## **BARNA WASTE**

# **ANNUAL**

# **ENVIRONMENTAL**

# **REPORT**

For the Period 1st January 2009 – 31st December 2009

WASTE LICENCE

**REGISTRATION NO:** WL106-02

LICENSEE: BRUSCAR BHEARNA TEORANTA

(BARNA WASTE)

**LOCATION OF ACTIVITY:** CARROWBROWNE,

HEADFORD ROAD, CO. GALWAY.

ATTENTION: MR. KEALAN REYNOLDS

EPA, REGIONAL INSPECTORATE JOHN MOORE ROAD, CASTLEBAR

CO. MAYO.

**PREPARED BY:**MR. CAMPBELL FINNIE

(Barna Waste)

**CONTRIBUTIONS FROM:** MR. SEAN CURRAN

(Managing Director/Facility Manager)

MR. PADHRAIC NOONE

(Finance Manager)

MR. DAMIEN MONAGHAN

(Operations Manager)

MR. CORMAC O'DONNELL

(Transport Manager)
MR. NIALL JORDAN
(Deputy Facility Manager)

EURO ENVIRONMENTAL SERVICES.

COMPLETE LABORATORY SOLUTIONS (CLS)

P.J. TOBIN CONSULTING ENGINEERS

#### 1.0 Introduction

The following is the Annual Environmental Report (AER) for **Barna Waste** for the period **1**<sup>st</sup> **January 2009 to 31st December 2009** for the Waste Transfer / Recycling Facility at Carrowbrowne, Headford Road, Co. Galway.

This report is in compliance with Condition 10.8 of Waste Licence No. WL106-02, which states:

"The licensee shall submit to the Agency for its agreement not later than January 31<sup>st</sup> of each year thereafter, an Annual Environmental Report (AER).

The AER shall include as a minimum the information specified in Schedule G: Content of Annual Environmental Report and shall be prepared in accordance with any relevant written guidance issued by the Agency."

This is a consolidated report, which includes details on all aspects of the site's environmental performance for the given period.

It is the policy of Barna Waste to conduct its business of waste acceptance, waste storage and waste transfer at the waste transfer station in such a manner that associated activities minimise any potential adverse effects on the environment. This commitment is expressed in the company's Environmental Management Policy, presented on the next page.

#### 1.1 Environmental Policy

This policy clearly sets out the overall aims and intentions of the company with respect to the environment. The creation of our Environmental Policy was the first step taken in the development of our EMS System, as required by Condition 2.1, of the Waste Licence. This document has been reviewed but no changes were made since last year's submission of the report.

# Brúscar Bhearna Teoranta (BARNA WASTE)

# **Environmental Policy**

**Brúscar Bhearna Teoranta** provides a service to the community in the management of waste activities such as disposal and recovery which is operated under licence 106-2 from the EPA.

**Brúscar Bhearna Teoranta** regards environmental protection as an essential requirement of its operation. BBT will undertake to conduct its business in a manner which protects the environment of the Customers, Employees and Communities in which it operates. This policy is consistent in its goals with the nature, scale and environmental impacts of our activities, products and services set out in the scope of our EMS system.

**Brúscar Bhearna Teoranta** will communicate this policy to all employees as part of the induction process for full time and temporary employees and any sub contractors who are engaged to carry out work on site.

#### **Guiding Principles:**

BBT is committed to...

- a) continual improvements, prevention of pollution and conservation of natural resources which are attributed to its facility.
- b) complying with relevant environmental legislation, regulations and other requirements pertinent to its facility.
- c) the continual assessment of the aspects and impacts of its activities, functions, products and services.
- d) providing a framework for setting and reviewing the environmental objectives and targets of its environmental action programmes.
- e) providing appropriate training and continual communication on its environmental issues to all its employees.
- f) Making this policy & any all other official records available to the public.

Signed: _		Date:
	FACILITY MANAGER	
Signed: _		Date:
_	MANAGING DIRECTOR	

#### 2. Waste Management at the Facility

#### 2.1 Waste Activities

As required by Schedule G of our waste licence the principal processes of the facility are outlined below:

- 1. The recycling / recovery of various waste streams for the diversion of these wastes away from landfill. The facility enables Barna Waste and other waste contractors, local authorities to collect waste from domestic/commercial/industrial sectors.
- 2. Within the facility heavy plant enables the segregation of the waste, (ie. a manual picking station, a ballistic separating machine, magnets, edicurrents, balers, a shredder, a pre-shredding machine, loading shovels, forklifts (with forks), forklifts (with clamp attachments), grab machine, screeners, crushers). This machinery is used on a daily basis to help separate, move and manage the various waste streams on site.
- 3. The facility also has a fully operational civic amenity site which is open to the public. The civic amenity site is staffed during operational hours and allows the segregation of general waste, mixed recyclables, cardboard, glass, timber, stones, metal, clothes, batteries and all types of white goods and electrical items.
- 4. C&D materials are currently being processed outside of the facility because of the space required by the machinery. Barna Waste plan to construct a building dedicated to the handling of C&D type waste and planning permission was granted for this building during 2006. Current C&D waste is managed using a screener and a crusher and on occasions a trommel which work in tandem and allow us to recycle the good quality inert materials. Plans for the construction of our C&D waste building are on hold until our composting is fully operational. We will discuss this project again during 2010.
- 5. Our purpose built composting process will be operational from the 1<sup>st</sup> January 2010 and all construction / mechanical work was completed within the building during 2009. Small volumes will be handled during the initial pilot phase and will be steadily increased during 2010. This process will allow for the collection and processing into composting of all organic waste types.
- 6. A summary of the current waste activities carried out at our facility are detailed below:
  - Landfill Waste the majority of mixed waste loads that come to our facility are able to be segregated in some way either by hand or by machine (grab or loading shovel) to ensure that most of the recyclable material which is in a reasonable condition is recovered. Only the non recyclable fractions are then transferred into our own vehicles for landfill disposal
  - Mixed Recyclables the company have invested in some of the best technology available to process domestic kerbside recyclables which are collected around Connacht. The ballistic separator, magnet, edicurrent and manual picking station allow us to produce segregated recyclable fractions from the original mixed recyclables and send for recycling. Materials currently being recycled via the picking station include paper, newspaper, cardboard, plastic bottles, plastic bags, plastic trays, steel and aluminium cans. This process is currently able to process around 9 tonnes of recyclables per hour.

- Separately collected recycling the company also encourage recycling from our commercial customers and segregated collections are available throughout Connacht. These collections result in collection and recycling of cardboard, paper (various grades) and plastics (various grades). These materials are baled immediately on receipt at the site and sent for recycling.
- Confidential shredding the company also offers customers a confidential shredding service where materials are collected in pre-paid bags or they have the option to deliver to our facility. Materials are shredded and then can be sent off site for recycling (99% of the time it is paper products).
- Timber processing as outlined above timber processing has now been taken out of the main transfer station and is processed in its own bay in the new composting building. The material is processed using two machines a waste reducer (preshedder) and a timber shredder which shreds the segregated clean timber to a size which can be sent off site for recycling into chipboard, landfill cover or for boiler fuel.
- Metal recycling the processing of metal products is carried out within the composting building in a dedicated area. We have a grab machine and baler in this area specifically used for baling this material into a form that can be easily sold as scrap to the UK or Irish metal markets. Some sorting of metal by grade is also carried out where possible.
- Civic Amenity Site the site is staffed during operational hours and allows the segregation of general waste, mixed recyclables, cardboard, glass, timber, stones, metal, clothes, batteries and all types of white goods and electrical items.
- General recycling Barna Waste are always reviewing markets around the world to try and offer as many recycling avenues as possible to our customers and in addition to the items listed above are currently collecting, segregating and sending the following waste types off site for recycling:
  - o end of life tyres, glass, batteries, industrial plastics, agricultural plastics, plasterboard

This section of the report was intended to give the reader a summary of the material types and the processing procedures used by Barna Waste during the reporting period. Any additional information required is available by contacting the company directly.

#### 2.2 Waste Activities Licensed

The waste activities carried out above are done so within the boundaries of our EPA Waste Licence WL106-2 and the Waste Management Act 1996. The following list is a summary of the waste types and activities for which we are licenced:

Licensed waste disposal activities, in accordance with the Third Schedule of the Waste Management Act, 1996.

- Class 11. Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
- Class 12. Repackaging prior to submissions to any activity referred to in a preceding paragraph of this Schedule.
- Class 13. Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned was produced.

Licensed waste recovery activities, in accordance with the Fourth Schedule of the Waste Management Act, 1996.

- Class 2. Recycling or reclamation of organic substances, which are not used as solvents (including composting and other biological transformation processors).
- Class 3 Recycling or reclamation of metals and metal compounds.
- Class 4. Recycling or reclamation of other inorganic materials.
- Class 12. Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule:
- Class 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:

#### 2.3 Composition and Quantity of Waste Received at the Facility

The Waste Transfer Station at Barna Waste is limited not only in the materials that can be accepted at the facility but also by the quantities which can be accepted. The following is a summary of the tonnages of different waste streams permitted to be accepted during this reporting period:

Waste Categories and Quantities acceptable at Transfer Station

WASTE TYPE	MAXIMUM TONNES PER ANNUM
Household	55,500 option A or 55,500 option B
Commercial	17,500 option A or 17,500 option B
Construction & Demolition	30,000 option A or 50,000 option B
Industrial Non Haz Solids	23,000 option A or 23,000 option B
Biodegradable Waste	40,000 option A or 20,000 option B
TOTAL	166,000 tonnes

These tonnages are set and documented in our EPA licence WL106-2 (schedule A).

#### 2.4 Waste In / Out Results for this year and past years (2002 – 2009)

This section of the report outlines the quantities and composition of the waste types accepted and removed from the facility for either disposal or recovery / recycling. As required by the Agency results for all years are included therefore results for reporting periods 2002, 2003, 2004, 2005, 2006, 2007, 2008 and the current reporting period of 2009 are outlined below.

This year's figures have been included with EWC codes as per the requirement in Schedule G of our waste licence WL106-2.

#### Waste In / Out Results for 2002 Period

Table 2.4.1: Waste Incoming during period 1st January 2002 – 31st December 2002

The following table outlines the waste that was received on site at the Barna Waste facility during the previous reporting period:-

Waste Type	Tonnes	0/0
Green / Organic / Timber	480.84	1.3%
Cardboard	700.39	1.8%
Recyclables	2595.08	6.6%
Commercial	10,245.00	26.1%
Household / Domestic	10,557.39	26.9%
Construction and Demolition	14,616.47	37.3%
Total	39,195.17	

Figure 2.1 illustrates the percentage breakdown of materials received on site for each of the main categories detailed above.

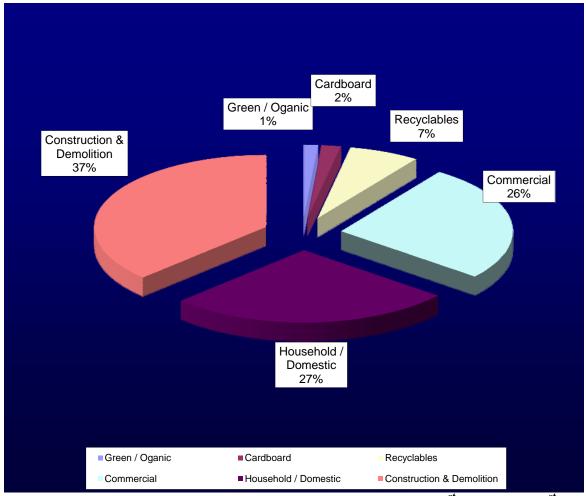


Figure 2.4.2: Percentage Breakdown of Waste Received on site from 1<sup>st</sup> January – 31<sup>st</sup> December 2002

**Table 2.4.3: Total Wastes Outgoing 1st January 2002 – 31st December 2002** 

Waste Type	Tonnes	% of Waste In
Materials Recovery (Plastic)	37.17	0.1%
Galway Metal	639.5	1.6%
Railuck (Mixed Plastics)	662.91	1.7%
Fibre Recycling (Newspapers etc)	677.98	1.7%
Fibre Recycling (Cardboard)	919.50	2.4%
Finsa Products (Timber)	1,092.50	2.8%
Recovered Fill	6859.40	17.5%
Ballinasloe Landfill	28,232.69	72%
Total	39,121.65	

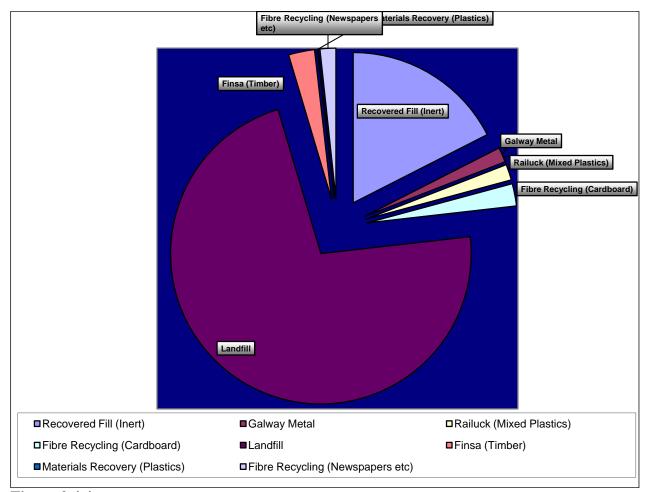


Figure 2.4.4:
Percentage Breakdown of Waste outgoing from 1<sup>st</sup> January 2002 to 31<sup>st</sup> December 2002

# Waste In 2003

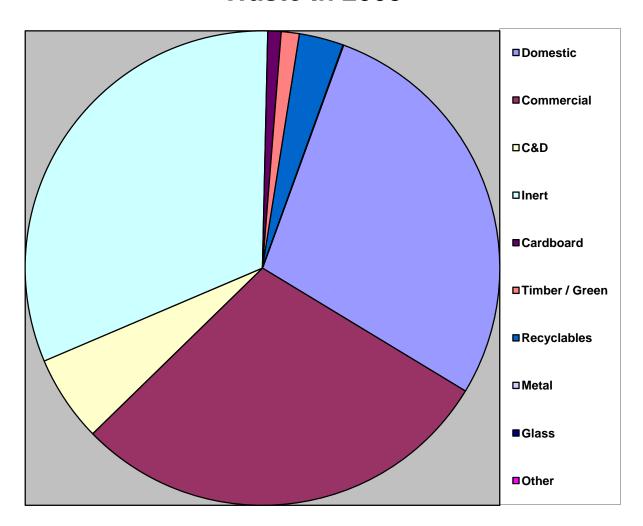


Figure 2.4.5: Breakdown of Waste Received on site from 1<sup>st</sup> January – 31<sup>st</sup> December 2003

