



ANNUAL ENVIRONMENTAL REPORT

REPORTING PERIOD: 1ST January 2017 – 31ST December 2017

**WASTE LICENCE
REGISTRATION NO:**

WL106-02

LICENSEE:

BRUSCAR BHEARNA TEORANTA

LOCATION OF ACTIVITY:

CARROWBROWNE,
HEADFORD ROAD,
CO. GALWAY.

ATTENTION:

Michelle McKim / Helen Boyce
EPA, REGIONAL INSPECTOR
JOHN MOORE ROAD, CASTLEBAR
CO. MAYO.

PREPARED BY:

MR. CAMPBELL FINNIE
(Barna Recycling)

CONTRIBUTIONS FROM:

MR. SEAN CURRAN
(Managing Director)
MR. MICHAL RUDZINSKI
(Operations Supervisor)
MR. JOHNNY CURRAN
(Deputy Facility Manager)
P.J. TOBIN CONSULTING ENGINEERS

DECLARATION:

"All the data and information presented in this report has been checked and certified as being accurate. The content of the information is assured to meet licence requirements;"

Campbell Finnie

1.0 Introduction

The following is the Annual Environmental Report (AER) for **Barna Recycling** for the period **1st January 2017 to 31st December 2017** for the Waste Transfer / Recycling Facility at Carrowbrowne, Headford Road, Co. Galway only.

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 31st 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 Recycling 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 RECYCLING)

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: _____
FACILITY MANAGER

Date: _____

Signed: _____
MANAGING DIRECTOR

Date: _____

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 Recycling and other waste contractors, local authorities to collect waste from domestic/commercial/industrial sectors and deliver it to our facility for sorting / processing and then transfer for disposal or recovery.
2. Within the facility heavy plant enables the segregation of the waste, (ie. a manual picking station, ballistic separating machines, magnets, edicurrents, balers, shredders, a pre-shredding machine, loading shovels, forklifts (with forks), forklifts (with clamp attachments), grab machines, screeners, crushers). This machinery is used daily 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. Currently 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.
5. Our purpose built composting process has been operational since 1st January 2013. We made changes during 2016 to construct tunnels for the initial part of the composting phase and this process has improved both the process itself and our ability to control odour within the process itself. The process is licenced through our existing EPA licence and is also monitored by Department of Agriculture Food and the Marine under licence number COMP-40.

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. Bulky waste which is removed would be kept in storage in preparation for transfer in our own vehicles to landfill for disposal.
- Recoverable MSW – during 2015 we introduced a new process of recovering MSW on site. The facility is approved by the Agency for the production of a mechanically treated EWC 191212 material. In effect this means our general waste is pre-sorted to remove bulky and recyclable material before being shredded and trommelled to remove organic fines and metals and finally is baled / wrapped in preparation for transfer. The material is stored on site until a bulk shipment accumulates (approximately 3000 tonnes) and then it is transferred to Galway Harbour for export in a ship for recovery in European outlets. All transfers out of the Country are done so via the TFS procedure.

- 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 separators, magnet, edicurrent and manual picking station allow us to produce segregated recyclable fractions from the original mixed recyclables and send for recycling. In addition, one line is supported by a Titech Optical Sorting Machine which has enhanced our ability to produce good quality recyclables. 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 6 tonnes of recyclables per hour on one shift.
- Composting Facility – we operate a compost process at the site which is in a separate area to the other materials. This process allows for the delivery of segregated collections of catering / food waste, green waste and sludge. This material is mixed and put through a controlled composting system to allow it to break down. The material is controlled by measuring temperature, adding air and monitoring on a daily basis to ensure the process is working. The material is then screened and put in a pasteurisation bunker to reach 70 degrees for one hour before being testing for EColi and Salmonella. Once tests are successfully passed and material has reached the temperatures the material is deemed to be stable it can be shipped as a compost.
- Separately collected recycling – the company also encourage recycling from our commercial customers and source segregated collections are available throughout Connacht. These collections result in collection and recycling of cardboard, paper (various grades), metals and plastics (various grades). These materials are checked for quality and once passed are baled immediately and sent for recycling. There is no requirement to process these materials through the picking station.
- 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) but we can shred all types of material in the machine that we have.
- Timber processing – timber is processed in its own dedicated area at the site and the material is processed using two machines a waste reducer (pre-shedder) 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. Alternatively timber can be sorted and sent off site in bulk trailers to OCR Waste Management in Roscommon where they carry out the shredding.
- Metal recycling – the processing of metal products is carried out within the transfer building in a dedicated area. We have a grab machine and baler available specifically used for baling this material into a form that can be easily sold as scrap to the UK or Irish metal markets. Alternatively material is stored in a specific area and transferred loose to a local recycler. Some sorting of metal on higher grade materials 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 Recycling 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:

end of life tyres, glass, batteries, industrial plastics, agricultural plastics, plasterboard (gypsum), street sweepings and RDF.

This section of the report was intended to give the reader a summary of the material types and the processing procedures used by Barna Recycling 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 Recycling 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 – 2017)

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 and written in our EPA Licence results for the current reporting year (2016) AND ALL PREVIOUS years are included therefore results for reporting periods 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016 and the current reporting period of 2017 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 and are in the new reporting format spreadsheet as published by the Agency.

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 Recycling facility during the previous reporting period:-

Waste Type	Tonnes	%
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.

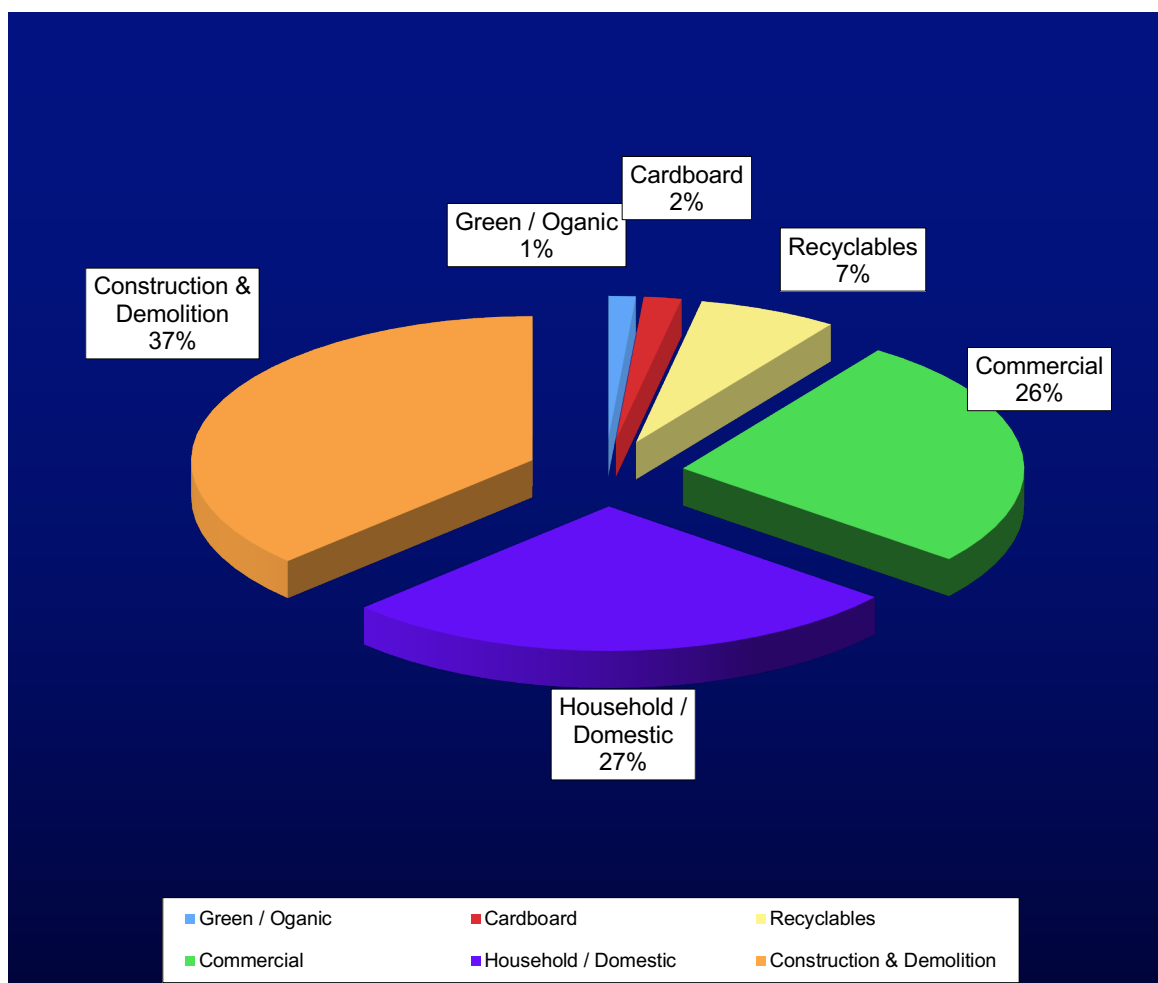


Figure 2.4.2: Percentage Breakdown of Waste Received on site from 1st January – 31st December 2002

