 198-1	Noise – Once per annum	2011	Environmental (Newbridge)
	Bioaerosols – Once per annum	2011	Environmental (Newbridge)
	Dust - Quarterly	2011	Kilberry (Environmental)
	Groundwater – Quarterly	2011	Kilberry (Environmental)
	Surface Water - Quarterly	2011	Kilberry (Environmental)

APPENDIX 1


05.02.2010 11:16

ERROR: undefined
OFFENDING COMMAND: f&QO@

STACK:

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.11

REFERENCE YEAR	2010

1. FACILITY IDENTIFICATION

Parent Company Name	Bord Na Mona
Facility Name	Bord na Móna Plc
PRTR Identification Number	W0198
Licence Number	W0198-01

Waste or IPPC Classes of Activity

No.	class_name
4.2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
4.11	Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.
4.13	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.
Address 1	Kilberry
Address 2	Athy
Address 3	Co. Kildare
Address 4	
Country	Ireland
Coordinates of Location	-7.0108 53.0473
River Basin District	IESE
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Craig Mallinson
AER Returns Contact Email Address	craigmallinson@inbox.com
AER Returns Contact Position	Consultant
AER Returns Contact Telephone Number	059-8631519 /087-2886848
AER Returns Contact Mobile Phone Number	087 2886848
AER Returns Contact Fax Number	
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	0
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General
50.1	General

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 ?	

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE | PRTR# : W0198 | Facility Name : Bord na Móna Plc | Filename : W0198_2010.xlsx | Return Year : 2010 | 4/8/2011 11:52

Please enter all quantities on this sheet in Tonnes 3

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	19 05 01	No	20.0	non-composted fraction of municipal and similar wastes	D1	E	Weighed	Offsite in Ireland	Kyletalesha WTS,W0194-01	Kyletalesha ,.,Laois,.,Ireland		
Within the Country	19 05 99	No	1200.0	wastes not otherwise specified	R3	M	Weighed	Offsite in Ireland	Rathcon Farm,WFP-WW-09-008-002	Rathcon Farm,Grange Con,Co. Wicklow,.,Ireland		

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

Link to previous years waste data
Link to previous years waste summary data & percentage change