WASTE TYPE	WASTE IN (tones per annum)
Domestic	20015.92
Commercial	20663.18
C & D	4199.2
Inert	22612.4
Cardboard	643.2
Timber / Green	878.55
Recyclables	2154.1
Metal	15
Glass	3.54
Others (public weighing)	8.02
TOTAL	71193.08

Table 2.4.3: Total Wastes Incoming 1<sup>st</sup> January 2003 – 31<sup>st</sup> December 2003

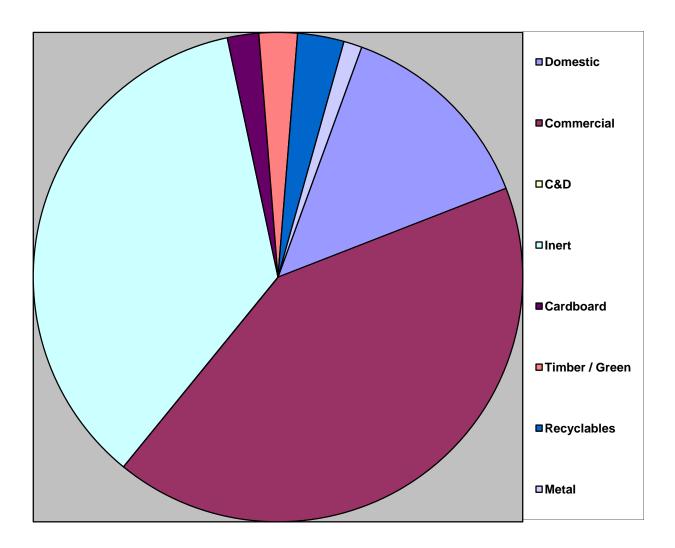


Figure 2.4.6: Breakdown of Waste going off site for Recovery or Disposal from  $\mathbf{1}^{st}$  January –  $\mathbf{31}^{st}$  December 2003

WASTE TYPE	WASTE OUT (tones per annum)
Domestic	8545.18
Commercial	26393.02
Inert	22602.2
Cardboard	1308.24
Timber / Green	1601.04
Recyclables	1937.22
Metal	761.87
TOTAL	63,418.72

Table 2.4.7: Total Wastes Outgoing 1<sup>st</sup> January 2003 – 31<sup>st</sup> December 2003

WASTE TYPE	RECYCLING	% OF TOTAL RECYCLING
	(tones per annum)	
Inert	22602.2	80.1%
Cardboard	1308.24	4.6%
Timber / Green	1601.04	5.7%
Recyclables	1937.22	6.9%
Metal	761.87	2.7%
TOTAL	28,210.57	39% of total waste in was recycled for 2003

Table 2.4.8: Recycling waste out details for  $1^{st}$  January –  $31^{st}$  December 2003

# Waste In 2004

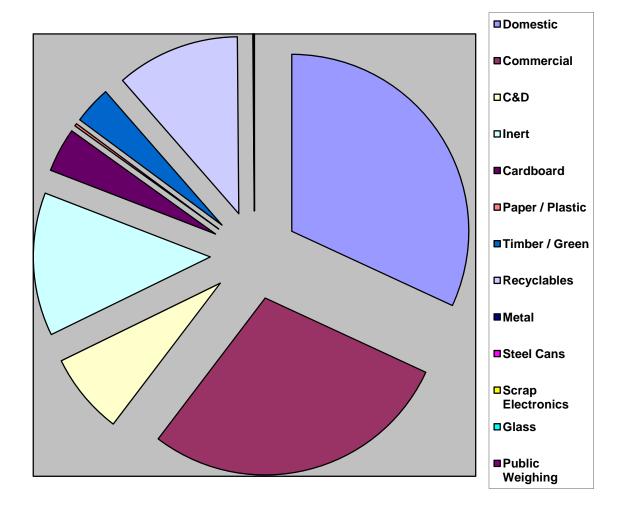


Figure 2.4.9: Breakdown of Waste Received on site from 1<sup>st</sup> January – 31<sup>st</sup> December 2004

WASTE TYPE	WASTE IN (tones per annum)
Domestic	19,796.62
Commercial	17,691.68
C & D	4575.1
Inert	8115.82
Cardboard	2506.52
Paper / Plastic	143.74
Scrap Electronics	1.20
Timber / Green	2111.85
Mixed Kerbside Recyclables	6990.80
Metal	45.00
Steel Cans	5.23
Glass	15.76
Public Weighing	15.88
TOTAL	62,045.20

**Table 2.4.10: Total Wastes Incoming 1st January 2004 – 31st December 2004** 

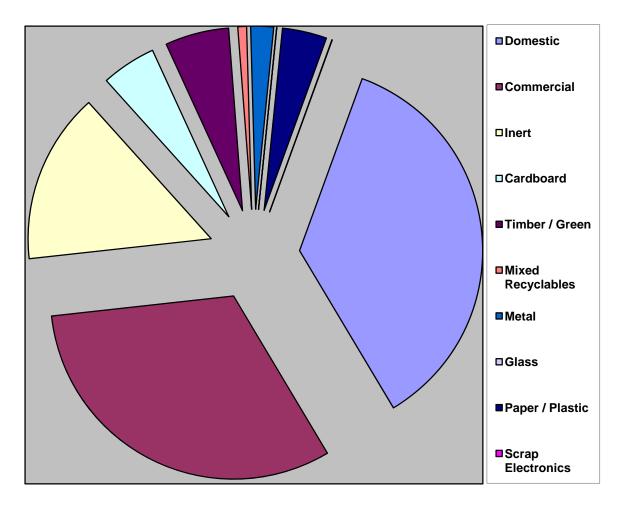


Figure 2.4.11: Breakdown of Waste going off site for Recovery or Disposal from  $\mathbf{1}^{st}$  January –  $\mathbf{31}^{st}$  December 2003

WASTE TYPE	WASTE OUT (tones per annum)
Domestic	19,299.33
Commercial	17,114.50
Inert	8115.82
Cardboard	2591.73
Paper / Plastic	2113.6
Timber / Green	3028.51
Recyclables	416.23
Scrap Electronics	14.69
Glass	9.98
Metal	1085.37
TOTAL	53,789.76

Table 2.4.12: Total Wastes Outgoing 1<sup>st</sup> January 2003 – 31<sup>st</sup> December 2004

All outlets for the materials going out have been approved in advance by the EPA. Our outlets for the waste types above are listed below:

- 1) Metal goes to Galway Metal
- 2) Timber / Green waste goes to Finsa Forest Products or Weyerhaeuser Europe
- 3) Paper / Cardboard / Steel Cans / Aluminium / Plastic / Scrap plastic all goes to AWS (Alternative Waste Solutions)
- 4) Glass goes to Eclipse Recycling
- 5) Scrap Electronics go to Cara Environmental
- 6) Inert material goes into our permitted site within out facility
- 7) All Domestic and Commercial waste goes to the Poolboy landfill site in Ballinasloe
- 8) In addition to the above Barna Waste also have Batteries collected by Returnbatt and send tyres as required to Crumb Rubber or to Crossmore Transport

Barna Waste requests and keeps on file recycling certificates from all the companies that take material from the premises for recycling / disposal / recovery.

WASTE TYPE	RECYCLING	% OF TOTAL RECYCLING
	(tones per annum)	
Inert	8115.82	46.73%
Cardboard	2591.73	14.9%
Timber / Green	3028.51	17.4%
Recyclables	416.23	2.4%
Paper / Plastic	2113.6	12.17%
Scrap Electronics	14.69	0.1%
Metal	1085.37	6.3%
TOTAL	17,365.95	28% of total waste in was recycled for 2004

Table 2.4.13: Recycling waste out details for 1st January 2004 – 31st December 2004

# Waste In 2005

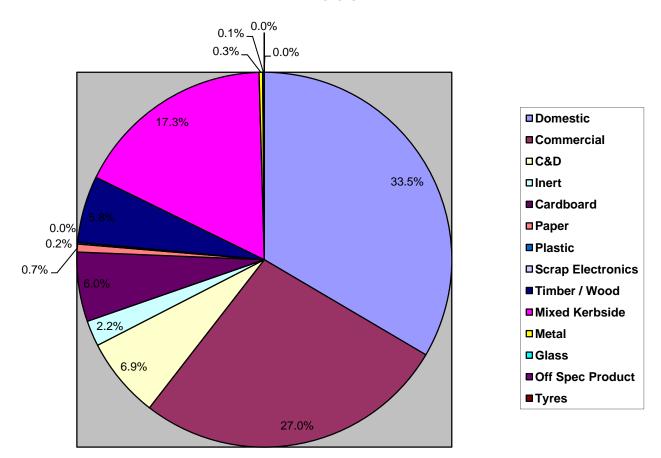


Figure 2.4.14: Breakdown of Waste Received on site from 1<sup>st</sup> January 2005 – 31<sup>st</sup> December 2005

WASTE TYPE	WASTE IN (tones per annum)
EWC 200301 Domestic	22134.78
EWC 200100 Commercial	17874.97
EWC 170100 C & D	4594.86
EWC 200202 Inert	1463.6
EWC 200101 Cardboard	3962.02
EWC 200101 Paper	449.78
EWC 200103 Plastic	100.52
EWC 160201 Scrap Electronics	0.76
EWC 200138 Timber / Wood / Green	3808.28
EWC 150101 Mixed Kerbside Recyclables	11443.15
EWC 170407 Metal	205.12
EWC 170202 Glass	78.98
EWC 160304 Off Spec Product	1.17
EWC 160103 Tyres	12.95
TOTAL	66130.94

Table 2.4.15: Total Wastes Incoming  $1^{st}$  January  $2005 - 31^{st}$  December 2005

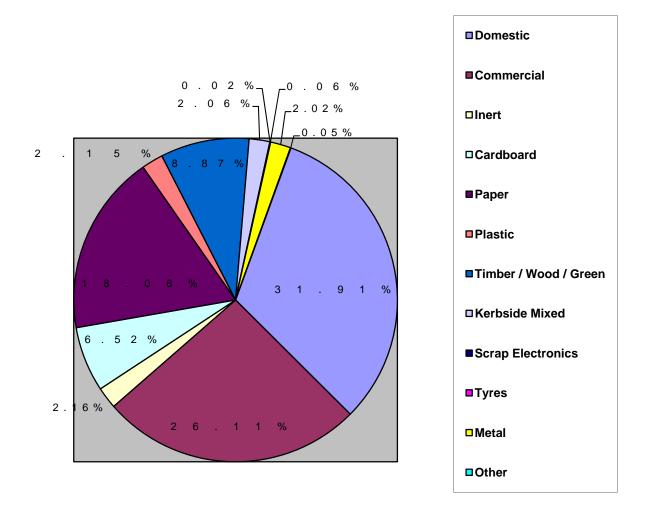


Figure 2.5.0: Breakdown of Waste going off site for Recovery or Disposal from  $1^{st}$  January  $2005 - 31^{st}$  December 2005

WASTE TYPE	WASTE OUT (tones per annum)
EWC 200301 Domestic	21593.80
EWC 200100 Commercial	17667.66
EWC 200202 Inert	1463.6
EWC 200101 Cardboard	4408.69
EWC 200101 Paper	12221.53
EWC 200103 Plastic	1457.49
EWC 200138 Timber / Wood / Green	6003.09
EWC 150101 Recyclables	1391.82
EWC 160201 Scrap Electronics	14.96
EWC 160103 Tyres	40.32
EWC 170407 Metal	1366.35
Other	36.7
TOTAL	67666.01

Table 2.5.1: Total Wastes Outgoing 1st January 2005 – 31st December 200

#### 2.5.2 Summary of Recycling Outlets used in 2005

Barna Waste are committed to finding new recycling markets in Ireland, Europe and Worldwide to ensure materials produced from the picking station and the other areas in our waste transfer station are sent to the best possible recycling outlets.

All outlets for the materials going out have been approved in advance by the EPA.

A summary of the recycling outlets used for 2005 is included below:

- 1) Metal products are sent to S.Norton Metal Merchants in Liverpool. Alternative outlets include Midland Scrap Metal (Portlaoise) and Galway Metal.
- 2) Timber / Wood / Green waste goes to Finsa Forest Products or Weyerhaeuser Europe
- 3) Paper / Cardboard / Steel Cans / Aluminium / Plastic (various grades) all go via AWS (Alternative Waste Solutions) for recycling
- 4) Paper / Cardboard are also sent to CWS (Complete Waste Solutions) for recycling
- 5) Paper / Cardboard are also sent to Highlander International Recycling for recycling
- 6) Paper / Cardboard are also sent to Parry & Evans for recycling
- 7) Scrap Electronics go to Cara Environmental
- 8) Inert material goes into our permitted site within out facility
- 9) Tyres are sent to Crossmore Transport in Limerick for recycling
- 10) All non recoverable waste goes to the Poolboy Landfill Site in Ballinasloe

Barna Waste requests and keeps on file recycling certificates from all the companies that take material from the premises for recycling / disposal / recovery.