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	

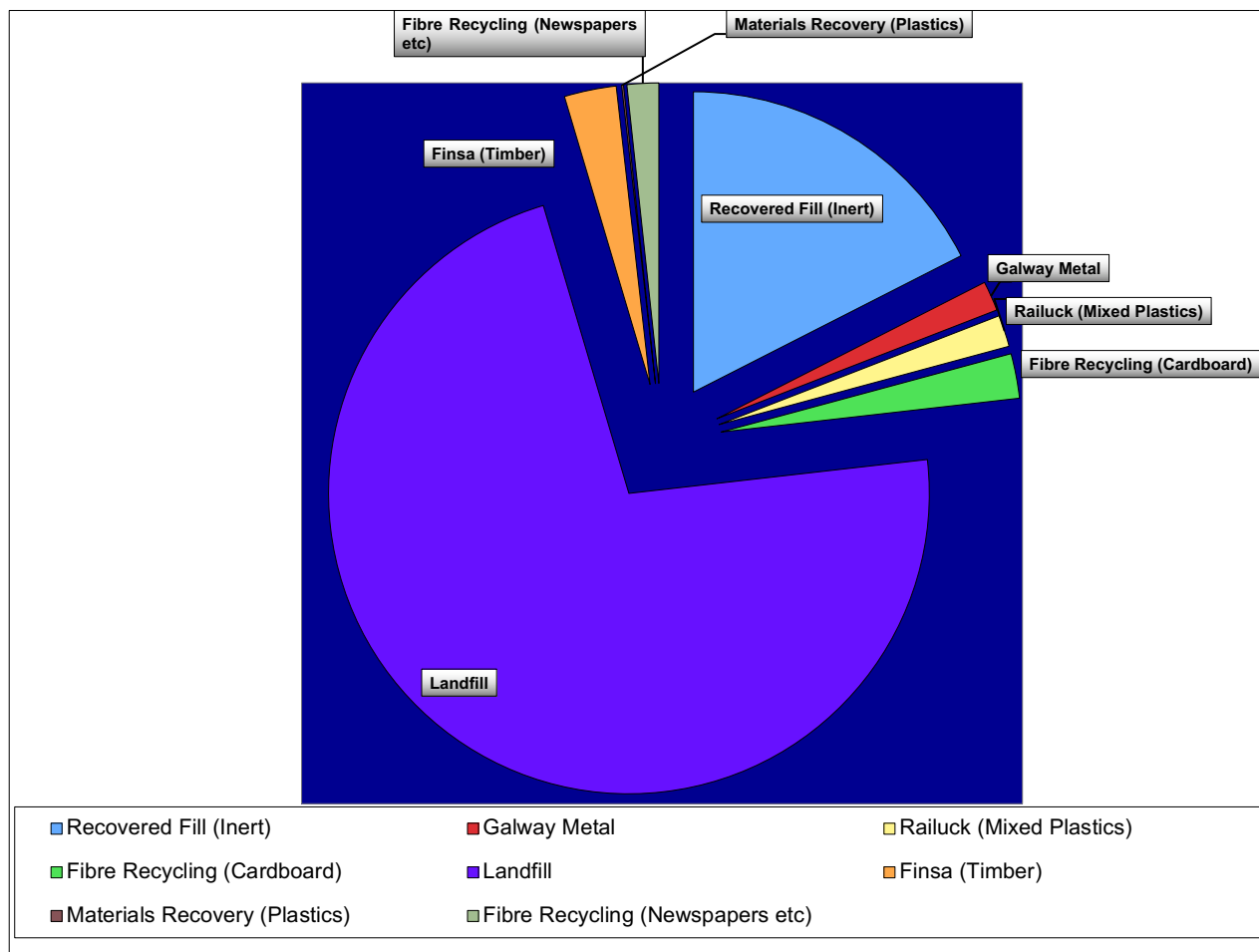


Figure 2.4.4: Percentage Breakdown of Waste outgoing from 1st January 2002 to 31st December 2002

Waste In / Out Reports for 2003

Waste In 2003

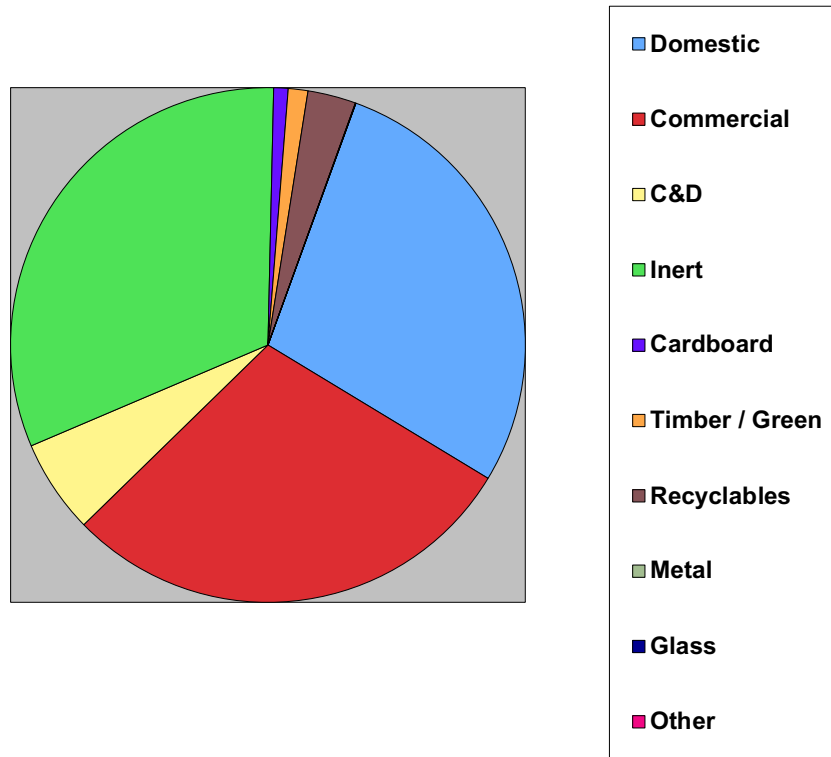


Figure 2.4.5:
Breakdown of Waste Received on site from 1st January – 31st December 2003

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

Table 2.4.3: Total Wastes Incoming 1st January 2003 – 31st December 2003

Waste Out 2003

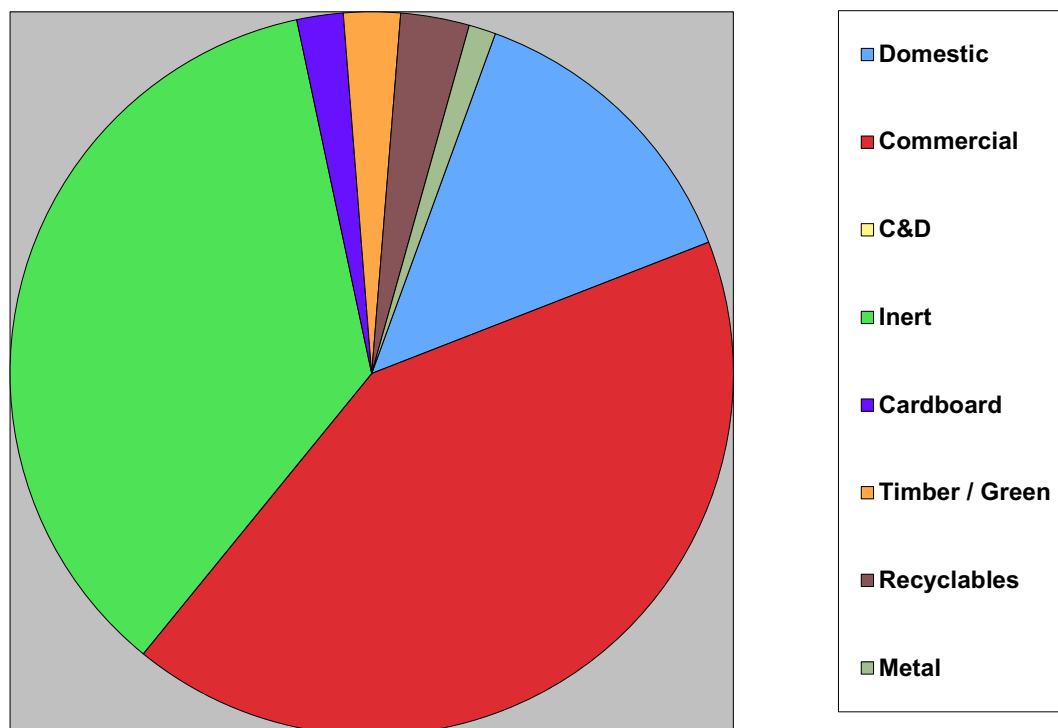


Figure 2.4.6:
Breakdown of Waste going off site for Recovery or Disposal from 1st January – 31st December 2003

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

Table 2.4.7: Total Wastes Outgoing 1st January 2003 – 31st December 2003

WASTE TYPE	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
<i>Inert</i>	22602.2	80.1%
<i>Cardboard</i>	1308.24	4.6%
<i>Timber / Green</i>	1601.04	5.7%
<i>Recyclables</i>	1937.22	6.9%
<i>Metal</i>	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 1st January – 31st December 2003

Waste In / Out Reports for 2004

Waste In 2004

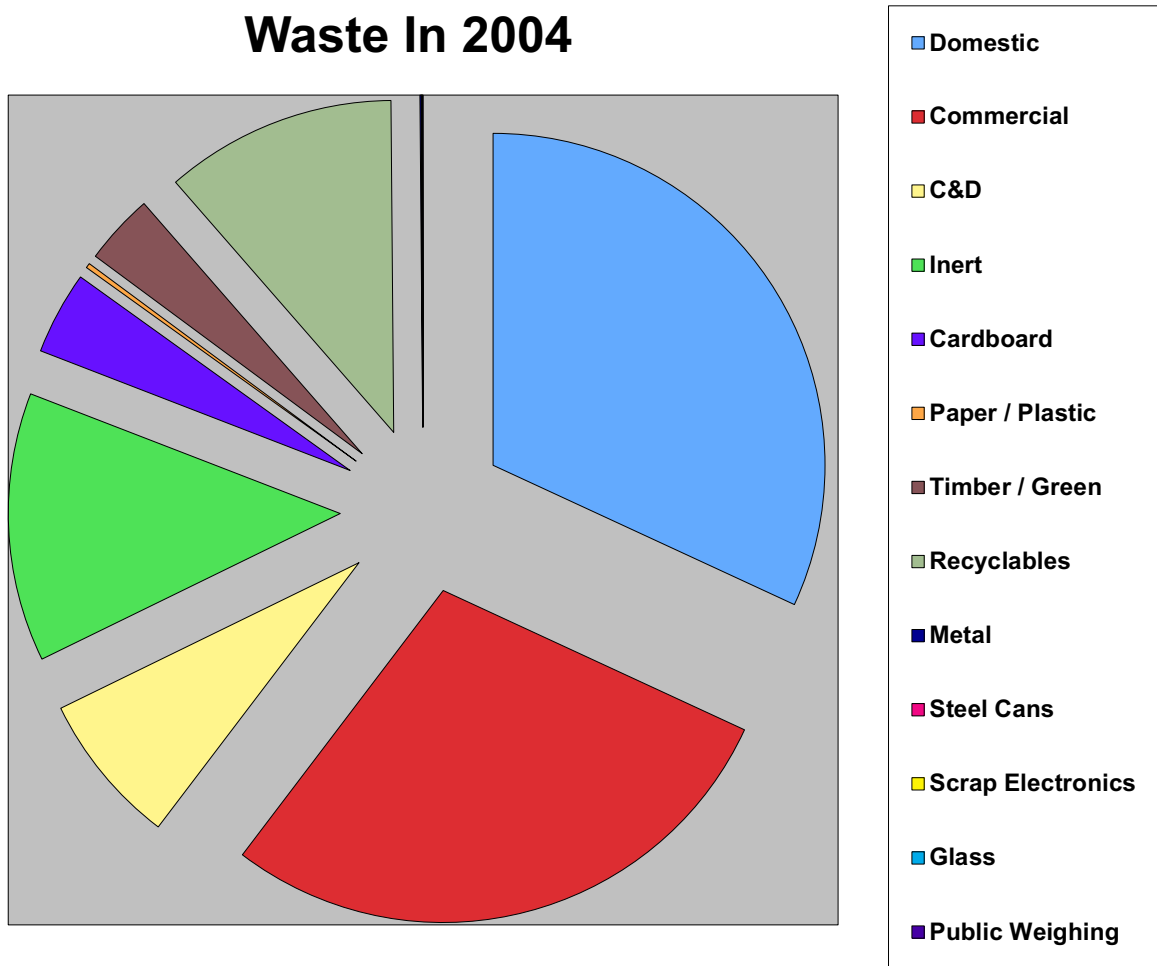


Figure 2.4.9:
Breakdown of Waste Received on site from 1st January – 31st December 2004