WASTE TYPE	RECYCLING	% OF TOTAL
	(tones per annum)	RECYCLING
EWC 200202 Inert	1463.6	5%
EWC 200101 Cardboard	4408.69	15%
EWC 200101 Paper	12221.53	43%
EWC 200103 Plastic	1457.49	5%
EWC 200138 Timber / Wood / Green	6003.09	21%
EWC 150101 Recyclables	1391.82	5%
EWC 160201 Scrap Electronics	14.96	Less than 1%
EWC 160103 Tyres	40.32	Less than 1%
EWC 170407 Metal	1366.35	5%
Other	36.7	Less than 1%
TOTAL	28404.55	43% of total waste in was recycled for 2005

Table 2.5.3: Breakdown of recycling waste out details for 1st January – 31st December 2005

#### **WASTE IN**

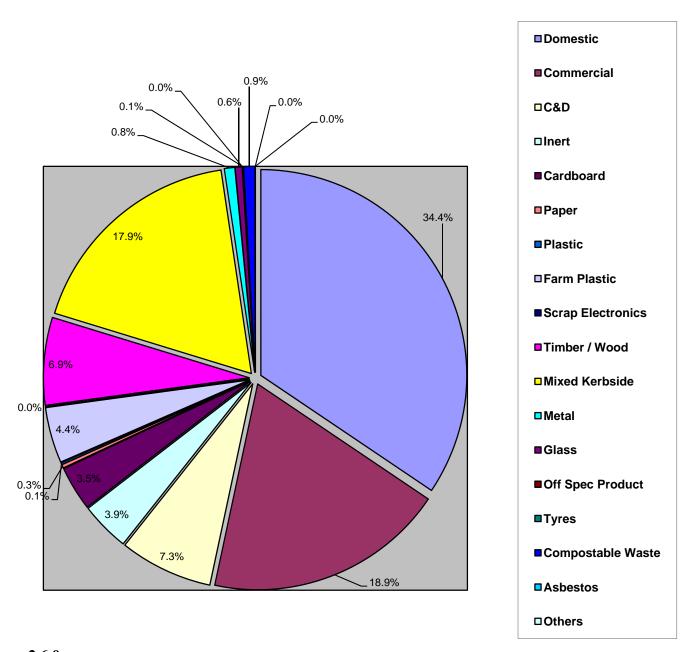


Figure 2.6.0: Breakdown of Waste Received on site from 1<sup>st</sup> January 2006 – 31<sup>st</sup> December 2006

WASTE TYPE	WASTE IN (tones per annum)
EWC 200301 Domestic	29328.22
EWC 200100 Commercial	16095.29
EWC 170100 C & D	6234.14
EWC 200202 Inert	3295.65
EWC 200101 Cardboard	2980.02
EWC 200101 Paper	239.55
EWC 200103 Plastic	121.71
EWC 200104 Farm Plastic	3729.12
EWC 160201 Scrap Electronics	6.89
EWC 200138 Timber / Wood / Green	5862.05
EWC 150101 Mixed Kerbside Recyclables	15244.71
EWC 170407 Metal	698.92
EWC 170202 Glass	470.45
EWC 160304 Off Spec Product	15.28
EWC 200108 Food Waste	753.51
EWC 200201 Garden & Park Waste	
EWC 200304 Sludge	
Compostable materials	
EWC 160103 Tyres	59.78
EWC 170605 Asbestos	3.10
Others (Public weighing)	8.45
TOTAL	85146.84

Table 2.6.1: Total Wastes Incoming 1<sup>st</sup> January 2006 – 31<sup>st</sup> December 2006

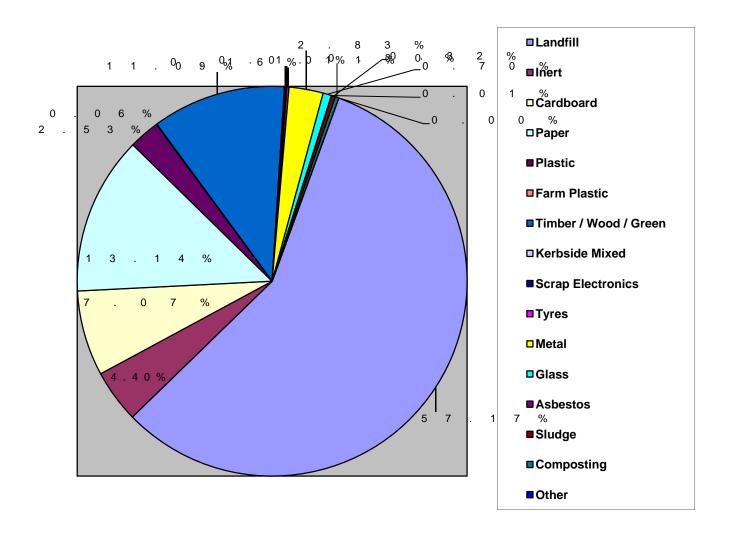


Figure 2.6.2: Breakdown of Waste going off site for Recovery or Disposal from  $1^{\rm st}$  January  $2006-31^{\rm st}$  December 2006

WASTE TYPE	WASTE OUT (tones per annum)
EWC 191212 Mechanically treated mixed	45754.84
waste for landfill (Commercial / Domestic)	
EWC 200202 Inert	3518.12
EWC 200101 Cardboard	5660.60
EWC 200101 Paper	10516.62
EWC 200103 Plastic	2023.17
EWC 200104 Farm Plastic	47.12
EWC 200138 Timber / Wood / Green	8875.78
EWC 150101 Recyclables	90.35
EWC 160201 Scrap Electronics	78.44
EWC 160103 Tyres	130.64
EWC 170407 Metal	2267.10
EWC 200102 Glass	559.56
EWC 170605 Asbestos	9.04
EWC 200304 Sludge	258.74
EWC200108 Composting	240.89
Others	1.62
TOTAL	80,032.63

Table 2.6.3: Total Wastes Outgoing 1<sup>st</sup> January 2006 – 31<sup>st</sup> December 2006

Breakdown of the recycling elements for 2006:

WASTE TYPE	RECYCLING	% OF TOTAL
	(tones per annum)	RECYCLING
EWC 200202 Inert	3518.12	10%
EWC 200101 Cardboard	5660.60	17%
EWC 200101 Paper	10516.62	31%
EWC 200103 Plastic	2023.17	6%
EWC 200138 Timber / Wood / Green	8875.78	26%
EWC 150101 Recyclables	90.35	Less than 1%
EWC 160201 Scrap Electronics	78.44	Less than 1%
EWC 160103 Tyres	130.64	Less than 1%
EWC 170407 Metal	2267.10	7%
EWC200108 Composting	240.89	Less than 1%
EWC 200102 Glass	559.56	2%
EWC 200104 Farm Plastic	47.12	Less than 1%
TOTAL	34008.39 tonnes	40% of total waste in was
		recycled for 2006

Table 2.6.4: Breakdown of recycling waste out details for 1st January – 31st December 2006

### **WASTE IN**

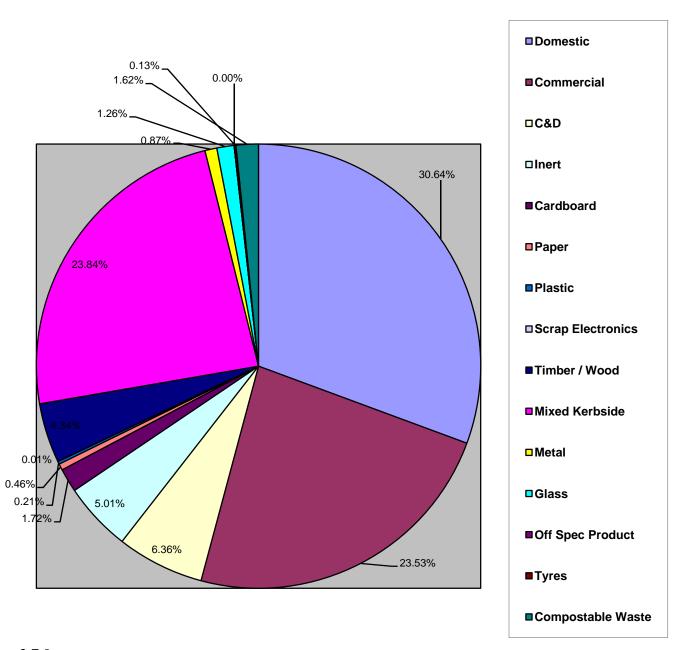


Figure 2.7.0: Breakdown of Waste Received on site from  $\mathbf{1}^{st}$  January  $\mathbf{2007} - \mathbf{31}^{st}$  December 2007

Waste in for 2007: Table of quantities by waste type

WASTE TYPE	WASTE IN (tones per annum)
EWC 200301 Domestic	28840.92
EWC 200100 Commercial	22150.64
EWC 170100 C & D	5988.48
EWC 200202 Inert	4720.19
EWC 200101 Cardboard	1621.48
EWC 200101 Paper	436.96
EWC 200103 Plastic	193.75
EWC 160201 Scrap Electronics	5.46
EWC 200138 Timber / Wood / Green	4082.74
EWC 150101 Mixed Kerbside Recyclables	22440.51
EWC 170407 Metal	817.07
EWC 170202 Glass	1181.63
EWC 160304 Off Spec Product	4.60
EWC 200108 Food Waste	1525.88
EWC 200201 Garden & Park Waste	
EWC 200304 Sludge	
Compostable materials	
EWC 160103 Tyres	120.96
TOTAL	94,131.27

Table 2.7.1: Total Wastes Incoming 1<sup>st</sup> January 2007 – 31<sup>st</sup> December 2007

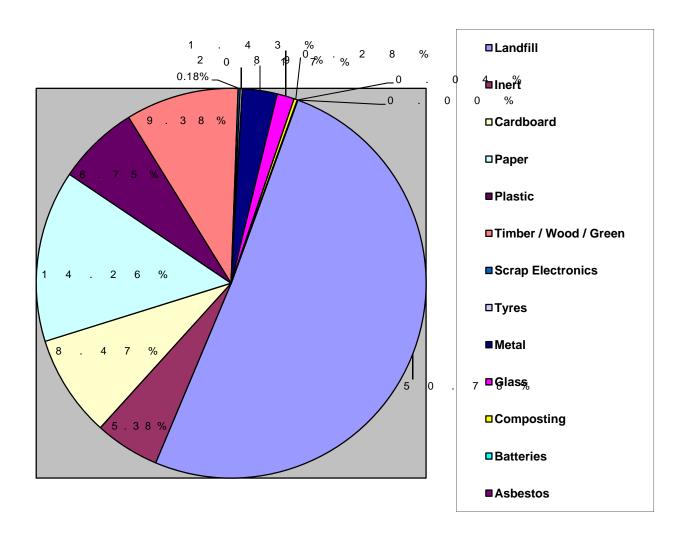


Figure 2.7.2: Breakdown of Waste going off site for Recovery or Disposal from  $1^{\rm st}$  January  $2007-31^{\rm st}$  December 2007

Waste out for 2007: Table of quantities by waste type

WASTE TYPE	WASTE OUT (tones per annum)
EWC 191212 Mechanically treated mixed	44558.56
waste for landfill (Commercial / Domestic)	
EWC 200202 Inert	4720.19
EWC 200101 Cardboard	7431.38
EWC 200101 Paper	12512.83
EWC 200103 Plastic	5927.02
EWC 200138 Timber / Wood / Green	8230.50
EWC 160201 Scrap Electronics	154.38
EWC 160103 Tyres	151.76
EWC 170407 Metal	2534.82
EWC 200102 Glass	1253.18
EWC 160601 Batteries	33.34
EWC 170605 Asbestos	3.38
EWC200108 or EWC 200304	1443.65
Compostable Material	
TOTAL	88954.99

Table 2.7.3: Total Wastes Outgoing 1st January 2007 – 31st December 2007

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2007:

WASTE TYPE	RECYCLING	% OF TOTAL
(Recyclable materials only)	(tones per annum)	RECYCLING
EWC 200202 Inert	4720.19	10%
EWC 200101 Cardboard	7431.38	17%
EWC 200101 Paper	12512.83	28%
EWC 200103 Plastic	5927.02	13%
EWC 200138 Timber / Wood / Green	8230.50	19%
EWC 160201 Scrap Electronics	154.38	Less than 1%
EWC 160103 Tyres	151.76	Less than 1%
EWC 170407 Metal	2534.82	6%
EWC 200102 Glass	1253.18	3%
EWC 160601 Batteries	33.34	Less than 1%
EWC200108 or EWC 200304	1443.65	3%
Compostable Material		
TOTAL	44,393.05	47% of total waste in was recycled for 2007

Table 2.7.4: Breakdown of recycling waste out details for  $\mathbf{1}^{st}$  January  $\mathbf{2007} - \mathbf{31}^{st}$  December  $\mathbf{2007}$ 

#### **WASTE IN (2008)**

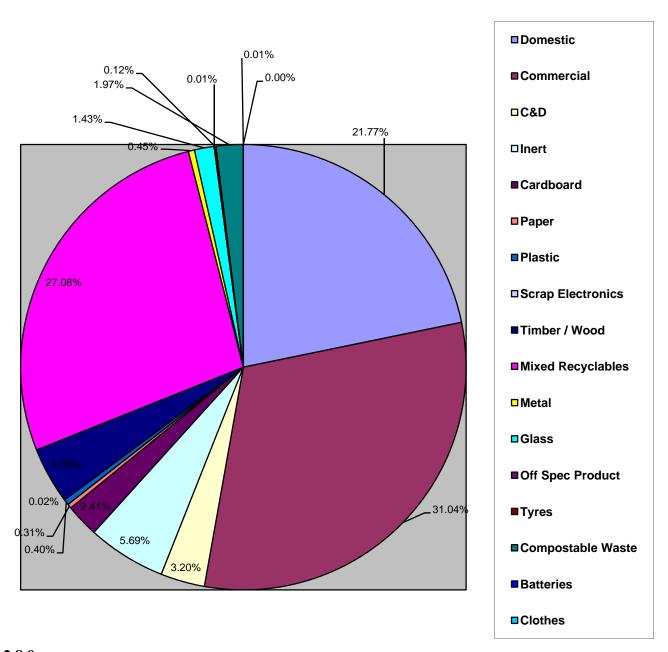


Figure 2.8.0: Breakdown of Waste Received on site from 1<sup>st</sup> January 2008 – 31<sup>st</sup> December 2008

Waste in for 2008: Table of quantities by waste type

WASTE TYPE	WASTE IN (tones per annum)
EWC 200301 Domestic	18539.17
EWC 200100 Commercial	26433.11
EWC 170100 C & D	2729.37
EWC 200202 Inert	4846.37
EWC 200101 Cardboard	2055.49
EWC 200101 Paper	267.90
EWC 200103 Plastic	344.76
EWC 160201 Scrap Electronics	16.00
EWC 200138 Timber / Wood / Green	3481.57
EWC 150101 Mixed Kerbside Recyclables	23064.37
EWC 170407 Metal	382.35
EWC 170202 Glass	1216.29
EWC 160304 Off Spec Product	2.56
EWC 200108 Food Waste	1674.44
EWC 200201 Garden & Park Waste	
EWC 200304 Sludge	
Compostable materials	
EWC 200110 Clothes	0.10
EWC 160601 Batteries	6.20
EWC 160103 Tyres	100.18
TOTAL	85,160.23 TONNES

Table 2.8.1: Total Wastes Incoming 1<sup>st</sup> January 2008 – 31<sup>st</sup> December 2008

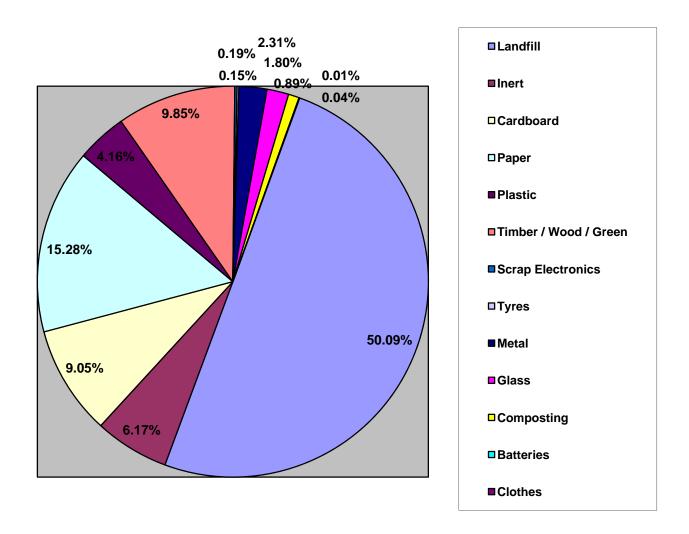


Figure 2.8.2: Breakdown of Waste going off site for Recovery or Disposal from  $1^{st}$  January  $2008-31^{st}$  December 2008

Waste out for 2008: Table of quantities by waste type

WASTE TYPE	WASTE OUT (tones per annum)
EWC 191212 Mechanically treated mixed	39362.81
waste for landfill (Commercial / Domestic)	
EWC 200202 Inert	4846.37
EWC 200101 Cardboard	7107.66
EWC 200101 Paper	12008.22
EWC 200103 Plastic	3272.20
EWC 200138 Timber / Wood / Green	7743.46
EWC 160201 Scrap Electronics	150.60
EWC 160103 Tyres	114.99
EWC 170407 Metal	1816.43
EWC 200102 Glass	1411.75
EWC 160601 Batteries	10.82
EWC 200110 Clothes	35.26
EWC 170802 Gypsum / Plasterboard	264.70
EWC200108 or EWC 200304	699.78
Compostable Material	
TOTAL	78845.05

Table 2.8.3: Total Wastes Outgoing 1st January 2008 – 31st December 2008

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2008:

WASTE TYPE	RECYCLING	% OF TOTAL
(Recyclable materials only)	(tones per	RECYCLING
	annum)	
EWC 200202 Inert	4846.37	12%
EWC 200101 Cardboard	7107.66	18%
EWC 200101 Paper	12008.22	30%
EWC 200103 Plastic	3272.20	8%
EWC 200138 Timber / Wood / Green	7743.46	20%
EWC 160201 Scrap Electronics	150.60	Less than 1%
EWC 160103 Tyres	114.99	Less than 1%
EWC 170407 Metal	1816.43	5%
EWC 200102 Glass	1411.75	4%
EWC 160601 Batteries	10.82	Less than 1%
EWC 200110 Clothes	35.26	Less than 1%
EWC 170802 Gypsum / Plasterboard	264.70	Less than 1%
EWC200108 or EWC 200304	699.78	2%
Compostable Material		
TOTAL	39,482.24	46% of total waste in was recycled for 2008

Table 2.8.4: Breakdown of recycling waste out details for  $\mathbf{1}^{st}$  January  $2008-3\mathbf{1}^{st}$  December 2008

#### **WASTE IN (2009)**

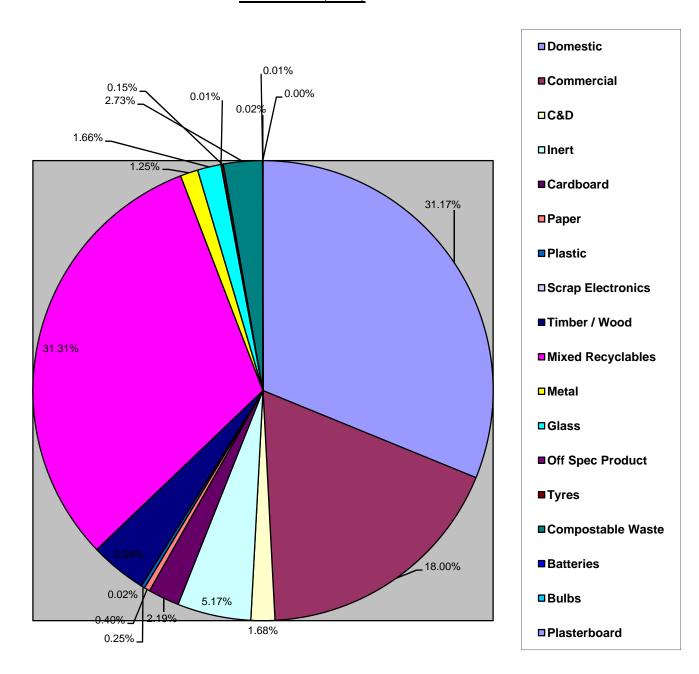


Figure 2.9.0: Breakdown of Waste Received on site from 1<sup>st</sup> January 2009 – 31<sup>st</sup> December 2009

Waste in for 2009: Table of quantities by waste type

WASTE TYPE	WASTE IN (tones per annum)
EWC 200301 Domestic	22356.82
EWC 200100 Commercial	12905.46
EWC 170100 C & D	1202.76
EWC 200202 Inert	3708.53
EWC 200101 Cardboard	1570.58
EWC 200101 Paper	289.72
EWC 200103 Plastic	180.09
EWC 160201 Scrap Electronics	14.88
EWC 200138 Timber / Wood / Green	2852.59
EWC 150101 Mixed Kerbside Recyclables	22451.12
EWC 170407 Metal	893.56
EWC 170202 Glass	1189.34
EWC 160304 Off Spec Product	6.70
EWC 200108 Food Waste	1960.91
EWC 200201 Garden & Park Waste	
EWC 200304 Sludge	
Compostable materials	
EWC 170802 Plasterboard / Gypsum	16.14
EWC 160601 Batteries	5.52
EWC 200121 Fluorescent Tubes	0.1
EWC 160103 Tyres	110.12
TOTAL	71,714.94 TONNES

Table 2.9.1: Total Wastes Incoming 1<sup>st</sup> January 2009 – 31<sup>st</sup> December 2009

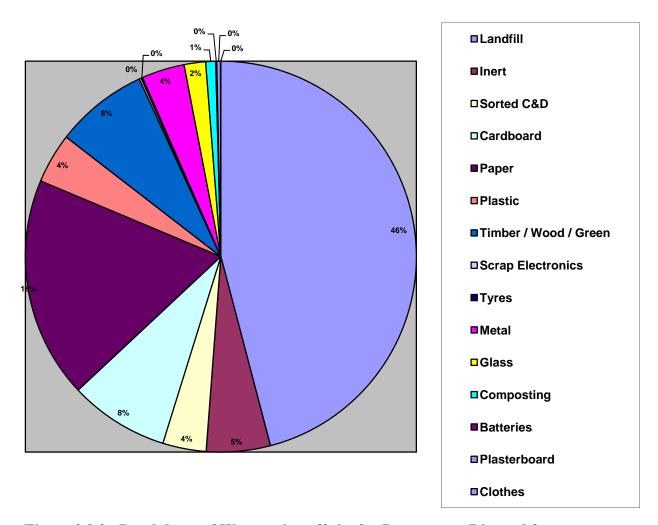


Figure 2.9.2: Breakdown of Waste going off site for Recovery or Disposal from  $1^{st}$  January  $2009-31^{st}$  December 2009

Waste out for 2009: Table of quantities by waste type

WASTE TYPE	WASTE OUT (tones per annum)
EWC 191212 Mechanically treated mixed	32188.23
waste for landfill (Commercial / Domestic)	
EWC 200202 Inert	6232.78
EWC 200101 Cardboard	5783.24
EWC 200101 Paper	12849.64
EWC 200103 Plastic	2906.97
EWC 200138 Timber / Wood / Green	5385.64
EWC 160201 Scrap Electronics	121.48
EWC 160103 Tyres	78.14
EWC 170407 Metal	2503.62
EWC 200102 Glass	1245.48
EWC 160601 Batteries	62.82
EWC 200110 Clothes	20.84
EWC 170802 Gypsum / Plasterboard	213.04
EWC200108 or EWC 200304	575.88
Compostable Material	
TOTAL	70167.80 tonnes

Table 2.9.3: Total Wastes Outgoing 1st January 2009 – 31st December 2009

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2009:

WASTE TYPE	RECYCLING	% OF TOTAL
(Recyclable materials only)	(tones per	RECYCLING
	annum)	
EWC 200202 Inert	6232.78	16%
EWC 200101 Cardboard	5783.24	15%
EWC 200101 Paper	12849.64	34%
EWC 200103 Plastic	2906.97	8%
EWC 200138 Timber / Wood / Green	5385.64	14%
EWC 160201 Scrap Electronics	121.48	Less than 1%
EWC 160103 Tyres	78.14	Less than 1%
EWC 170407 Metal	2496.44	7%
EWC 200102 Glass	1245.48	3%
EWC 160601 Batteries	62.82	Less than 1%
EWC 200110 Clothes	20.84	Less than 1%
EWC 170802 Gypsum / Plasterboard	213.04	Less than 1%
EWC200108 or EWC 200304	575.88	2%
Compostable Material		
TOTAL	37,972.39	53% of total waste in was
		recycled for 2009

Table 2.9.4: Breakdown of recycling waste out details for  $\mathbf{1}^{st}$  January  $2009 - 3\mathbf{1}^{st}$  December 2009

#### 2.9.5 Summary of Recycling Outlets used in 2009

Barna Waste are committed to finding new recycling markets in Ireland, Europe and Worldwide to ensure materials produced from the picking station and the other areas in our waste transfer station are sent to the best possible recycling outlets. All outlets for the materials going out have been approved in advance by the EPA. A summary of the major recycling outlets used for 2009 is included below:

MATERIAL / COMMODITY	MARKET / TYPE	
Metal	S.Nortons (Liverpool) – recycler	
	Galway Metal (Galway) – recycler	
	SIMMS Metal (England) - recycler	
Steel Cans	AWS (Newcastle) – broker	
	Global Material Recycling (Galway) – broker	
	WRC Recycling (Scotland) - broker	
Aluminium Cans	Leo Van Leeuwen (Holland) – recycling	
	WRC Recycling (Scotland) – broker	
	Global Material Recycling (Galway) – broker	
Timber (shredded)	Finsa Forest Products (Ireland) – end user	
	Weyerhaeuser Europe (Ireland) – end user	
	Greenstar (Galway) – end user	
	Galway City Council Composting Site – end user	
Paper / Cardboard / Newspaper	Highlander International (Glasgow) – broker	
	Peute Papier Recycling (Holland) – end user	
	Boost Recycling (England) – broker	
	Global Material Recycling (Galway) – broker	
Plastics	AWS (Newcastle) – broker	
	Highlander International (Glasgow) – broker	
	Leinster Environmentals (Dundalk) – broker	
	Global Materials Recycling (Galway) – broker	
	WRC Recycling (Scotland) – broker	
	WF Recycling (Cork) – end user / broker	
WEEE and Scrap Electronics	Immark Ireland Ltd (Ireland)	
	Global Material Recycling (Galway) – broker	
Glass	Tullagower Quarries (Ireland)	
	Glassdon Recycling (Antrim, Northern Ireland)	
Composting	Enviro-Grind (Ireland)	
	Galway City Council – Carrowbrowne Site	
Tyres	Ruane Tyre Recycling (Mayo)	
	OM Tyre Recycling (Northern Ireland)	
Inert Materials	Barna Waste (permitted site – Headford Road)	
Landfill Material	Connacht Residual Regional Landfill - Kilconnell	
	Ballydonagh Landfill - Athlone	
	Ballaghadereen Landfill – Roscommon	
	Derrinumera Landfill - Mayo	
	Rathroeen Landfill – Mayo	
Batteries	ENVA (Portlaoise)	
	Returnbatt (Kildare)	
Gypsum / Plasterboard	Gypsum Ireland (Dublin)	
Clothing / Textiles	Textile Recycling Ireland (Dublin)	

Table 2.9.5: Major recycling markets used in 2009

#### Paperwork / Certification for Recyclable Loads

Recycling certificates are requested and kept on file for most of the companies who take recyclable material from our site. These are requested on a monthly basis and are all on file in our offices. Details of all individual transactions of waste going off site are also available from our offices and paperwork for any individual load can be viewed on request. This paperwork includes weighbridge tickets, laydown / transfer documents and the annex vii forms which are required to accompany each waste movement. Loading pictures are normally available for materials loaded into containers for the export markets.

## 3.0 Report on the achievement of targets set out for:

- Biodegradable waste
- Packaging waste
- Recovery of C&D Waste
- Recovery of Household, Industrial and Commercial waste.

This section is included to update on the progress Barna Waste have made during the 2009 reporting period with regards to meeting our environmental targets. As stated in previous years it is the aim of the facility to meet the targets set out by the "Waste Management - Changing Our Ways" Policy Document which was published by the Department of the Environment and Local Government in 1998. The relevant targets set out in this document are as follows:

- A diversion of 50% of overall household waste from landfill within the next 15 years
- A minimum 65% reduction in biodegradable waste consigned to landfill within the next 15 years
- The development of waste recovery facilities employing environmentally beneficial technologies, as an alternative to landfill, including the development of composting and other feasible biological treatment facilities capable of treating up to 300,000 tonnes of biodegradable waste per annum within the next 15 years
- Recycling of 35% of municipal waste within the next 15 years
- Recycling at least 50% of C&D Waste within a five year period, with a progressive increase to at least 85% over the next 15 years

As can be seen from the results above the overall percentage for waste recycled is 53% of the total waste into our facility across the weighbridge for the reporting period. This is a 7% increase and therefore an improvement in performance compared to 2008.

During 2009 Barna Waste collected and processed over 22,400 tonnes of mixed recyclable material at our facility in Galway which was down approximately 500 tonnes compared to 2008. We believe this was down to the fact that simply less waste was presented for collection by our customers due to the economic climate in 2009. We do not expect the tonnage of recyclables collected to significantly change in the next few years and therefore to achieve the target of 50% diversion from landfill for household waste the brown bin for the separated collection of organic waste types is essential. Barna Waste will open its new composting facility at our site in Carrowbrowne at the beginning of 2010 and will immediately begin the distribution of brown bins to our domestic customers on a phased approach. The promotion of this new service will be a priority for the company during 2010 to ensure the success of the new process and repayment of our investment in the new composting facility. We have not set a target for 2010 on the amount of organic waste we hope to accept and process as this is dependent on the success of the pilot process and how quickly we are able to ramp up to full production. The speed and success of the pilot process will determine the tonnage we can accept during 2010. Following this pilot process we hope to be able to set tonnage targets for the next couple of years for both commercial and domestic organic waste.