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

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

Waste Out 2004

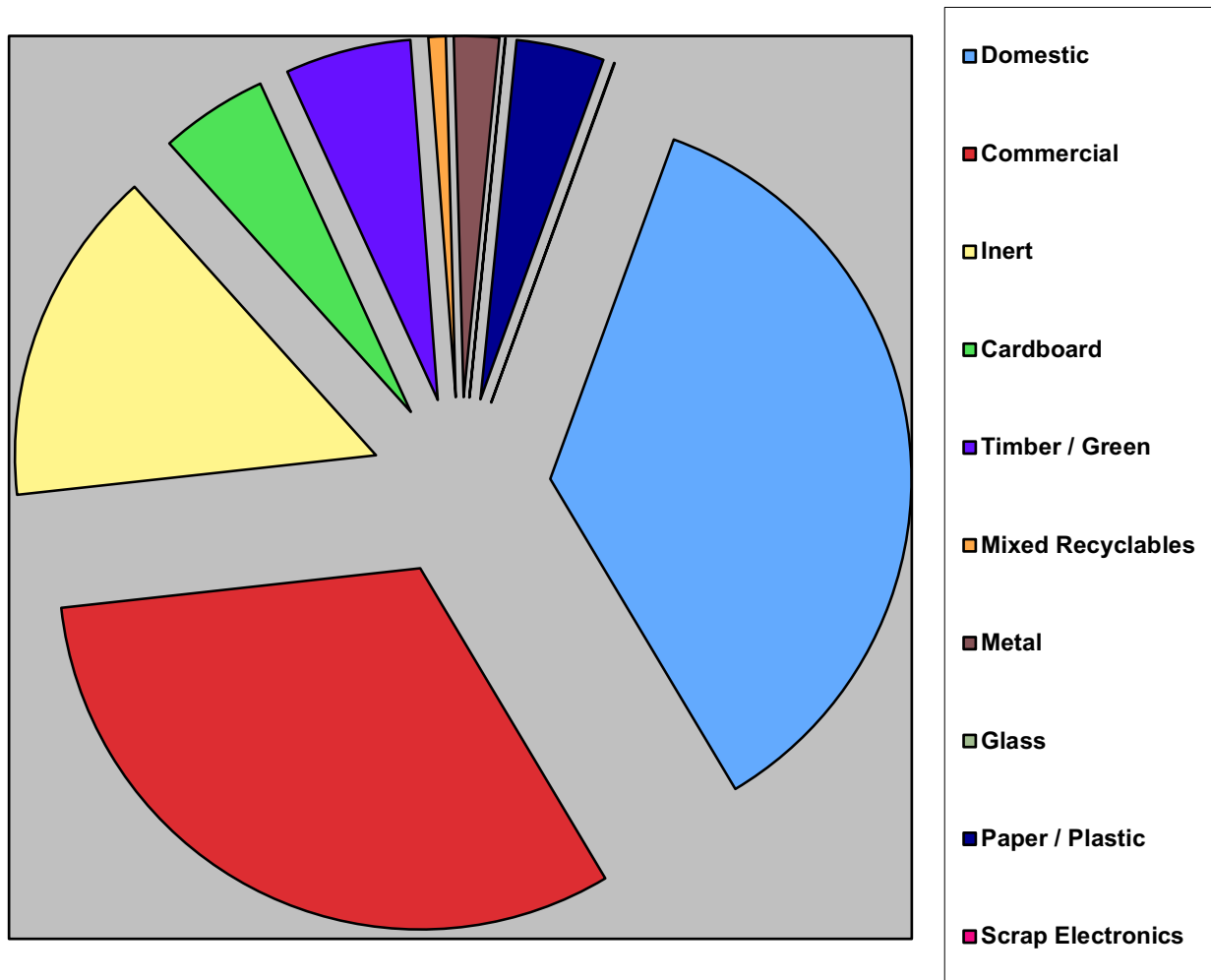


Figure 2.4.11:
Breakdown of Waste going off site for Recovery or Disposal from 1st January – 31st December 2003

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

Table 2.4.12: Total Wastes Outgoing 1st January 2003 – 31st 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 our facility
- 7) All Domestic and Commercial waste goes to the Poolboy landfill site in Ballinasloe
- 8) In addition to the above Barna Recycling also have Batteries collected by Returnbatt and send tyres as required to Crumb Rubber or to Crossmore Transport

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

WASTE TYPE	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
<i>Inert</i>	8115.82	46.73%
<i>Cardboard</i>	2591.73	14.9%
<i>Timber / Green</i>	3028.51	17.4%
<i>Recyclables</i>	416.23	2.4%
<i>Paper / Plastic</i>	2113.6	12.17%
<i>Scrap Electronics</i>	14.69	0.1%
<i>Metal</i>	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 / Out Reports for 2005

Waste In 2005

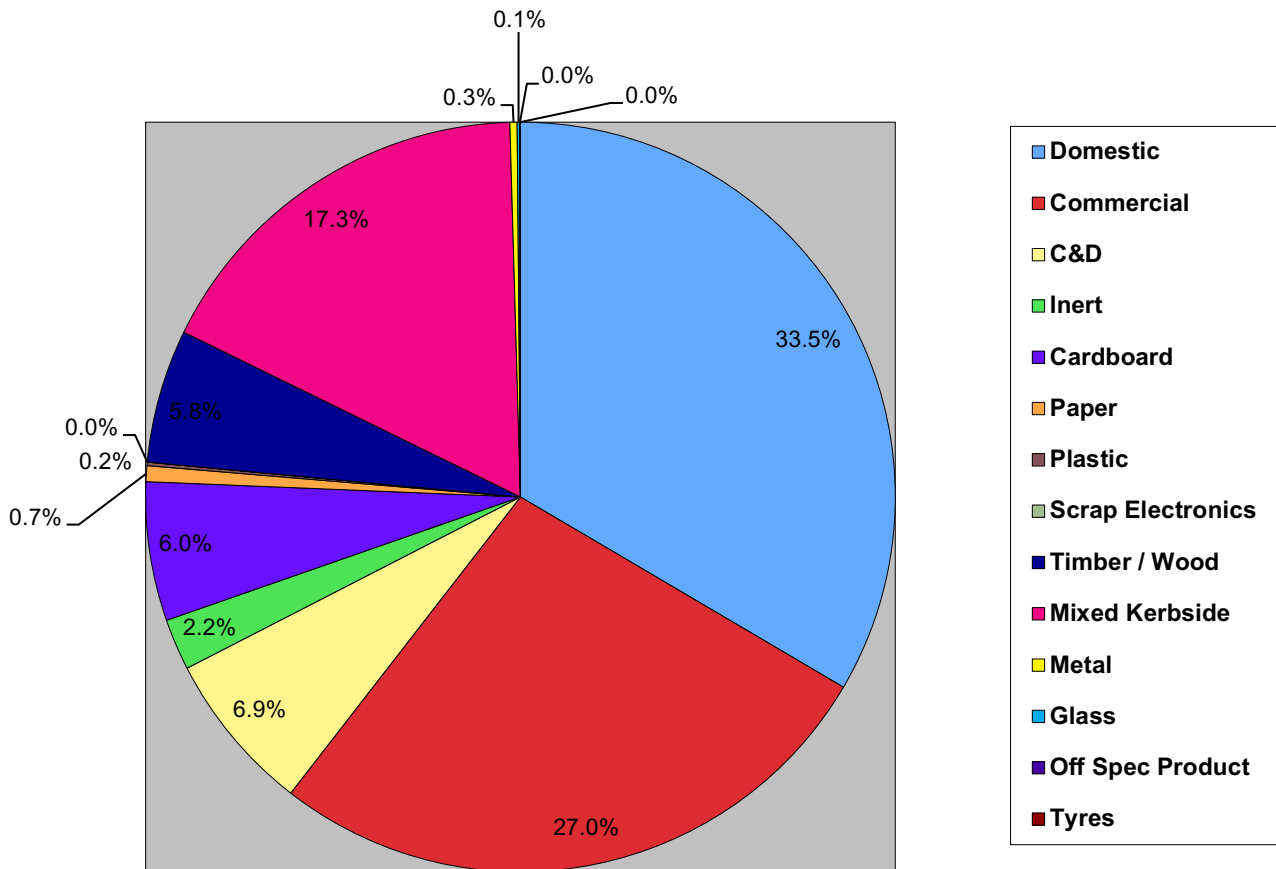


Figure 2.4.14: Breakdown of Waste Received on site from 1st January 2005 – 31st December 2005

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

Table 2.4.15: Total Wastes Incoming 1st January 2005 – 31st December 2005

Waste Out 2005

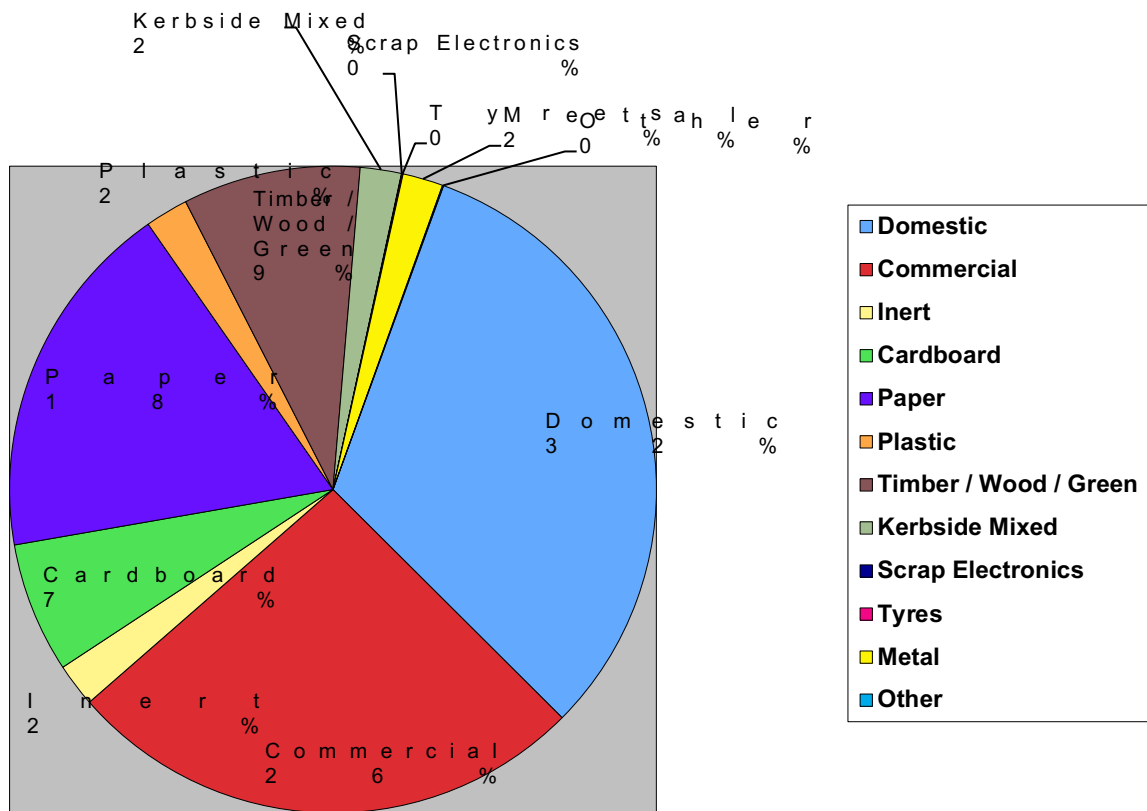


Figure 2.5.0:
Breakdown of Waste going off site for Recovery or Disposal from 1st January 2005 – 31st December 2005

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

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

2.5.2 Summary of Recycling Outlets used in 2005

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

WASTE TYPE	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
<i>EWC 200202 Inert</i>	1463.6	5%
<i>EWC 200101 Cardboard</i>	4408.69	15%
<i>EWC 200101 Paper</i>	12221.53	43%
<i>EWC 200103 Plastic</i>	1457.49	5%
<i>EWC 200138 Timber / Wood / Green</i>	6003.09	21%
<i>EWC 150101 Recyclables</i>	1391.82	5%
<i>EWC 160201 Scrap Electronics</i>	14.96	Less than 1%
<i>EWC 160103 Tyres</i>	40.32	Less than 1%
<i>EWC 170407 Metal</i>	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 / Out Reports for 2006

WASTE IN

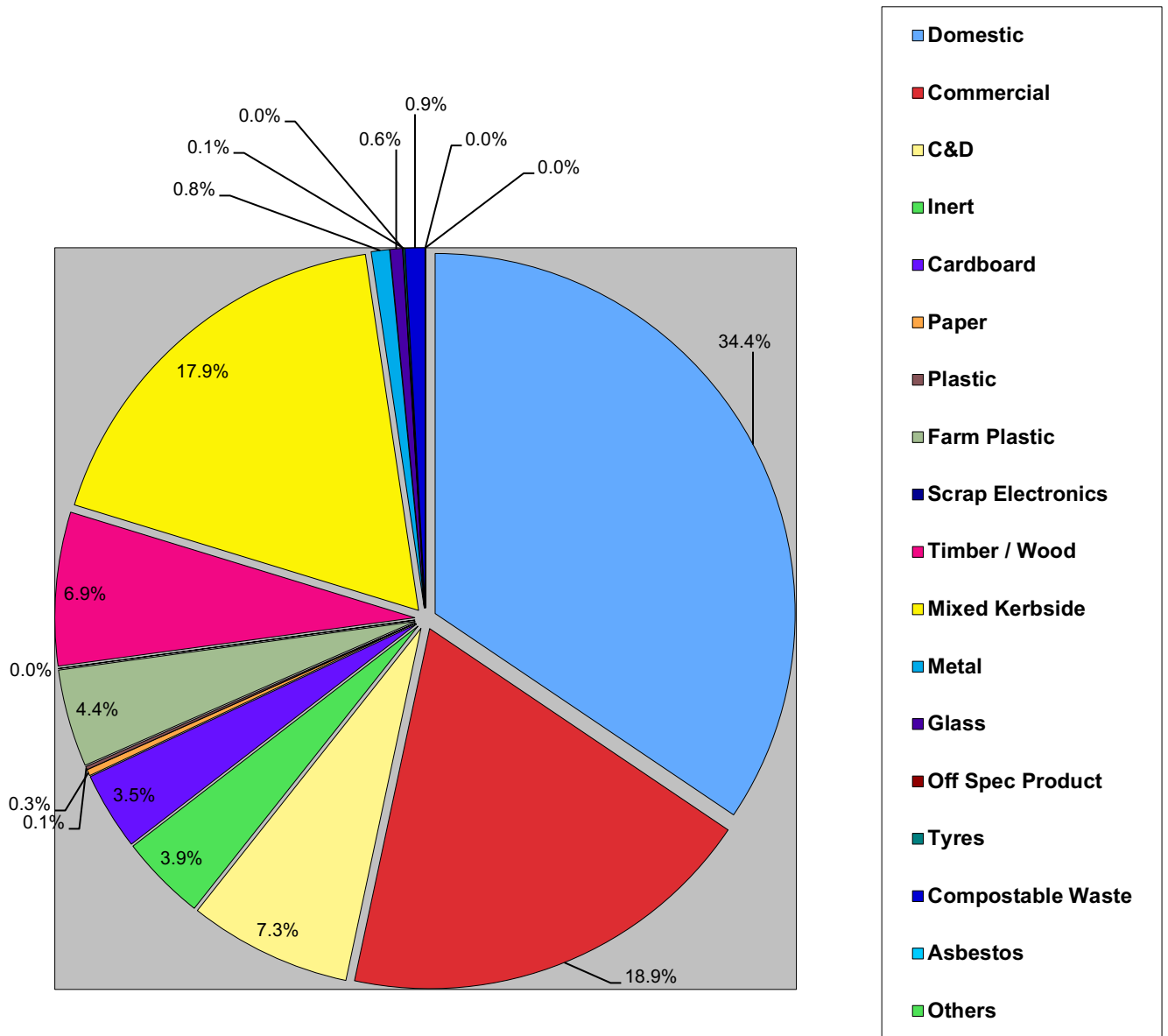


Figure 2.6.0:
Breakdown of Waste Received on site from 1st January 2006 – 31st December 2006

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

Table 2.6.1: Total Wastes Incoming 1st January 2006 – 31st December 2006

Waste Out 2006

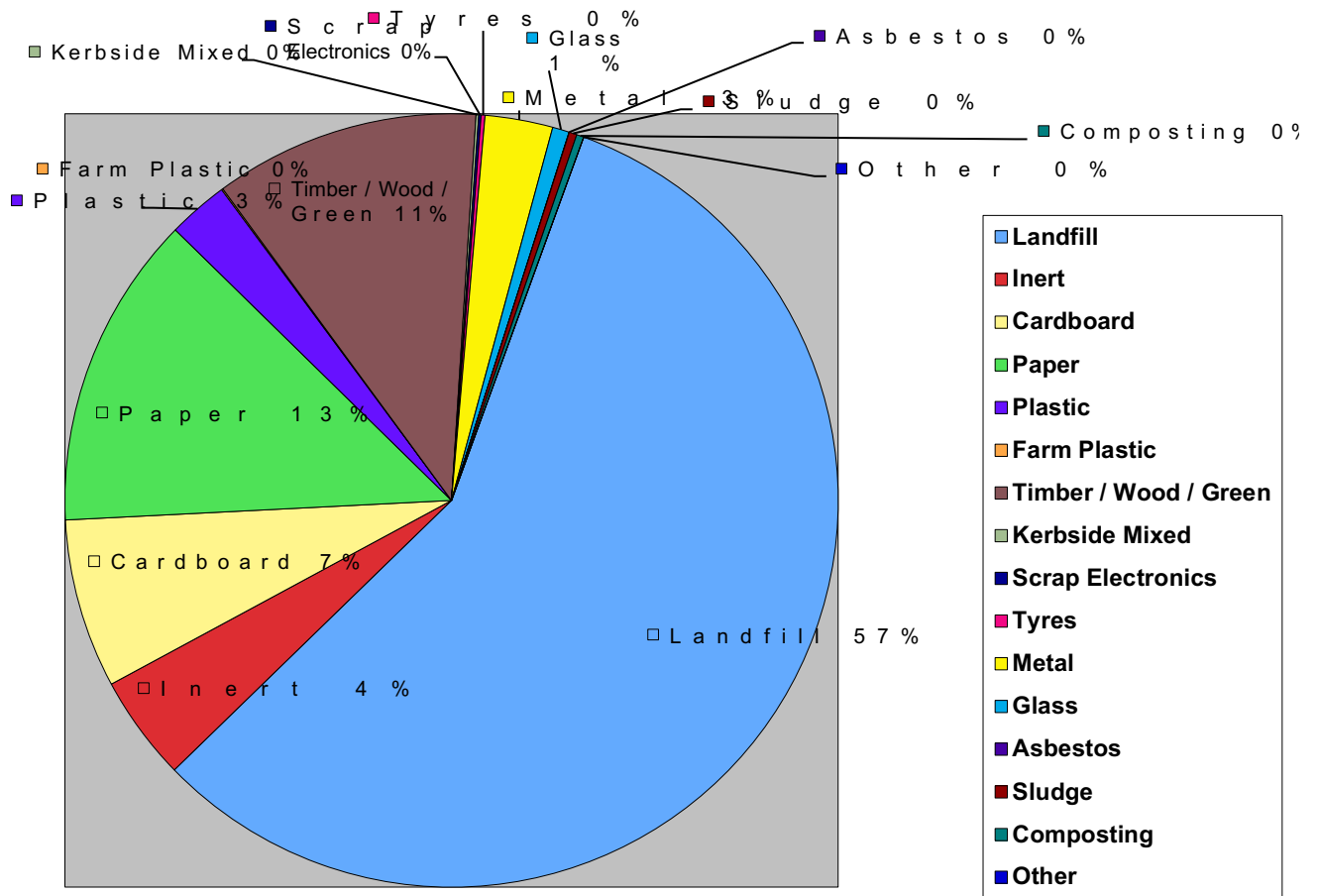


Figure 2.6.2: Breakdown of Waste going off site for Recovery or Disposal from 1st January 2006 – 31st December 2006