In relation to the specific targets above Barna Waste's objective is to try and ensure that over the next couple of years all customers both domestic or commercial are offered the service where they are not required to place any organic / biodegradable waste into a bin destined for landfill. We can offer all customers a closed loop solution on this material where we will be the collector and end recycler of this material and we are confident customers will support these collections. As a company we will ensure there is a financial insentive for all customers to support this project and legislation will also help to force customers to take up this service.

The targets of a diversion of 50% of overall household waste from landfill within the next 15 years and a minimum 65% reduction in biodegradable waste consigned to landfill within the next 15 years in our opinion can be comfortably achieved assuming the expected success of our own composting plant. Barna Waste will be in a better position at the end of 2010 to update the authorities on how quickly we can achieve these targets once we have 12 months of actual data from our composting plant to use. Overall we are positive the targets for the next 15 years can / will be achieved and we hope that our facility will assist other companies to be able to offer the service to their customers and have an outlet for the material.

Barna Waste have also done some initial investigations into the possibility of installing a plant or finding a market as an alternative to landfill such as refused derived fuel. We have had discussions with a couple of companies in relation to this. One in relation to providing material which can be sorted and processed at our site then baled and be exported for treatment at an approved facility and another where we would invest in some plant / equipment and install it on site to allow us to produce this material internally. In doing this initial investigation we are recognising that we can help to achieve the targets of finding alternatives to landfill either locally or via the export market. We will continue to investigate these options and hope to run a pilot / trial on one of these alternative processes during 2010.

The targets in relation to C&D type waste have become difficult to monitor due to the significant drop in tonnages in relation to this type of waste. We experienced a drop of 1,500 tonnes from 2008 to 2009 due to the economic situation that has affected the building trade and therefore it is not clear if this trend will continue through 2010. However before the downturn the builders were all showing a willingness to separate waste at their sites both to help increase recycling and to save money. As a company our pricing structure for builders was designed to encourage recycling and we had seen a good increase in inert, timber and metal tonnages coming from building sites in recent years and therefore there is no reason to think that if the building trade picks up then recycling rates will only increase due to the costs the builders will be looking to save. The targets above are achievable assuming the trends that we did see continue when things get back to normal.

#### **Summary**

Generally as a company we are very comfortable that over the next 12 to 24 months we will see a significant rise in our recycling figures now that our composting facility is officially opening. We can now push ahead with plans to fully roll out the third bin system to all our domestic customers and to all our commercial customers who produce organic / biodegradable waste items. The targets detailed above for biodegradable waste should now be achieved by Barna Waste assuming the success of this new process when it reaches full production. At the end of 2010 we will have actual data to illustrate success towards these targets and we will ensure this data is used in next year's Annual Environmental Report. It is also our intention to pilot a new alternative to landfill during 2010 and assuming a successful trial of whatever process we decide to go with then during 2011 we would expect to be in full production or involved in exporting material for submission to an alternative waste option other than landfill. We are also aware alternative options may become available within Ireland in the next couple of years and we are monitoring that closely. The specific targets in relation to construction waste are harder to comment on due to the tough year in this industry but trends from previous years show that these targets should be achievable if this industry picks up again. Overall we are very comfortable now that we can go into production of compost and with the other facilities we have in Carrowbrowne that allow for the segregation and processing of recyclables we are now fully set up to ensure that the above targets will be achieved and we are very confident that over the next two years we will be able to demonstrate this with actual data. Our collection fleet and our facility are set-up to ensure these targets are achieved. Progress will be reported annually in the Annual Environmental Report.

## The following are our projected waste quantities for next year:

Table 3.0.1 outlines some projected waste quantities for the next reporting year and onwards.

**Table 3.0.1: Actual and Projected Waste Quantities** 

WASTE TYPE	TONNES PER ANNUM						
	2004	2004 2005 2006					
Household	19796.62	22134.78	29328.22	28840.92			
Commercial	17691.68	17874.97	16095.29	22150.64			
Construction and	12690.92	4594.86	6234.14	5988.48			
Demolition							
Others	19981.8	21526.33	33,489.19	35625.35			
Biowaste	aste 0		0	1525.88			
<b>Total</b> 71193.08		66130.94	85146.84	94,131.27			

WASTE TYPE	TONNES PER ANNUM						
	2008	2009	2010 (projected)	2011			
Household	18539.17	22356.82	22,000				
Commercial	26433.11	12905.46	15,000				
Construction and	2729.37	1202.76	2,000				
Demolition							
Others	35784.14	33288.99	40,000				
Biowaste	1674.44	1,960.91	5,000				
Total	85,160.23	71,714.94					

## 4. Site Infrastructure and Operational Changes

## 4.1 Existing Facility & Operations

The infrastructure and set-up of the existing Barna Waste facility is outlined below. Changes from last year's report are highlighted.

Phase 1 is the existing waste transfer building.

The existing site has been continually developed over the past ten years and at the end of the current reporting period was laid out as follows:

- Site Accommodation:
- 1) Canteens four staff canteens on site
- **2) Administration Offices** includes a weighbridge office adjacent to our two weighbridges and a larger administration office housing administration staff including Facility Manager, Operations Manager, Transport Manager and all Accounts and Sales staff.
- 3) Toilet Facilities toilets now in place at the front and rear of the facility
- 4) Changing Facilities locker rooms and changing facilities available for all our Operations staff.
- 5) First Aid Room fully stocked first aid room and trained first aiders at the site
- Two weighbridges (weigh in / weight out) system at the entrance of the facility incorporating weighbridge software

• Transfer building incorporating separate areas for:

**Section 1:** NON RECOVERABLE LANDFILL WASTE STORAGE **Section 2:** MIXED RECYCLABLES STORAGE (pre-picking station)

**Section 3:** PICKING STATION **Section 4:** BALING AREA

Section 5: WASTE QUARANTINE AREA Section 6: BACK UP BALING AREA Section 7: PAPER SHREDDING AREA

- The transfer building is equipped with adequate floor space to cope with the volume of waste and/or recyclables being handled at the facility. The building is split into two imaginary halves one side which handles the mixed general (non recoverable) waste and the other side of the building is used for managing the recyclable materials. Mixed general waste materials are sorted by hand and/or machine where possible to ensure any materials that can be recovered are salvaged before the load is sent to landfill. The floor is normally cleared at the end of each working day.
- Steel and Timber processing areas steel and timber are now processed within the new composting extension in separate bays. A member of staff is now designated to process these materials and maintain the machinery on a daily basis. This change has increased the efficiency of the facility greatly. Small amounts of steel and timber are still stored in the main transfer station because they are picked out of mixed deliveries and taken to the appropriate area at the end of each day. These changes have meant that no stockpiles of metal / timber have been allowed to build up on site in normal circumstances.
- End product storage shed an enclosed building for storing products which are produced via our picking station which keeps them dry and in the best possible condition for selling to potential buyers. Baling wire stock is also kept in this area.
- Maintenance building and maintenance yard for carrying out maintenance work and storing equipment. This section has a full time on site mechanic and fitter.
- Paint shop this area has been closed and we in the process on looking to find an alternative area on site where this process can be relocated to.
- Civic Amenity Site located at the front of our facility next to our weighbridge office the site is staffed during operational hours and allows the segregation of general waste, mixed recyclables, cardboard, glass, timber, stones, metal, clothes, batteries and all types of white goods and electrical items
- Picking station fitted with a ballistic separating machine, edicurrents and a magnet
- A temporary area outside for the processing of construction and demolition waste
- Composting Building construction of the actual composting building is now complete and we will be operational on a pilot basis in Q1 2010.
- Wash Bay this area is used for the washing of all trucks and mobile fleet, mobile plant and machinery within the facility and other equipment (such as bins / skips).

• Dock loading bays – the facility is now equipped with loading bays which allow containers to be backed up to the entrance to our storage shed for loading. This has almost halved the loading times of containers at the site and significantly reduced litter at this area of the site

## **EMS System**

The operation of our facility is supported by our EMS system. The documents within our EMS outline how we carry out our daily operations and contains the forms used to record information from our processes / activities. This system is constantly under review and every document is fully reviewed on an annual basis at least. This system is ISO 14001 accredited by the NQA. The company were audited during 2009 and successfully retained the ISO14001 certification.

Titles of all procedures and documents used at the facility at the end of 2009 are as follows:

# **BARNA WASTE - EMS Contents Listing**

1. BW/EMS/001	E.M.S. Manual
2. BW/EMS/002	
	Environmental Policy
3. BW/EMS/003	I.E.R
4. BW/EMS/004	Document Control Procedure
5. BW/EMS/005	Document Issuance Form
6. BW/EMS/006	Document Review Form
7. BW/EMS/007	Programme Review Form
8. BW/EMS/008	Aspects Register
9. BW/EMS/009	Records Management Procedure
10. BW/EMS/010	Env. Management Rep. Job Description
11. BW/EMS/011	Management Review Schedule
12. BW/EMS/012	Revision History Form
13. BW/EMS/013	Training Course Attendance Record
14. BW/EMS/014	Emergency Preparedness & Response Proc.
15. BW/EMS/015	Communications Procedure
16. BW/EMS/016	Waste Handling & Disposal Procedure
17. BW/EMS/017	Accident Report Form
18. BW/EMS/018	Health and Safety Equipment Issue Form
19. BW/EMS/019	Training Procedure
20. BW/EMS/020	Env. Records Index
21. BW/EMS/021	Employee Env. Feedback Form
22. BW/EMS/022	Approved Supplier Control Procedure
23. BW/EMS/023	OBSOLETE – Approved Supplier List
24. BW/EMS/024	EMS Programme List
25. BW/EMS/025	EMS Programme Management Procedure
26. BW/EMS/026	Emergency Response Team Seniority List
27. BW/EMS/027	Register of Environmental Legislation
(NOTE:- The above doc	ument is stored in its own folder)
28. BW/EMS/028	Register of Legislation Management Proc.
29. BW/EMS/029	EMS Audit Procedure
30. BW/EMS/030	Internal Audit Report Form
31. BW/EMS/031	Non Conformance Form
32. BW/EMS/032	Employee Details Form
	1 - J

33. BW/EMS/033	EMS Audit Schedule
34. BW/EMS/034	Emergency Contacts Listing
35. BW/EMS/035	Safety Statement Declaration Form
36. BW/EMS/036	Internal Environmental Checklist
37. BW/Ops/001	Organisation Chart
38. BW/Ops/002	Monitoring and Recording Schedule
39. BW Ops/003	Foul Water Discharge Meter Reading Form
40. BW/Ops/004	Waste Inspection Check Sheet
41. BW/Ops/005	Waste Processing Procedure
42. BW/Ops/006	
42. BW/Ops/000 43. BW/Ops/007	Housekeeping/Nuisance Inspection Procedure
-	Housekeeping/Nuisance Check Sheet
44. BW/Ops/008	General Monitoring Procedure
45. BW/Ops/009	Waste Profiling Form
46. BW/Ops/010	OBSOLETE – Bund Testing Results Form
47. BW/Ops/011	Bund Integrity Test Procedure
48. BW/Ops/012	Drainage, Bunds & Interceptor Check Sheet
49. BW/Ops/013	Env. Incident Investigation Form
50. BW/Ops/014	Env. Incident Investigation & Reporting Proc.
51. BW/Ops/015	Env. Complaints Form
52. BW/Ops/016	Env. Non-Compliance Form
53. BW/Ops/017	Env. Non-Compliance Procedure
54. BW/Ops/018	Residuals Management Procedure
55. BW/Ops/019	Incoming Checklist
56. BW/Ops/020	Outgoing Checklist
57. BW/Ops/021	Equipment Maintenance Procedure
58. BW/Ops/022	Equipment Maintenance Schedule/Checklist
59. BW/Ops/023	Picking Station Procedure
60. BW/Ops/024	Boston Scientific Procedure
61. BW/Ops/025	Medtronic AVE Materials Procedure
62. BW/Ops/026	Toolbox Training Document for Forklift Safety
63. BW/Ops/027	BBT Battery Charging (Health and Safety) Procedure
64. BW/Ops/028	Weekly Preoperational Checklist for Excavator Grab
65. BW/Ops/029	Weekly Preoperational Checklist for Forklifts
66. BW/Ops/030	Daily Preoperational Checklist for Loading Shovels
67. BW/Ops/031	BBT Noise Health and Safety Policy
68. BW/Ops/032	Permit to Dig Form
69. BW/Ops/033	Manual Handling Policy Procedure
70. BW/Ops/034	Number to be re-used no document
71. BW/Ops/035	Barna Waste Construction Works Safety Checklist
72. BW/Ops/036	Number to be re-used no document
73. BW/Ops/037	Barna Waste Facility Health and Safety Guidelines
74. BW/Ops/038	OBSOLETE - Barna Waste Fire Drill Guidelines
75. BW/Ops/039	Barna Waste Weekly Fire Equipment Checksheet
76. BW/Ops/040	Barna Waste First Aid Equipment Checklist
77. BW/Ops/041	Barna Waste Weekly Health and Safety Checklist
78. BW/Ops/042	Hot Works Permit Form
79. BW/Ops/043	Hot Works Procedure
80. BW/Ops/044	Machine – Permit to Work Form
55. 2 11/ Spar 5 11	Total Cities of the Cities Cities

81. BW/Ops/045	Still to be used missed in error
82. BW/Ops/046	Health and Safety Records Index
83. BW/Ops/047	Induction List for Visitors to Barna Waste
84. BW/Ops/048	Composting Waste Acceptance Form
85. BW/TRA/001	Training Versatility Chart
86. BW/TRA/002	BW Induction Process
87. BW/TRA/003	OBSOLETE - Employee Roll Call Listing
88. BW/TRA/004	OBSOLETE - Approved Forklift Drivers Listing
89. BW/TRA/005	Bin Lorry Lifting Equipment Training Procedure
90. BW/TRA/006	Health & Safety Equipment - Ear Muffs Fitting Instructions
91. BW/TRA/007	Health & Safety Equipment - Foam Plugs Fitting Instructions

## 4.2. Plant & Machinery / Road Fleet

The current plant either in use or available for use on site consists of the following which show that we have the appropriate back-up equipment in place should any of the day to day equipment we have on site break down.