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

Table 2.6.3: Total Wastes Outgoing 1st January 2006 – 31st December 2006

Breakdown of the recycling elements for 2006:

WASTE TYPE	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
<i>EWC 200202 Inert</i>	3518.12	10%
<i>EWC 200101 Cardboard</i>	5660.60	17%
<i>EWC 200101 Paper</i>	10516.62	31%
<i>EWC 200103 Plastic</i>	2023.17	6%
<i>EWC 200138 Timber / Wood / Green</i>	8875.78	26%
<i>EWC 150101 Recyclables</i>	90.35	Less than 1%
<i>EWC 160201 Scrap Electronics</i>	78.44	Less than 1%
<i>EWC 160103 Tyres</i>	130.64	Less than 1%
<i>EWC 170407 Metal</i>	2267.10	7%
<i>EWC200108 Composting</i>	240.89	Less than 1%
<i>EWC 200102 Glass</i>	559.56	2%
<i>EWC 200104 Farm Plastic</i>	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 / Out Reports for 2007

WASTE IN

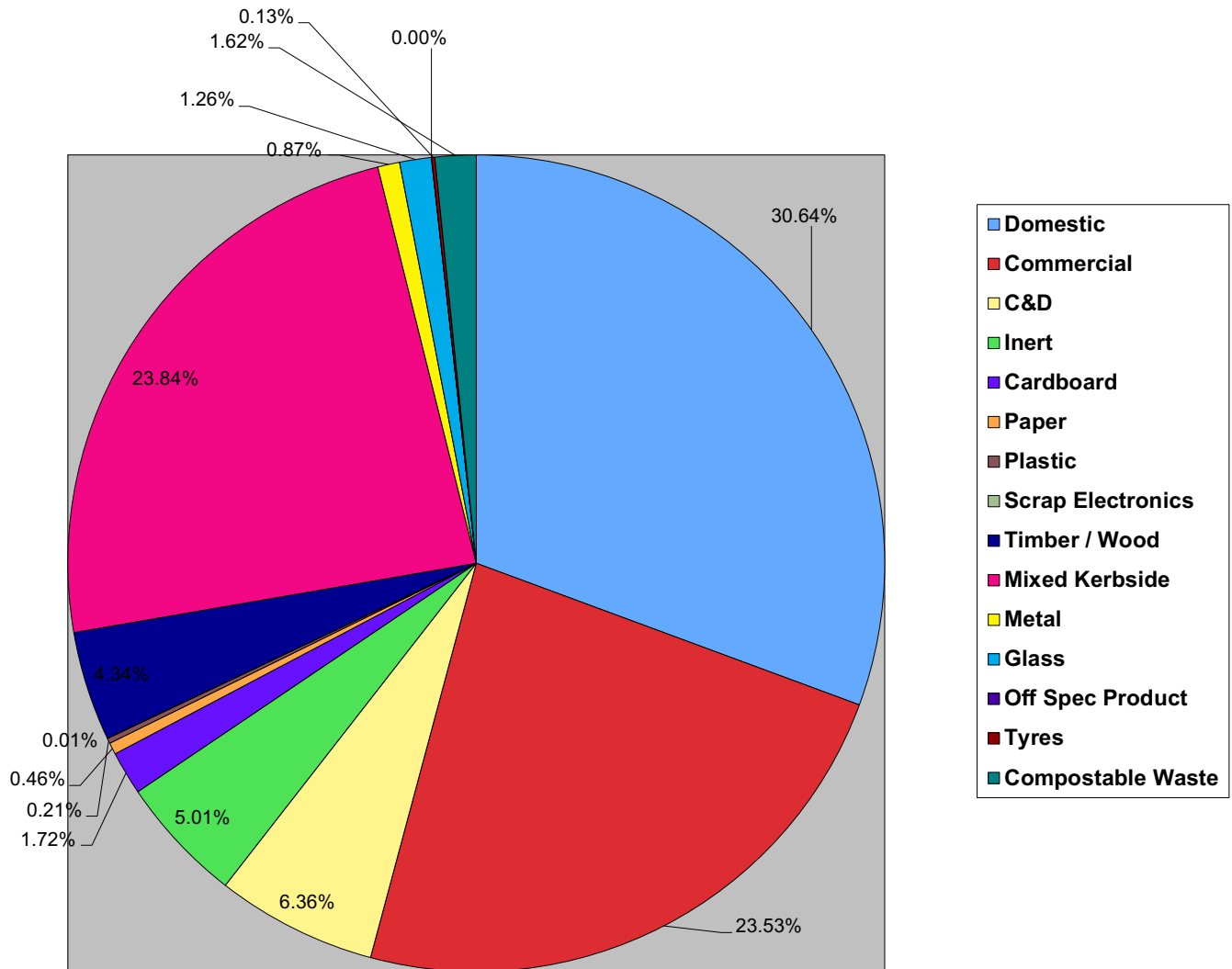


Figure 2.7.0:
Breakdown of Waste Received on site from 1st January 2007 – 31st December 2007

Waste in for 2007: Table of quantities by waste type

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

Table 2.7.1: Total Wastes Incoming 1st January 2007 – 31st December 2007

Waste Out 2007

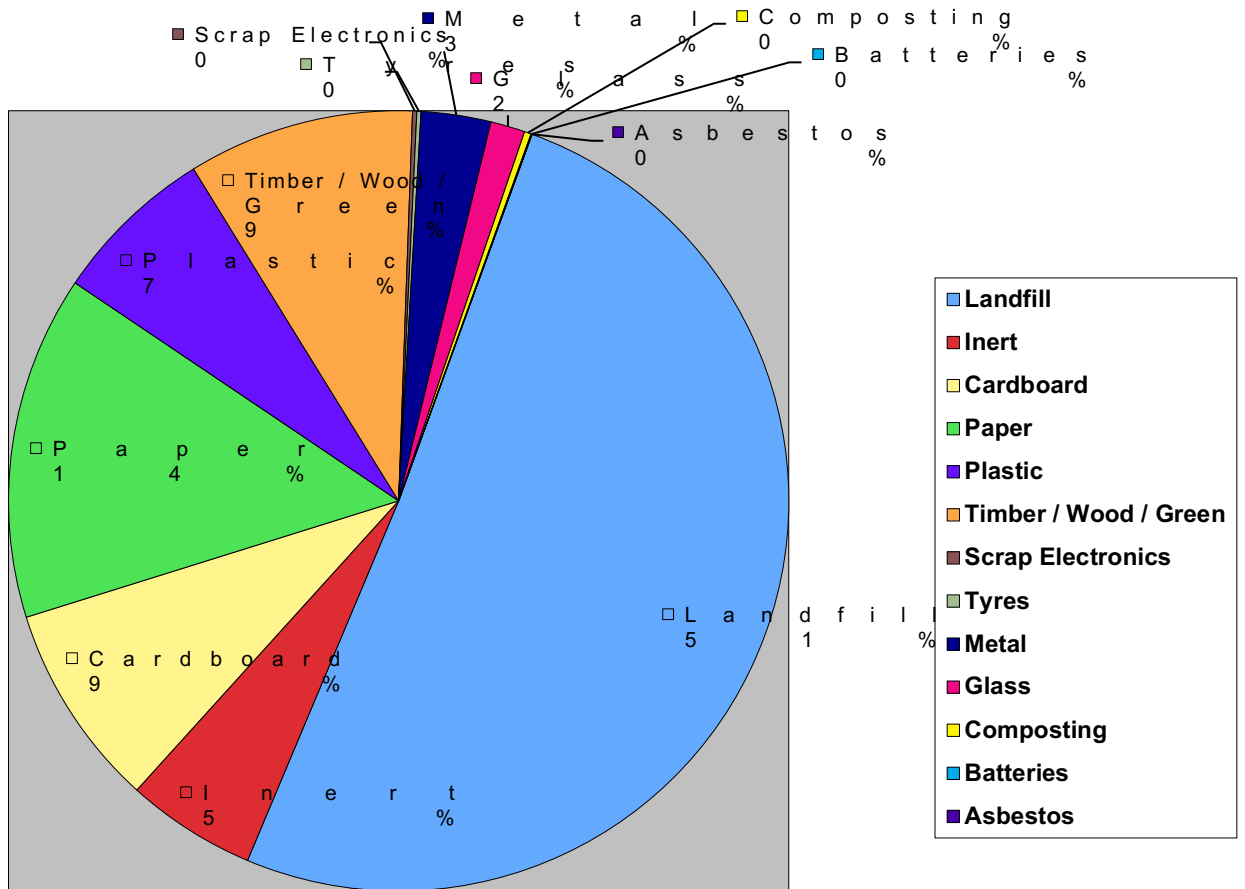


Figure 2.7.2: Breakdown of Waste going off site for Recovery or Disposal from 1st January 2007 – 31st December 2007

Waste out for 2007: Table of quantities by waste type

WASTE TYPE	WASTE OUT (tonnes per annum)
<i>EWC 191212 Mechanically treated mixed waste for landfill (Commercial / Domestic)</i>	44558.56
<i>EWC 200202 Inert</i>	4720.19
<i>EWC 200101 Cardboard</i>	7431.38
<i>EWC 200101 Paper</i>	12512.83
<i>EWC 200103 Plastic</i>	5927.02
<i>EWC 200138 Timber / Wood / Green</i>	8230.50
<i>EWC 160201 Scrap Electronics</i>	154.38
<i>EWC 160103 Tyres</i>	151.76
<i>EWC 170407 Metal</i>	2534.82
<i>EWC 200102 Glass</i>	1253.18
<i>EWC 160601 Batteries</i>	33.34
<i>EWC 170605 Asbestos</i>	3.38
<i>EWC200108 or EWC 200304 Compostable Material</i>	1443.65
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 (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
<i>EWC 200202 Inert</i>	4720.19	10%
<i>EWC 200101 Cardboard</i>	7431.38	17%
<i>EWC 200101 Paper</i>	12512.83	28%
<i>EWC 200103 Plastic</i>	5927.02	13%
<i>EWC 200138 Timber / Wood / Green</i>	8230.50	19%
<i>EWC 160201 Scrap Electronics</i>	154.38	Less than 1%
<i>EWC 160103 Tyres</i>	151.76	Less than 1%
<i>EWC 170407 Metal</i>	2534.82	6%
<i>EWC 200102 Glass</i>	1253.18	3%
<i>EWC 160601 Batteries</i>	33.34	Less than 1%
<i>EWC200108 or EWC 200304 Compostable Material</i>	1443.65	3%
TOTAL	44,393.05	47% of total waste in was recycled for 2007

Table 2.7.4: Breakdown of recycling waste out details for 1st January 2007 – 31st December 2007

Waste In / Out Reports for 2008

WASTE IN (2008)

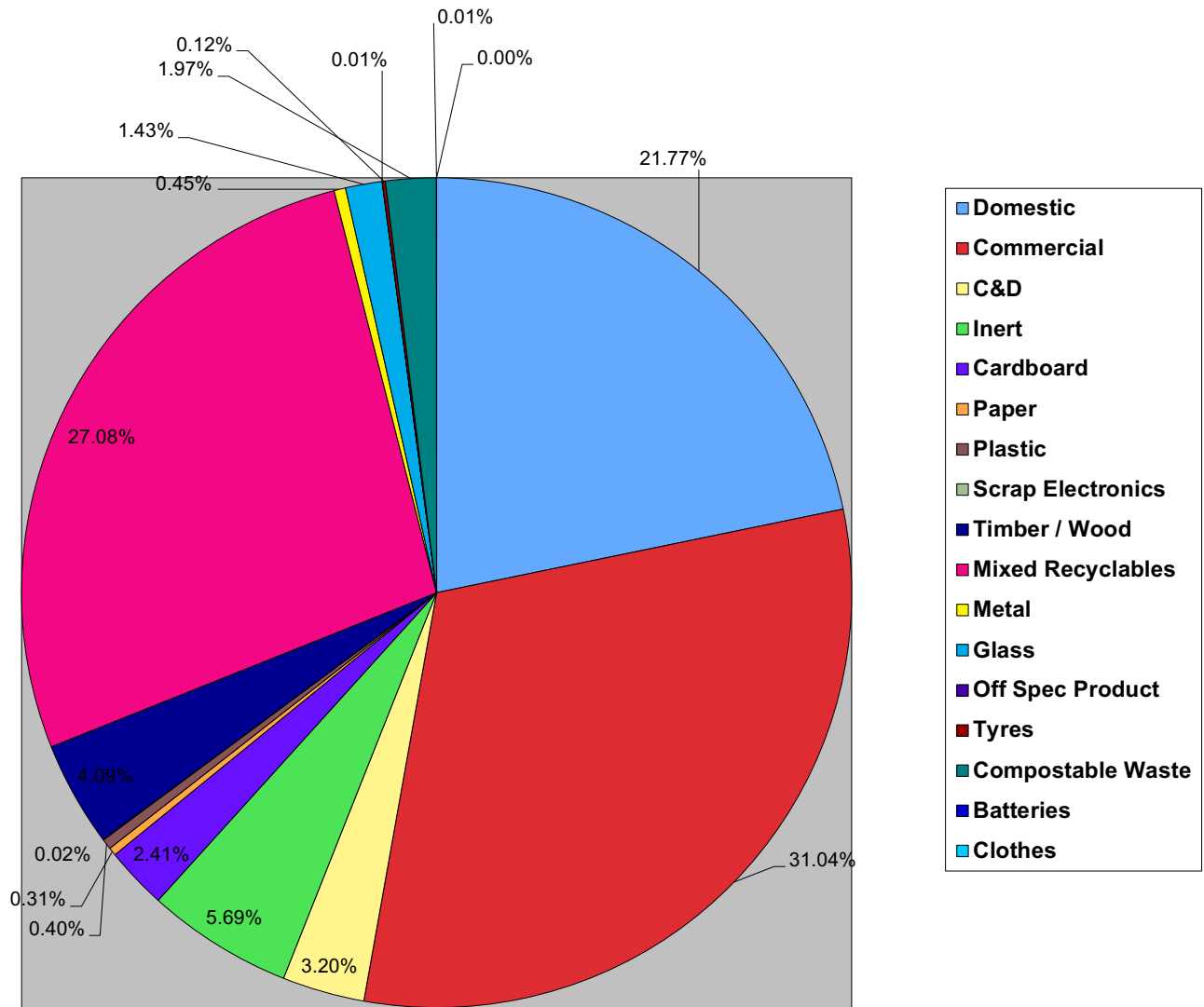


Figure 2.8.0:
Breakdown of Waste Received on site from 1st January 2008 – 31st December 2008

Waste in for 2008: Table of quantities by waste type

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

Table 2.8.1: Total Wastes Incoming 1st January 2008 – 31st December 2008

Waste Out 2008

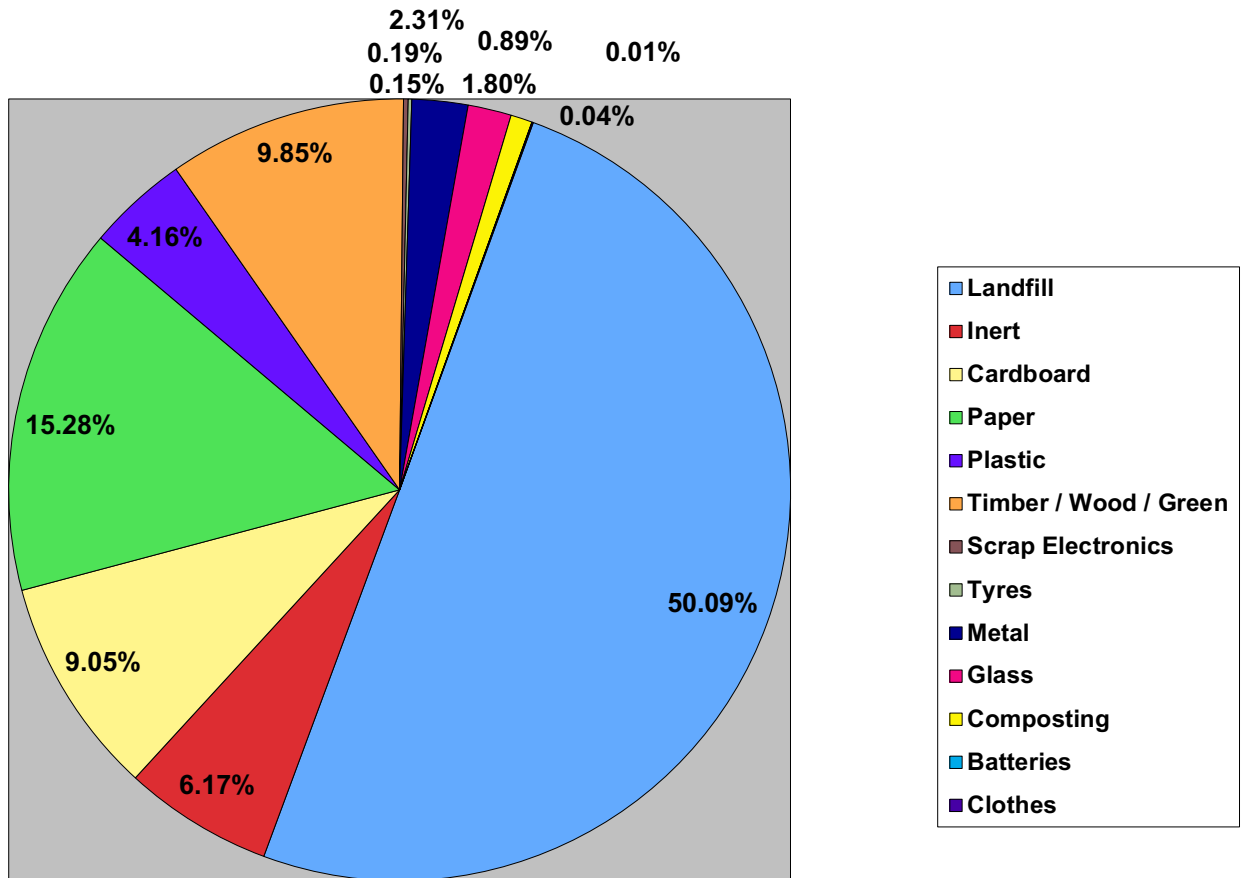


Figure 2.8.2: Breakdown of Waste going off site for Recovery or Disposal from 1st January 2008 – 31st December 2008

Waste out for 2008: Table of quantities by waste type

WASTE TYPE	WASTE OUT (tonnes per annum)
<i>EWC 191212 Mechanically treated mixed waste for landfill (Commercial / Domestic)</i>	39362.81
<i>EWC 200202 Inert</i>	4846.37
<i>EWC 200101 Cardboard</i>	7107.66
<i>EWC 200101 Paper</i>	12008.22
<i>EWC 200103 Plastic</i>	3272.20
<i>EWC 200138 Timber / Wood / Green</i>	7743.46
<i>EWC 160201 Scrap Electronics</i>	150.60
<i>EWC 160103 Tyres</i>	114.99
<i>EWC 170407 Metal</i>	1816.43
<i>EWC 200102 Glass</i>	1411.75
<i>EWC 160601 Batteries</i>	10.82
<i>EWC 200110 Clothes</i>	35.26
<i>EWC 170802 Gypsum / Plasterboard</i>	264.70
<i>EWC200108 or EWC 200304 Compostable Material</i>	699.78
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 (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
<i>EWC 200202 Inert</i>	4846.37	12%
<i>EWC 200101 Cardboard</i>	7107.66	18%
<i>EWC 200101 Paper</i>	12008.22	30%
<i>EWC 200103 Plastic</i>	3272.20	8%
<i>EWC 200138 Timber / Wood / Green</i>	7743.46	20%
<i>EWC 160201 Scrap Electronics</i>	150.60	Less than 1%
<i>EWC 160103 Tyres</i>	114.99	Less than 1%
<i>EWC 170407 Metal</i>	1816.43	5%
<i>EWC 200102 Glass</i>	1411.75	4%
<i>EWC 160601 Batteries</i>	10.82	Less than 1%
<i>EWC 200110 Clothes</i>	35.26	Less than 1%
<i>EWC 170802 Gypsum / Plasterboard</i>	264.70	Less than 1%
<i>EWC200108 or EWC 200304 Compostable Material</i>	699.78	2%
TOTAL	39,482.24	46% of total waste in was recycled for 2008

Table 2.8.4: Breakdown of recycling waste out details for 1st January 2008 – 31st December 2008

Waste In / Out Reports for 2009

WASTE IN (2009)