This is the current list of equipment for the end of the 2009 reporting period:-

- 3 x large loading shovels for managing waste in the transfer area
- 3 x mini loading shovels for managing waste in the picking station bays / or main transfer station
- 5 x track machine excavators
- 3 x Liebherr grab machines for loading trucks and managing movements of waste
- 1 x Kabelco grab machine
- 4 x forklifts
- 2 x JCB Teletrucks (with clamps for lifting bales)
- 2 x Teleporters
- 1 x Electric Scissor Lift
- 1 x Finger Screener
- 3 x mobile trommels
- 1 x Extec Stone Shredder/Crusher
- 1 x Pre Shredder / Waste Reducing machine
- 1 x Shredder fitted with magnetic separator
- 1 x EXCEL Baler (with bottle piercer)
- 1 x Harris Twin-Ram Baler
- 1 x Metal baling machine
- 2 x Paper Shredding machines
- 2 x Picking Station Conveyers and 6 x Material Bunkers
- 2 x Ballistic Separating Machines
- 2 x Mobile road sweeper
- 2 x Fire Engines
- 1 x Diesel Tanker (used to fill all plant / machinery on site)
- 2 x Weighbridges with Computer system and software
- 1 x Power Washing Jetter Van
- 1 x Mobile Power Washer
- 3 x Cherry Pickers
- 1 x Hoist
- 10 x 45ft storage containers

The following is a list of our road fleet:

- 11 x artic trucks
- 2 x rigid tankers
- 20 x skip lorries
- 7 x hook bin loaders
- 7 x curtainsider collection / delivery vehicles
- 65 x rear end loaders (standard bin lorries)
- 40 x collection delivery vans / jeeps
- 22 x trailers
- 8 x 30m<sup>3</sup> ejector trailers for the transfer of waste
- 1 x sludge treatment tanker / dewatering unit
- 2 x glass collection vehicle
- 1 x food collection vehicle
- Container lift
- Tractor unit with Crane Attachment

The above list of plant / machinery provides us with the equipment to manage our busy waste transfer station and waste collections. The above list is not all in use 100% of the time and some of the equipment acts as backup in times where we suffer breakdown to ensure where possible there is no impact on production or collections. A Transport Manager is in place to ensure the collection fleet are well maintained and managed and our Operations Manager is responsible for ensuring maintenance and proper use of the machinery used within the transfer station. The management team are backed up by an onsite mechanic who repairs most defects in house. A washing programme for all trucks, machinery and equipment is in place to ensure the appearance of our equipment / fleet is always of a high standard. Only is cases of a serious malfunction would our collections or production be seriously affected. Barna Waste try to invest some of our annual budget each year towards the upgrading of the above list of plant and equipment and this was evident again in 2008. We will continue to implement this policy. We are comfortable that the above list of machines / plant are able to manage the volumes of waste we are collecting and processing while providing the appropriate level of backup in the case of breakdown.

## **4.3.** Proposed Future Developments

The facility in Carrowbrowne has constantly been upgraded over the past five years to meet the ever changing demands of the waste / recycling industry. The major project of constructing and getting our new composting process operational is complete and this part of our facility will open in January 2010. At present we have no plans as a company to develop the existing building any further over the next couple of years.

The major project for 2009 was to relocate the company administration offices and although this was not completed this project will also be completed in January of 2010 when all staff will move to the new offices. This project was delayed due to the flooding in November which caused some damage in the new building.

There are no details of any major developments to include in this year's AER as no definite plans are in place to upgrade the site. We are considering upgrades to the site which will see a building constructed for construction & demolition waste but that is on hold until we see how the construction industry recovers from the current recession. We have land available to the back of our existing site which is in the process of being filled and there are no plans in place on what to use this area for as yet.

In relation to the existing facility we will be installing a dust suppression system during 2010 throughout the facility to improve dust levels around the site and that will be the major project for 2010. The Agency will be updated if anything changes but as present there are no plans for significant developments during 2010.

# 5. Incidents and Complaints Summary

All environmental incidents and complaints are documented through the Environmental Management System (EMS) procedures on the following documents:

- Environmental Complaints Form (BW-OPS-015)
- Environmental Incidents Form (BW-OPS-013)

Any environmental non-compliances are recorded and documented by the EPA and are the responsibility of the Management Team to action.

Internal audits are also carried out as part of our ISO 14001 certification and continual improvement plans. Results of these are recorded on:

• Environmental Non-Compliances Form (BW-OPS-016)

All documented Complaints, Incidents or Non Compliances are recorded and kept on file as part of the EMS System and a file maintained of all open and closed records. Any complaints received will immediately be assigned to a member of the management team to find a solution / corrective action.

- There were no complaints submitted to the company of an environmental nature during this reporting period.
- There were no major environmental incidents to report during the reporting period.

#### 6. Nuisance and Emission Controls

Nuisance inspections are carried out on a daily basis by the Facility Manager or a delegate. Results are logged and are available for review at all times. These nuisance checks verify that there are no issues at the facility with regards to vermin, birds, flies, dust, housekeeping or odours.

We are pleased to confirm that having reviewed the nuisance results for 2009 there were no major issues to report. The problem with vermin that arose in 2008 was not an issue in 2009 and Ecolab done an excellent job controlling the vermin. We had no issues in relation to flies, birds, odours at the site. There were problems on different occasions with dust at the site but the introduction of the roadsweeper solved that problem and the company have plans in place to install a full dust control system during 2010 (Q1). Litter was also an issue on some occasions but this is not a problem as the company control litter in the corner of the site where it accumulates and manage it on a daily basis.

No other recurring nuisance issues arose during 2009 and overall results recorded were not a cause for concern.

## 7. Environmental Monitoring

The required monitoring programme at the Barna Waste Facility is set out in Schedule E of the Waste Licence. The reporting frequencies of reporting environmental monitoring data are indicated in Schedule C and D. The following monitoring was carried out for the reporting period:

- Surface & Foul Water Monitoring (carried out by Complete Lab Solutions) on the 29/01/2009.
- Surface & Foul Water Monitoring (carried out by Complete Lab Solutions) on the 26/06/2009.
- Surface & Foul Water Monitoring (carried out by Complete Lab Solutions) on the 23/07/2009.
- Surface & Foul Water Monitoring (carried out by Complete Lab Solutions) on the 21/10/2009.
- Dust Monitoring (carried out by Euro Environmental Services) in periods June to July 2009, August to September 2009 and September to October 2009. Dust pots left on site for approximately 30 days each time.
- Noise Monitoring (carried out by Euro Environmental Services) on 15/01/2009.

All monitoring was carried out as per the requirements of our EPA waste licence.

Complete Lab Solutions are employed as part of the Environmental Management Team to carry out and report on the Surface and Foul Water monitoring. We have on file all the relevant names and qualifications held by the people carrying out the testing on our behalf.

Euro Environmental Services are employed as part of the Environmental Management Team to carry out and report on the Dust and Noise levels on site. We have on file all the relevant names and qualifications held by the people carrying out the testing on our behalf.

Both companies will continue to monitor our facility during 2010.

## 7.1. Summary of Surface and Foul Water Results

Water Monitoring – Annual Summary

All surface and foul water monitoring was carried as per the schedule set out in EPA licence WL106-2 for 2009. The dates of the collection of the samples are as listed above. In addition to this schedule the Agency also take their own samples at periodic times during the year. Our main areas of concern in relation to water would be the water that discharges from our site to the stream at the back of our facility. Monitoring points SW1 and SW2 are used to monitor the emissions to the stream. There were no areas of concern to report from locations SW1 or SW2 during 2009 and all results were as expected for the stream. No chemicals, oils, litter or any type of contamination you would associate with our facility were evident in any of the stream samples. The sample results did show issues in relation to monitoring point SD1 which is our surface discharge point located between SW1 and SW2. Samples are taken directly from the pipe at SD1 before the water goes into the stream at the back of the facility and after it passes through our oil interceptor. In all four quarters of sampling in 2009 different levels of mineral oil were detected in the pipe at location SD1. The oil is not visible in the pipe or in the samples taken from the pipe in the collection bottles. The oil interceptor was checked and cleaned internally and no issues were found with the interceptor itself and it does appear to be doing its job. As a precaution Barna Waste surrounded the pipe which discharges this location to the stream with a bund to ensure if any traces of oil did escape the pipe they were contained within this area. Visual checks were carried out on a daily basis morning, midday and evening time to check the quality of the water and no visual evidence was apparent to suggest oil was leaking into the stream. This has been verified by the EPA sampler when he has been at the site. The bund remains in place within the stream and continues to be monitored daily. As a company we looked at every possible cause of these oil readings and we dug two large holes each about 8feet deep and 6 feet wide around the pipe to see if there was any evidence of oil contamination in the grass or soil around this area and these also showed up to be completely clean and free from contamination. These have been left open so they can also be viewed and checked on a regular basis. Therefore there is no apparent reason for these readings within location SD1 that we can see. We have discussed with the Agency water collection team and our Local Inspector and we will review with him the next time he visits the site. The interesting point to make is that the EPA water samples taken by their own people throughout 2009 at the very same location show absolutely no issues with mineral oil at this collection point. As a company we will continue to monitor this on a daily basis until the readings show nil however we believe we have taken every step possible to identify if there is a problem and have a mitigation in place with the bund in case of a leak but so far no evidence suggests that there has been. The other water monitoring point is at location FW1 where our foul water is discharged. There are no major concerns as this water is discharged directly to the adjacent leachate treatment lagoon operated by Galway City Council in the redundant landfill site and the water is treated before being discharged. Due to the use of the company wash bay for washing trucks and bins adjacent to our FW holding tank the readings in the tank for ammonium, sulphate and suspended solids have shown increased levels but these are all stored and treated in the lagoon and we have no major concerns over these results. We are looking into putting a treatment area / interceptor into our wash bay during 2010 so that the water from this area is pre-treated before being discharged.

## Water Sampling – Quarter 1 2009

Samples were collected by Complete Lab Solutions on 29/01/2009 as per the conditions of EPA licence WL106-2. Having studied the results and discussed them with Complete Lab Solutions the results at FW1 are over the specified limits from COD and BOD but as this water is treated in the leachate treatment lagoon there and no concerns with these results. Locations SW1 and SW2 in the stream were clear and within specification. Location SD1 showed a high reading of mineral oil but no contamination in the stream where it discharges and investigation into this result showed no obvious reason. We will continue to monitor this during Q2 to see if any reason for this result becomes evident. A bund has been placed in the stream to ensure any oil contamination that does escape is contained but so far there is no trace of oil showing in the stream.

## Water Sampling – Quarter 2 2009

Samples were collected by Complete Lab solutions on 26/06/2009 as per the conditions of EPA licence WL106-2. Having studied the results and discussed them with Complete Lab Solutions the results at FW1 are over the specified limits from COD and BOD but as this water is treated in the leachate treatment lagoon there and no concerns with these results. The results were similar to Q1 results. Locations SW1 and SW2 in the stream were clear and within specification. Location SD1 showed a trace of mineral oil which was a large reduction on the result in Q1. There was no evidence of contamination in the stream where it discharges and investigation into this result showed no obvious reason. We will continue to monitor this during Q3 to see if any reason for this result becomes evident.

## Water Sampling – Quarter 3 2009

Samples were collected by Complete Lab Solutions on 14/07/2009 and 23/07/2009 as per conditions of waste licence WL106-2. Having studied the results and discussed them with Complete Lab Solutions the results at FW1 are over the specified limits from COD and BOD but as this water is treated in the leachate treatment lagoon there and no concerns with these results. The results were similar to Q1 and Q2 results. Location SD1 showed a trace of mineral oil which was a similar result to what was recorded in Q2. There was no evidence of contamination in the stream where it discharges and investigation into this result showed no obvious reason. We will continue to monitor this during Q4 to see if any reason for this result becomes evident. The oil interceptor was cleaned and serviced during Q3 and no issues were identified with this equipment and the interceptor appeared to be doing its job. During Q4 we plan to dig the ground around this area to identify if oil is leaking from the pipe into the ground that could be causing this problem. At the end of Q3 despite investigations there appears no reason for the oil readings to be high. We have discussed this with the agency whose own sampling results continue to show no problem with the same location and we have agreed to continue with the bund in case of emergencies and to visually monitor the area on a daily basis.

## Water Sampling – Quarter 4 2009

Samples were collected by Complete Lab Solutions on 21/10/2009 as per the conditions of EPA licence WL106-2. Barna Waste have reviewed the results and discussed them with Complete Lab Solutions the results at FW1 are over the specified limits from COD and BOD but as this water is treated in the leachate treatment lagoon there and no concerns with these results. The results were similar to previous quarters of 2009. Even although this water is treated Barna Waste have asked Tobin Engineers to investigate and design a way of us pre-treating the water from the wash bay prior to discharge and we hope to implement this in Q1 of 2010 assuming it can be done. Location SD1 showed a trace of mineral oil which was a similar result to what was recorded in Q2 and Q3.

There was no evidence of contamination in the stream where it discharges and investigation into this result showed no obvious reason. We will continue to monitor this during Q4 to see if any reason for this result becomes evident. During Q4 we dug trenches close to the SD1 pipe to establish is the oil was coming from anywhere in the ground but both trenches although dug as deep as 8ft showed no trace of oil contamination and we have no idea why the pipe results are showing traces of oil. We have discussed with the Agency and our Local Inspector and we are going to review the next time he is on site. Overall we do not see a major problem in the area but we cannot explain why our own samplers continue to detect traces of oil yet EPA samples are always clean.

## 7.2. Summary of Dust Monitoring Results

# **Dust Monitoring – Annual Summary**

Dust monitoring was carried out on the dates listed above during 2009. The frequency and number of samples were all carried out as per the requirements of our EPA licence WL106-2. Barna Waste have always recognised that dust controls at the site need to be improved and had planned to install a dust control system during 2009 but this did not happen but will definitely be completed by the end of Q1 2010. The equipment for this has been purchased and will be on site before the end of February 2010. Daily roadsweeping at the site has ensured road surfaces are always in good condition and that the dust on site does not affect areas that are not under cover. The daily sweeping programme and appointment of people to look after specific areas has seen dust levels significantly improve during 2009 and this was reflected in our monitoring results. Dust results for July to August 2009 and for August to September were perfect and were within the specified licence limits for all locations. The report for dust monitoring for September / October were within specification with the exception of one location at D4 which is adjacent to out civic amenity site at the front of our facility. The dust pot here is attached to the wall and the approach road is a busy road with vehicles accessing the halting site opposite and the Galway City Council composting facility. Although this road is in good repair it is not swept on a regular basis unlike our own civic amenity site and therefore we are assuming that dust levels recorded in this area were as a result of external traffic / activities. The civic amenity site is swept daily and is always in excellent condition and therefore we are comfortable that we did not influence the results in this area. Overall dust results for 2009 were very positive and a significant improvement on 2008 results.

## Dust Monitoring – JULY / AUGUST 2009

Dust Monitoring was carried out by Euro Environmental Services as per the requirements of EPA licence WL106-2. Sampling pots were left on site on 26/06/2009 and removed on 24/07/2009 for analysis. The results showed that all locations were within the specified limits although the result at location D1 was contaminated heavily by bird droppings. There were no issues or corrective actions required because of the positive results.

## Dust Monitoring – AUGUST / SEPTEMBER 2009

Dust Monitoring was carried out by Euro Environmental Services as per the requirements of EPA licence WL106-2. Sampling pots were left on site on 26/08/2009 and removed on 23/09/2008 for analysis. The results for this period were all within specification and no corrective actions were required.

## Dust Monitoring – SEPTEMBER / OCTOBER 2009

Dust Monitoring was carried out by Euro Environmental Services as per the requirements of EPA licence WL106-2. Sampling pots were left on site on 23/09/2009 and removed on 23/10/2009 for analysis. During this period locations D1, D2, D3 were all within the specified limits as in previous sampling periods for 2009. However location D4 was slightly outwith the specified licence limits on this occasion. The dust pot here is attached to the wall and the approach road is a busy road with vehicles accessing the halting site opposite and the Galway City Council composting facility. Although this road is in good repair it is not swept on a regular basis unlike our own civic amenity site and therefore we are assuming that dust levels recorded in this area were as a result of external traffic / activities. The civic amenity site is swept daily and is always in excellent condition and therefore we are comfortable that we did not influence the results in this area. Overall dust results for 2009 were very good and a significant improvement on 2008.

## 7.3. Summary of Noise Monitoring Results

## Noise Monitoring Results - Annual

Noise Monitoring was carried out by Euro Environmental Services as per the requirements of EPA licence WL106-2. This year's survey was carried out on 15<sup>th</sup> January 2009. As required by the licence we monitored noise levels at two sensitive locations one on the site boundary nearest the major processing area and the second at the nearest residence to our facility. Locations are known as N1 and N2. Monitoring results at the locations N1 (on site) & N2 (off site) show that the noise levels exceeded the required limit mainly due to the movement of vehicles in and out of the transfer station and on the main road. Operational noises did have an impact on the results at N1 however the major factor was the vehicles passing close to the monitoring location and this is shown by the peaks in the recordings during the monitoring period. We have no control over vehicle noise as traffic must come and go from the facility as required. The reports have highlighted no concerns in relation to operational noises or nuisance caused by noise that would cause issues to neighbours or near-by businesses and this theory is supported by the fact that we have no complaints in relation to noise throughout 2009 even although the halting site which has residents on site permanently is only a few yards from our front gate and our site is operational some evenings until 11pm. As a result we do not believe any investigation or corrective action to be necessary as a result of this year's noise monitoring.

## 7.4. Monitoring Locations

A map of the monitoring locations at the site is attached as an appendix to this report.

## 8.0. Foul Water Discharge

As required by schedule G of our EPA waste licence this section details the foul water emission levels for the current reporting period. Readings of foul water emissions are taken on a daily basis by the Facility Manager and results are logged and kept on file. Details of the volumes of surface water discharged during the reporting period are below.

## Total wastewater discharged via FW1 for 2009 (approximately): 9,971,000 litres

These results are available for review on request and are recorded on a daily basis.

# 9. Resource and Energy Consumption Summary

The main resources consumed at the facility during the reporting period were electricity, diesel fuel and water. A summary of the significant resources consumed are tabulated below with a summary of the principal resource consumption.

**Table 9.1: Principal Areas of Resource Consumption** 

Area of Use	Purpose	Principal Resource
	_	Consumed
Site Plant	Moving and processing of	Diesel, hydraulic oils
	wastes and our fleet of on	
	the road vehicles used for	
	the collection and disposal	
	of waste	
Site Operations	Road sweeper for	Water
	maintenance of road	
	surfaces and wash bay hose	
	for washing bins, trucks	
Odour Controls	Used on an as required	Chemical – diluted with
	basis if any odours are	water
	detected at the facility	
Offices	Administration &	Electricity
	Management of the facility	
	usage of electricity for	
	computers, phones etc	

Table 9.2: Usage of Energy and Resources, 1st January 2009 – 31st December 2009

Resource	Consumption for Reporting Period			
Site Management				
Odour Control Chemicals	Approximately 20 litres			
Electricity	2009: 1,392,552 (KW)			
•	2008: 1,304,972 (KW)			
	2007: 817,982 (KW)			
	2006: 71,689 (KW)			
	2005: 117,174 (KW)			
	2004: 120,900 (KW)			
Diesel Fuel	900,000 (litres approx) including our fleet			
	of on the road vehicles			
Hydraulic Oils	61,000 (litres approx)			

## 10. Tank, Pipeline and Bund Testing and Inspection Report

This work was carried out during 2008 and details were included in the 2009 AER submission and there was no requirement to carry out a survey again during this reporting period and therefore there is nothing to document in this section.

## 11. Financial Provision for the Facility

Financial provision for the company is outlined in our Environmental Liabilities Risk Assessment report which was prepared by Tobin Consulting Engineers. This was submitted and accepted by the EPA. There were no changes to the Financial Provision of the site during this reporting period.

Full details of the calculations carried out to reach the final figure are detailed in the report but were made using the formulae outlined in our EPA licence WL106-2.

The final bond figure agreed under the new financial provision is €430,000 and this was unchanged following a review of the ELRA report during 2009.

## 12. Management Structure at the Facility

A current company organisation chart is included in the company EMS system and a current copy is attached to this report as an appendix. There have been no significant changes to the Management Structure at the company during this reporting period. We believe the structure we have in place to be adequate for running an operation of this size and we have Managers in place responsible for all key areas of the business.

#### 13. Public Information

All official records kept by Barna Waste under the terms of our EPA licence or in relation to any of our activities from either our collection activities or at the transfer station are available to any member of the public on request from our offices.

The Facility Manager is the contact person for any requests for information in relation to company records.

All requests by the public or any other interested party for information will be answered as a priority.

## 14. Environmental Management Plan & Environmental Management Programme

It is the purpose of the Environmental Management Plan (EMP) to set out the procedures necessary to meet the licence conditions. Specifically, the EMP is designed to:

- 1) Detail the methods by which the objectives and targets will be achieved in the coming year and the designation of responsibility for targets
- 2) Any other items required by written guidance issued by the agency

Barna Waste have produced a new EMP for 2010 which is a combined document along with our Schedule of Targets and Objectives. These updates are being submitted to the EPA alongside this Annual Environmental Report. The EMP details clearly the progress Barna Waste has made in all areas during this reporting period and outlines the major tasks ahead during the new reporting period.

#### 15. AER / PRTR Emissions Data for 2009

The EPA requires Barna Waste to complete an annual return called an AER / PRTR Emissions Data report where we declare both emissions data from our facility for the reporting period and declare tonnages of waste received at our facility. The tonnage data is already included in full in section two of this report.

This report is to be included in the company's full AER for the reporting period starting from 2008 onwards and therefore a full copy of the 2009 AER / PRTR Emissions Report has been added to this report and is attached as appendix C. The AER / PRTR is attached in full.

#### 16. Full PDF AER

The EPA's new reporting requirements introduced for 2008 have been designed to ensure public access to information is improved and therefore a full copy of this AER in PDF format has now been uploaded to the Agencies website where it is available in full for review via the internet.

Full paper copies of the AER including the PRTR have been submitted to the EPA's Castlebar Office and are also available for Barna Waste directly on request.

## **Final Comments**

This year's Annual Environmental Report has been compiled in the same format as previous years to keep it consistent. All figures and updates quoted are specifically for the 2009 reporting period unless otherwise stated in the particular section of the report. All information listed in schedule G of our EPA Waste Licence WL106-2 has been included somewhere in this report.

The intention of this report is to give the reader a detailed outline of the activities carried out by Barna Waste during 2009 in all areas of the business. We believe this report achieves this successfully. However Barna Waste welcome constructive feedback on this report from any source and will endeavour to make any changes requested by customers, the Agency or members of the public in order to improve the reports.

Updates on any of Barna Waste's activities are available at anytime during the year from our main offices in Carrowbrowne. Contact should be made with the Facility Manager.

A full copy of this report will also be made available on request to any person who requests it.

#### **Appendices**

The following documents have been requested by the Agency and are attached to this document and form part of the final report:

Appendix A: Company Organisation Chart
Appendix B: Map of site monitoring locations

Appendix C: PRTR Report for 2009

# **Next Submission**

The next submission of this report is due on 31st January 2011.

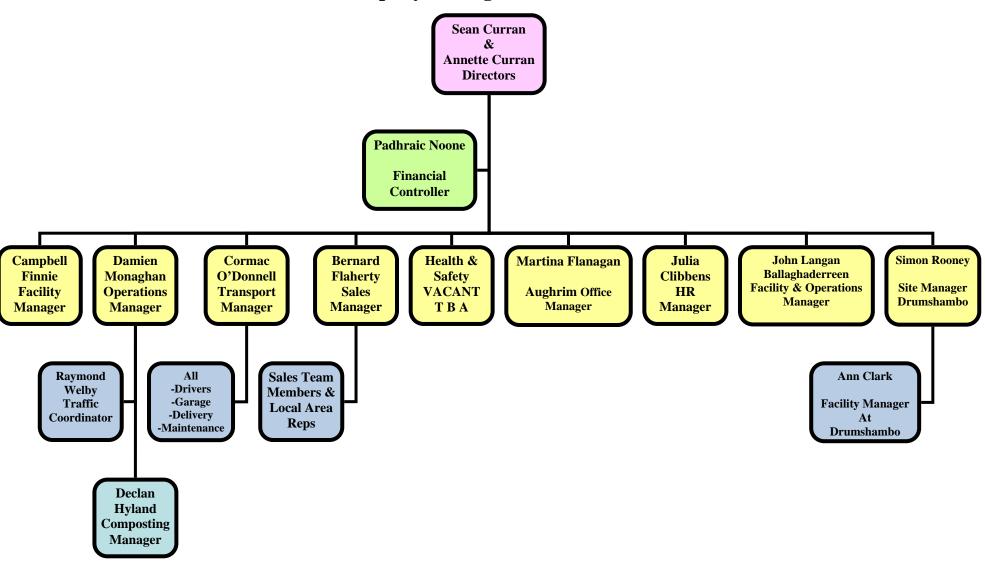
# **Contacts**

Any issues, questions or requests for additional information with regards to this report can be requested from Campbell Finnie (Facility Manager).

**Appendix A:**Company Organisation Chart

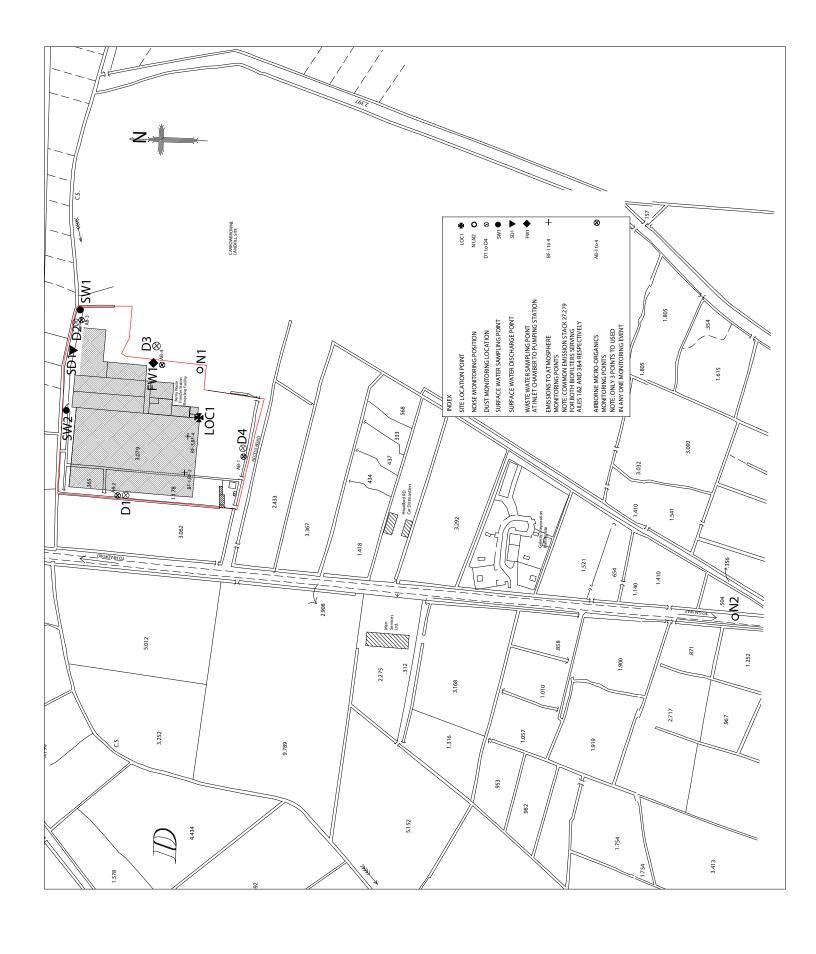
# **BARNA WASTE**

**Company Management Structure** 



BW-OPS-001 REV 13 18/01/2010

**Appendix B:** Map of site monitoring locations





**Appendix C:** PRTR Report for 2009



# **AER Returns Worksheet**

Version 1.1

# REFERENCE YEAR 2009

#### 1. FACILITY IDENTIFICATION

III AGIENT IDENTIFICATION	
Parent Company Name Brus	scar Bhearna Teoranta
Facility Name Brus	scar Bhearna Teoranta
PRTR Identification Number W01	106
Licence Number W01	106-02

#### Waste or IPPC Classes of Activity

Waste or IPPC Classes of Activity				
No.	class_name			
	Storage prior to submission to any activity referred to in a preceding			
	paragraph of this Schedule, other than temporary storage, pending			
3.13	collection, on the premises where the waste concerned is produced.			
	Blending or mixture prior to submission to any activity referred to in a			
3.11	preceding paragraph of this Schedule.			
	Repackaging prior to submission to any activity referred to in a			
3.12	preceding paragraph of this Schedule.			
	Exchange of waste for submission to any activity referred to in a			
4.12	preceding paragraph of this Schedule.			
	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			
4.13	produced.			
	Recycling or reclamation of organic substances which are not used			
	as solvents (including composting and other biological transformation			
4.2	processes).			
4.3	Recycling or reclamation of metals and metal compounds.			
	Recycling or reclamation of other inorganic materials.			
	Carrowbrowne			
Address 2	Headford Road			
Address 3	Galway			
Address 4				
Country				
Coordinates of Location				
River Basin District				
NACE Code				
	Treatment and disposal of non-hazardous waste			
AER Returns Contact Name				
AER Returns Contact Email Address				
AER Returns Contact Position				
AER Returns Contact Telephone Number AER Returns Contact Mobile Phone Number				
AER Returns Contact Mobile Phone Number AER Returns Contact Fax Number				
Production Volume				
Production Volume Units				
Number of Installations				
Number of Operating Hours in Year				
Number of Employees				
User Feedback/Comments				
Web Address				
Treb Address				

#### 2. PRTR CLASS ACTIVITIES

Z. FRIR CEASS ACTIVITIES			
Activity Number	Activity Name		
	Installations for the disposal of non-hazardous waste		
5(c)	Installations for the disposal of non-hazardous waste		
50.1	General		

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

0. 002 12 11 10 112 002 71 10 110 (0.11 110: 0+0 0) 21	,02)
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 ?	

#### SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		METHOD			QUANTITY				
				Method Used					
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

<sup>\*</sup> 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								
P	DLLUTANT			METHOD	QUANTITY				
		Method Used							
No. Annex I	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (A	ccidental) KG/Year	F (Fugitive) KG/Year
					0.0	)	0.0	0.0	0.0

<sup>\*</sup> 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								
PC	LLUTANT		M	ETHOD	QUANTITY				
				Method Used					
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	
					0.1	1	0.0	0.0	

<sup>\*</sup> 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) KGlyr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

I andfill:	Bruscar Bhearna Teoranta

Please enter summary data on the quantities of methane flared and / or utilised			Meti	nod Used		•
l.				Designation or	Facility Total Capacity m3	
	T (Total) kg/Year	M/C/E	Method Code	Description	per hour	
Total estimated methane generation (as pe						
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	

#### 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 only concerns Releases from your facility

	RELEASES TO WATERS								
POI				QUANTITY					
				Method Used					
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

<sup>\*</sup> 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							
PO	LLUTANT						QUANTITY	
				Method Used				
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

<sup>\*</sup> 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									
POI	LUTANT				QUANTITY					
				Method Used						
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		

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

#### SECTION A : PRTR POLLUTANTS

	DFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREAT	MENT OR	SEWER									
	POLLUTANT		M	ETHOD		QUANTITY						
				Method Used								
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				

<sup>\*</sup> 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)

SECTION B : REMAININ	IG POLLUTANT EMISSIONS (as required in your Licence) OFFSITE TRANSFER OF POLLUTANTS DESTINED F	OR WASTE-WATER TREATMENT OR	SEWER					
	POLLUTANT		METH	OD			QUANTITY	
				thod Used	FW1			
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
			ISO 17025 - Standard					
			Methods for the Examination of Water					
			and Wastewater",					
314	Fats. Oils and Greases	м	21ed, 2005		124.638	124.638	0.0	0.0
314	rais, Oils and Greases	IVI	ISO 17025 - Based on		124.630	124.036	0.0	0.0
			USEPA approved Had					
306	COD	M	Method 8000	'	12261.837	12261.837	0.0	0.0
300	000		ISO 17025 - Standard		12201.007	12201.007	0.0	0.0
			Methods for the					
			Examination of Water					
			and Wastewater",					
303	BOD	M	21ed, 2005		4295.008	4295.008	0.0	0.0
			ISO 17025 - Methods					
			for the Examination of					
			Waters and Associated					
0.40	0.11.4		Materials" published by	<b>'</b>	4040.000			0.0
343	Sulphate	M	the HMSO (UK)		1243.633	0.0	0.0	0.0
			ISO 17025 - Standard Methods for the					
			Examination of Water					
			and Wastewater",					
240	Suspended Solids	M	21ed, 2005		5698,427	0.0	0.0	0.0
2.0	Casponaca Conac		2.00, 2000		0000.121	0.0	0.0	0.0
			ISO 17025 - Methods					
			for the Examination of					
			Waters and Associated	l e				
			Materials" published by	·				
238	Ammonia (as N)	M	the HMSO (UK)		166.578	166.578	0.0	0.0

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

#### SECTION A: PRTR POLLUTANTS

SECTION ATTENDED TANKS	R	ELEASES TO LAND						
	POLLUTANT			METH	OD		QUANTITY	
				Me	ethod Used			
No. Annex II	Name	N	Λ/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
						0	10	0.0

<sup>\*</sup> 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		N	METHOD			QUANTITY					
				Method Used								
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year					
						0.0	0.0 0.0					

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

	European Waste		Quantity (Tonnes per Year)		Waste Treatment		Method Used	Location of	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 / Disposet (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
Transfer Destination  Within the Country	Code	Hazardous	5393.28	Description of Waste	Operation R3	M/C/E	Method Used  Weighed	Treatment  Offsite in Ireland	Finsa Forest Products Connacht Residual Regional Landfill & Weyerheauser Europe Ltd ,EPA IPC Licence Number 22 (Finsa Forest Products) Licence Number EPA 178/1 (Connacht Residual Regional Landfill) Licence Number IPC 593 (Weyerheauser Europe Ltd)	Finsa Forest Products Scariff Co. Clare Ireland,Connacht Residual Regional Landfill Killconnell Co.Galway Ireland,Weyerheauser Europe Ltd Redmondstown Clonmel Co. Tipperary "Ireland		
	19 12 01	No		Paper and Cardboard	R12	М	Weighed	Abroad	Peute Papier Recycling (End User) Highlander International (Broker) Global Material Recycling (Broker) Marwin Environmental Trading Ltd (Broker) Greenguard (Broker) Boost Recycling (Broker),DO 02.2017 MDO (Peute Papier	Peute Papier Recycling Veerplaat 40 3313 LJ Dordrecht Netherlands / Highlander International Ltd Highlander House 1 Teign Grove East Kilbride Glasgow G75 8UZ United Kingdom, Global Material Recycling Mullaghdrum Corrundulla Co. Galway Ireland, Marwin Environmental Trading LtdRubicon Centre CIT Campus Bishopstown Co. Cork Ireland /		
To Other Countries	19 12 04	No	2842.67	Plastic	R12	М	Weighed	Abroad	Alternative Waste Solutions(AWS) WRC Recycling Global Material Recycling (Broker) WF Recycling Ltd Leinster Environmental (Broker) Highlander International (Broker) / Irish Farm Film Producers Group, YNA/838807/CB (AWS) IRE/G068/08 (WRC Recycling) IRE/G013/08 (Global Material Recycling) Cork County Council 01/09 (WF Recycling Ltd) WP 2004/30 (Leinster Environmental) SCO/044794/CB (Highlander International) Irish Farm Film Producers Group - No licence	Kilbride Glasgow G75 8UZ		

									Constant Project Project	
									Connacht Residual Regional	
									Landfill Ballydonagh Landfill	0 10 11 10 1 1
										Connacht Residual Regional
										Landfill Kilconnell
										Co.Galway
									(Connacht Residual Regional	
										Ballydonagh Dublin Road
										Athlone Co. Westmeath
										Ireland,Ballyaghadereen
									Licence Number EPA	Landfill Aghalustia Townland
									Licence: 59/2	Ballaghaderreen Co.
									(Ballaghadereen Landfill) &	Roscommon
									Licence Number EPA	Ireland, Derryclure Landfill
				Mechanically Treated Mixed Waste for					Licence: W029/02	Portlaoise Road Tullamore
Within the Country	191	2 12	No	32188.23 Landfill (Commercial & Domestic)	D15	M	Weighed	Offsite in Ireland	(Derryclure Landfill)	Co. Offaly, Ireland
									Ruane Tyre Recycling OM	
									Tyre Recycling & Galway	
										Ruane Tyre Recycling Balla
										Co.Mayo Ireland, OM Tyre
										Recycling Chapel Hill Road
										Mayobridge Newry Co.
										Down Ireland, Galway Metal
										Recycling Oranmore
Within the Country	160	1 03	No	78.14 End of Life Tyres	R12	М	Weighed	Offsite in Ireland		Co.Galway,.,Ireland
	100			. 3.1 1 2.13 3. 2.10 1 ,100	2		7.0.g50	C.I.G.LO III II GIGITIG		52 Creagh
									Glassdon Recycling ,Licence	
Within the Country	191	2.05	No	1245.48 Glass	R12	М	Weighed	Offsite in Ireland		eland
within the Country	19	2 00	INU	1240.40 Glass	NIZ	IVI	vveigneu	Onsite in neland		S.Norton & Co Ltd Bankfield
									S.Norton & Co Ltd (Recycler)	
									Galway Metal ,NSO / 543946	
									or WML 195/02/M01 (S.Norton & Co Ltd) WR/05-	8RQ,Galway Metal Company
To Other Countries	- 101	2.02	No	1853,81 Mixed Metal	R12	М	Weighed	Abroad		,,,,Ireland
To Other Countries	5 191	2 03	INO	1000.01 Wilked Wetai	K1Z	IVI	weighed	Abioau		Crown Works, Anne
										Road,Smethwick West
										Midlands ,B66 2NZ ,United
To Other Countries	s 17 (	4 11	No	95,95 Electrical Cables	R12	М	Mojahod	Abroad		Kingdom
To Other Countries	5 17 (	4 11	INO	95.95 Electrical Gables	KIZ	IVI	Weighed	Abioau	The state of the s	Carrowbrowne, Headford
Within the Country	20 0	2.02	No	6232.78 Rubble/Inert Materials	R5	М	Weighed	Onsite in Ireland		Road, Galway, , Ireland
within the Country	200	2 02	140	0232.76 Rubble/Illeft Waterials	11.5	IVI	Weighed	Offsite III Ireland		Auchans Road
									, , ,	,Houston,Johnstone
										Renfrewshire, PA6
To Other Countries	s 20 0	1 39	No	64.3 Plastics	R12	М	Weighed	Abroad		7EE, United Kingdom
										· ==, • · · · · · · · · · · · · · · · · · ·
										Marwin Environmental
										Trading Ltd Rubicon Centre
										CIT Campus Bishopstown
										Co.Cork Ireland, Galway
										Metal Recycling Oranmore
										Co. Galway Ireland,WRC
										Recycling Auchans Road
										Houston Johnstone
										Renfrewshire PA67EE
										United Kingdom,AWS Unit 2
										Britannia Business Park
										Point Pleasant Industrial
										Estate Wallsend Newcastle-
									,	
										Upon-Tyne United Kingdom /
										GMR Ltd Mullaghdrum
										Corrundulla Co. Galway
									(AWS) IRE/G013/08 (GMR)	
To Other Countries	150	1.04	No	EE2 96 Stool/Aluminium Cons	D12	M	Moighed	Abroad	Licence Number 340257 (Leo	
To Other Countries	5 10 (	1 04	No	553.86 Steel/Aluminium Cans	R12	М	Weighed	Abroad		BN Rotherdam, Netherlands
									Galway City Council – Carrowbrowne	
									Landfill,Licence number EPA	Headford
Within the Country	20.0	1.08	No	359.12 Food Waste	P12	М	Weighod	Offsite in Ireland		
viulin ale Country	20 (	1 00	INU	JJJ. IZ FUUU WASIE	R12	IVI	Weighed	Onsite in Ireland	LIGHTLE 13-1	Road,,,Co.Galway,,,Ireland
									Enviro-Grind & Premier	Enviro-Grind Donegal Road
										Pettigo Co.Donegal
										Ireland, Premier Proteins
										Ballinasloe
Within the Country	20.0	3 04	No	209.12 Sludge	R12	М	Weighed	Offsite in Ireland		Co.Galway,,,,Ireland
		-						2		· · · · · · · · · · · · · · · · · · ·

Within the Country	16 06 01	Yes	62.82 Batteries	R12	М	Weighed	Offsite in Ireland	Enva Ireland Limited T/a Enva ,Licence number EPA WL184-1	Clonminam Industrial Estate,Portlaoise,Co. Laois ,,,Ireland	Enva Ireland Limited T/a Enva "Licence number EPA WL184-1,Clonminam Industrial Estate,Portlaoise,Co. Laois ",Ireland	Clonminam Industrial Estate,Portlaoise,Co. Laois ,,,Ireland
										Immark Ireland Ltd Global Material Recycling (t/a EWM) & OCON Chemicals,Permit Number WO233/1 (Immark Ireland Ltd) WFP-DS-09-	
										0012-01 (Global Material Recycling (t/a EWM) & Permit Number 01/08 (OCON	
									Inmark Ireland Ltd C/o A1 Metal Recycling Ltd	Chemicals),Inmark Ireland Ltd C/o A1 Metal Recycling	Inmark Ireland Ltd C/o A1 Metal Recycling Ltd
								Immark Ireland Ltd Global	Greenogue Business Park	Ltd Greenogue Business	Greenogue Business Park Rathcoole Co. Dublin
								Material Recycling (t/a EWM) & OCON Chemicals, Permit	Rathcoole Co. Dublin Ireland, Global Material	Park Rathcoole Co. Dublin Ireland, Global Material	Ireland, Global Material
								Number WO233/1 (Immark	Recycling Limited	Recycling Limited	Recycling Limited
								Ireland Ltd) WFP-DS-09- 0012-01 (Global Material	Mullaghadrum Corrandulla Co. Galway Ireland,OCON	Mullaghadrum Corrandulla Co. Galway Ireland, OCON	Mullaghadrum Corrandulla Co. Galway Ireland, OCON
								Recycling (t/a EWM) & Permi	t Chemicals Vicars Road 5	Chemicals Vicars Road 5	Chemicals Vicars Road 5
Within the Country	20 01 35	Yes	121.48 Scrap Electronics (Mixed)	R12	E	Volume Calculation	Offsite in Ireland	Number 01/08 (OCON Chemicals)	South Cork Industrial Estate Cork Co. Cork ,,,Ireland	South Cork Industrial Estate Cork Co. Cork ,,,Ireland	South Cork Industrial Estate Cork Co. Cork,,,Ireland
								Textile Recycling Limited (Recycler),Permit number	Glen Abbey Complex,Belgard		
Within the Country	20 01 11	No	20.84 Clothing/Textiles	R12	М	Weighed	Offsite in Ireland	WPR-014 Gypsum Recycling Ireland	Rd,Tallaght,Dublin 24,Ireland		
Within the Country	17 08 02	No	213.04 Gypsum/Plasterboard	R12	M	Weighed	Offsite in Ireland	Ltd,Permit Number WPT95	Navan,Co. Meath,,,,Ireland		

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