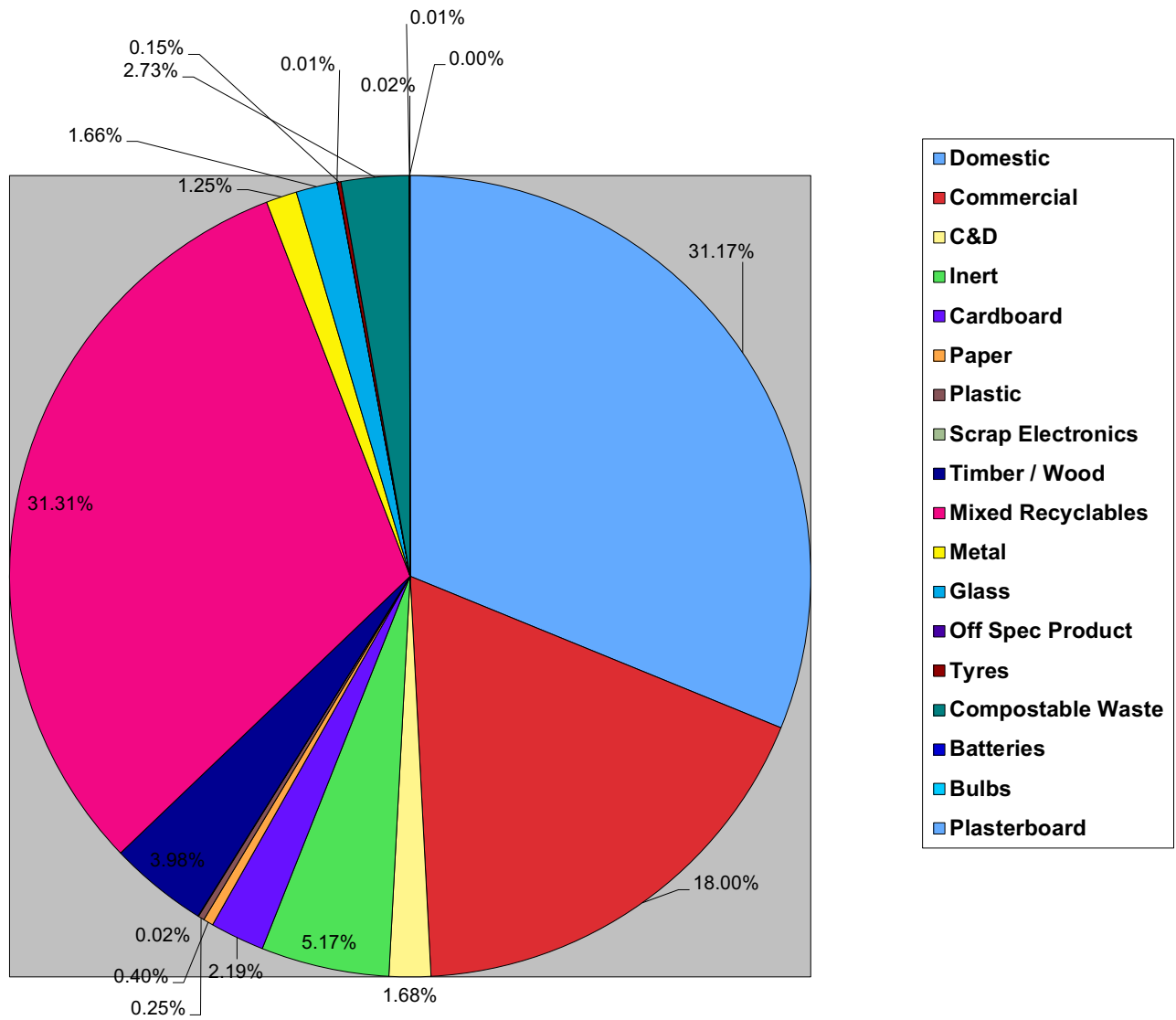


Figure 2.9.0:
Breakdown of Waste Received on site from 1st January 2009 – 31st December 2009

Waste in for 2009: Table of quantities by waste type

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

Table 2.9.1: Total Wastes Incoming 1st January 2009 – 31st December 2009

Waste Out 2009

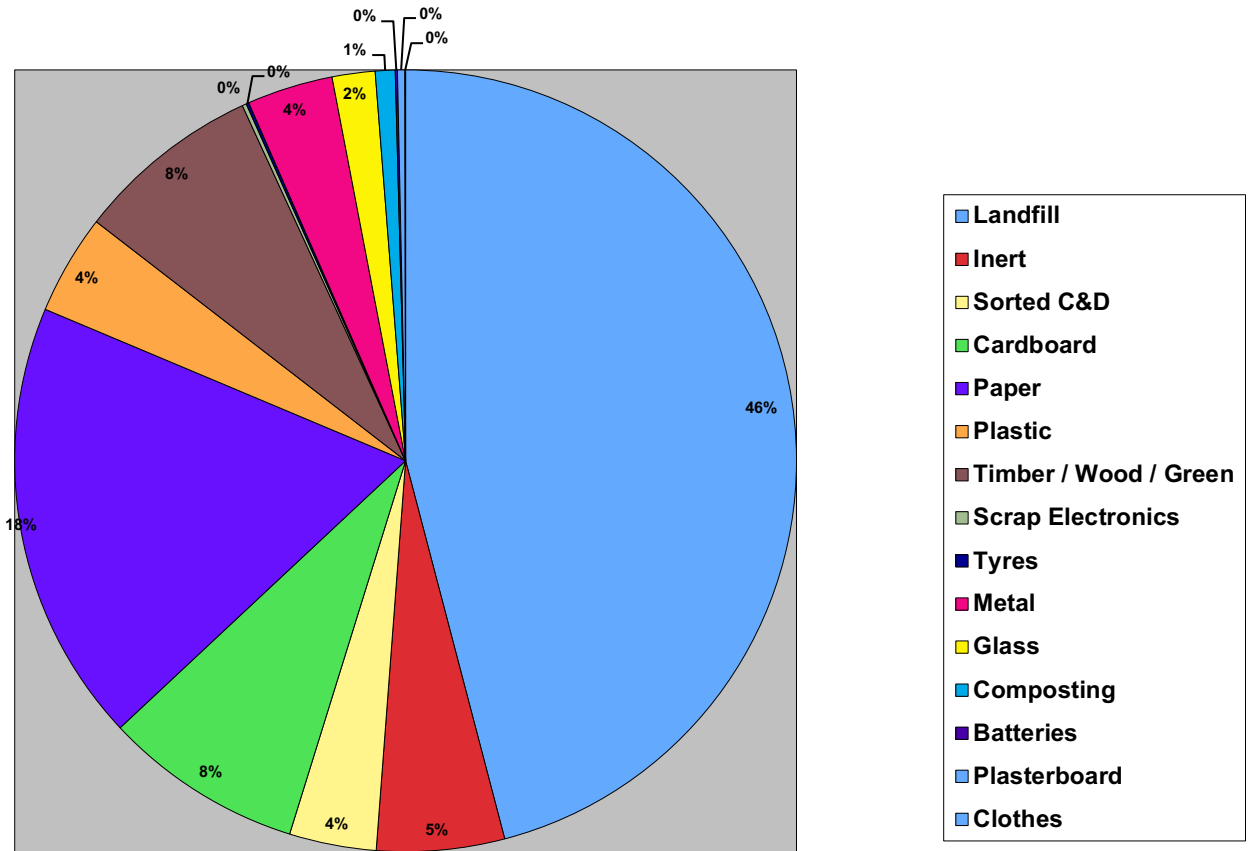


Figure 2.9.2: Breakdown of Waste going off site for Recovery or Disposal from 1st January 2009 – 31st December 2009

Waste out for 2009: Table of quantities by waste type

WASTE TYPE	WASTE OUT (tonnes per annum)
<i>EWC 191212 Mechanically treated mixed waste for landfill (Commercial / Domestic)</i>	32188.23
<i>EWC 200202 Inert</i>	6232.78
<i>EWC 200101 Cardboard</i>	5783.24
<i>EWC 200101 Paper</i>	12849.64
<i>EWC 200103 Plastic</i>	2906.97
<i>EWC 200138 Timber / Wood / Green</i>	5385.64
<i>EWC 160201 Scrap Electronics</i>	121.48
<i>EWC 160103 Tyres</i>	78.14
<i>EWC 170407 Metal</i>	2503.62
<i>EWC 200102 Glass</i>	1245.48
<i>EWC 160601 Batteries</i>	62.82
<i>EWC 200110 Clothes</i>	20.84
<i>EWC 170802 Gypsum / Plasterboard</i>	213.04
<i>EWC200108 or EWC 200304 Compostable Material</i>	575.88
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 (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
<i>EWC 200202 Inert</i>	6232.78	16%
<i>EWC 200101 Cardboard</i>	5783.24	15%
<i>EWC 200101 Paper</i>	12849.64	34%
<i>EWC 200103 Plastic</i>	2906.97	8%
<i>EWC 200138 Timber / Wood / Green</i>	5385.64	14%
<i>EWC 160201 Scrap Electronics</i>	121.48	Less than 1%
<i>EWC 160103 Tyres</i>	78.14	Less than 1%
<i>EWC 170407 Metal</i>	2496.44	7%
<i>EWC 200102 Glass</i>	1245.48	3%
<i>EWC 160601 Batteries</i>	62.82	Less than 1%
<i>EWC 200110 Clothes</i>	20.84	Less than 1%
<i>EWC 170802 Gypsum / Plasterboard</i>	213.04	Less than 1%
<i>EWC200108 or EWC 200304 Compostable Material</i>	575.88	2%
TOTAL	37,972.39	53% of total waste in was recycled for 2009

Table 2.9.4: Breakdown of recycling waste out details for 1st January 2009 – 31st December 2009

Waste In / Out Reports for 2010

WASTE IN (2010)

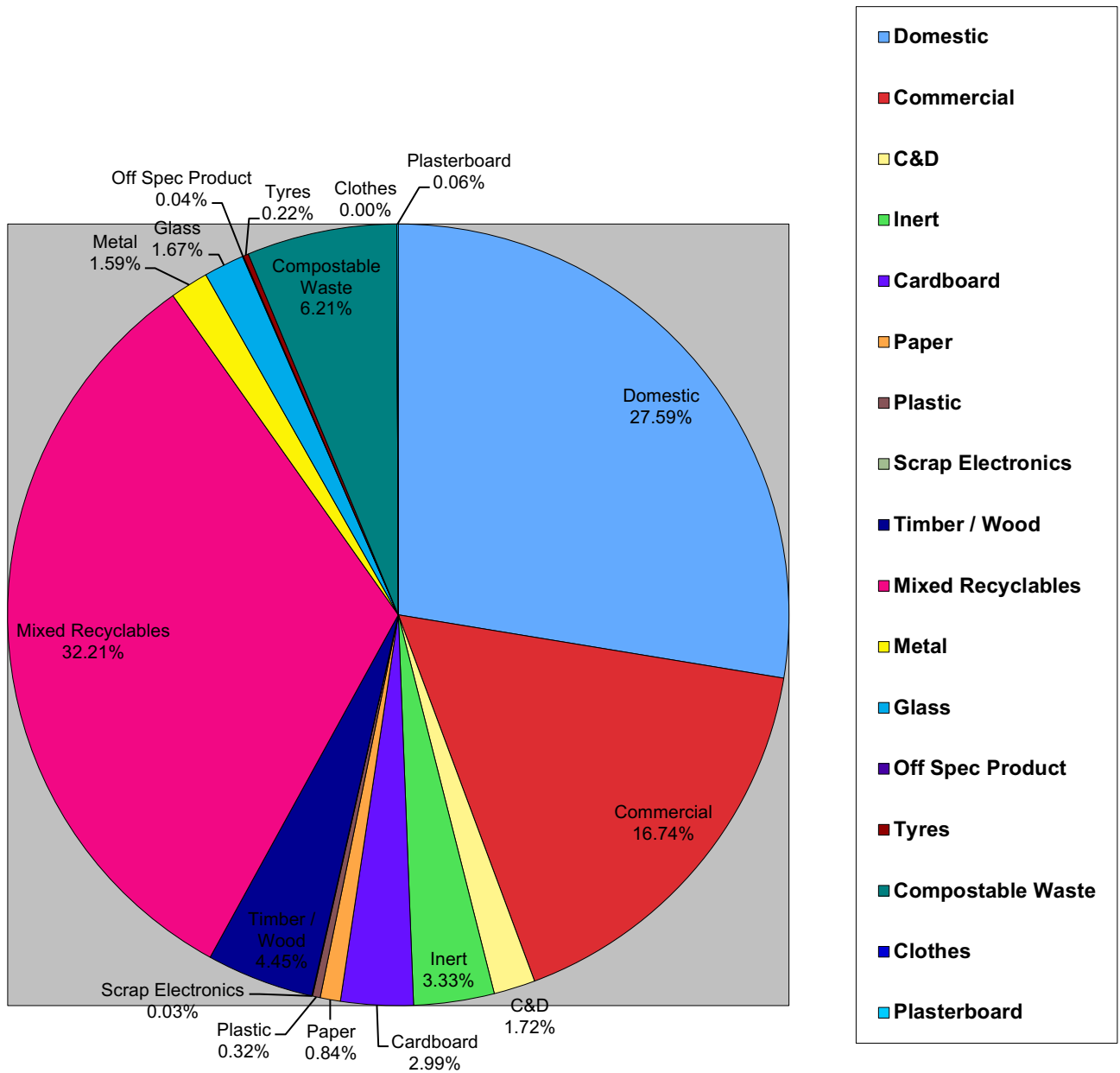


Figure 2.10.0:
Breakdown of Waste Received on site from 1st January 2010 – 31st December 2010

Waste in for 2010: Table of quantities by waste type

WASTE TYPE	WASTE IN (tonnes per annum)
EWC 200301 Domestic	19,140.78
EWC 200301 Commercial	11,609.68
EWC 170904 Mixed C & D	1,191.54
EWC 170107 Inert	2,310.09
EWC 150101 Cardboard	2,076.90
EWC 200101 Paper	580.54
EWC 200103 Plastic	220.34
EWC 160201 Scrap Electronics	19.98
EWC 200138 Timber / Wood / Green	3083.83
EWC 200199 Mixed Kerbside Recyclables	22342.70
EWC 170407 Metal	1101.82
EWC 200102 Glass	1160.39
EWC 160304 Off Spec Product	24.66
EWC 200108 Food Waste	4,309.15
EWC 200201 Garden & Park Waste	
EWC 200304 Sludge	
Compostable materials	
EWC 170802 Plasterboard / Gypsum	42.42
EWC 160103 Tyres	152.54
EWC 200110 Clothes	0.28
TOTAL	69,367.64 TONNES

Table 2.10.1: Total Wastes Incoming 1st January 2010 – 31st December 2010

Waste Out 2010

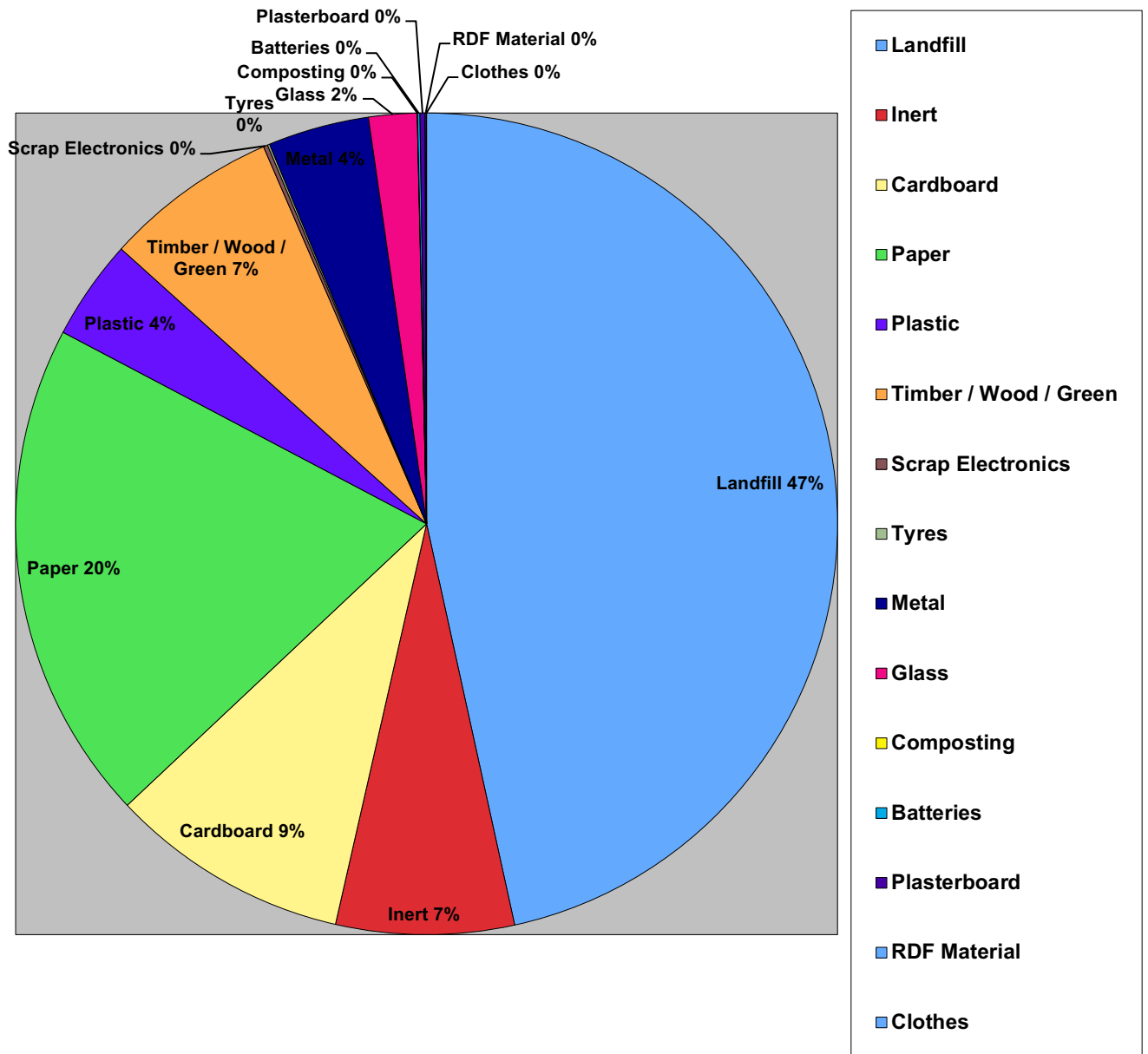


Figure 2.10.2: Breakdown of Waste going off site for Recovery or Disposal from 1st January 2010 – 31st December 2010

Waste out for 2010: Table of quantities by waste type:-

WASTE TYPE	WASTE OUT (tonnes per annum)
EWC 191212 Mechanically treated mixed waste for landfill	28,115.82
EWC 200202 Inert	4,227.79
EWC 191201 Cardboard	5,692.87
EWC 191201 Paper	11,916.14
EWC 191204 Plastic	2,382.34
EWC 191207 Timber / Wood / Green	4,131.03
EWC 160201 Scrap Electronics	100.92
EWC 160103 Tyres	51.78
EWC 191203 Metal	2402.76
EWC 191205 Glass	1145.88
EWC 160601 Batteries	56.36
EWC 191208 Clothes	8.18
EWC 170802 Gypsum / Plasterboard	122.44
EWC 200108 or EWC 200304 Compostable Material	7.50
EWC 191210 Refuse Derived Fuel	25.34
TOTAL	60,387.15 TONNES

Table 2.10.3: Total Wastes Outgoing 1st January 2010 – 31st December 2010

RECYCLING SUMMARY FOR 2010

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2010. This table only shows the RECYCLABLE / RECOVERABLE material types and lists the total tonnage recycled during 2010 and the % split that each waste type provides towards the total recycling figure:-

WASTE TYPE (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
EWC 200202 Inert	4,227.79	13%
EWC 191201 Cardboard	5,692.87	18%
EWC 191201 Paper	11,592.04	36%
EWC 191204 Plastic	2,706.44	8%
EWC 191207 Timber / Wood / Green	4,131.03	13%
EWC 160201 Scrap Electronics	100.92	Less than 1%
EWC 160103 Tyres	51.78	Less than 1%
EWC 191203 Metal	2,402.76	7%
EWC 191205 Glass	1,145.88	4%
EWC 160601 Batteries	56.36	Less than 1%
EWC 191208 Clothes	8.18	Less than 1%
EWC 170802 Gypsum / Plasterboard	122.44	Less than 1%
EWC 200108 or EWC 200304 Compostable Material	7.50	Less than 1%
EWC 191210 Refuse Derived Fuel	25.34	Less than 1%
TOTAL	32,271.33	47% of total waste in was recycled for 2010

Table 2.10.4: Breakdown of recycling waste out for 1st January 2010 – 31st December 2010

Waste In / Out Reports for 2011

WASTE IN (2011)

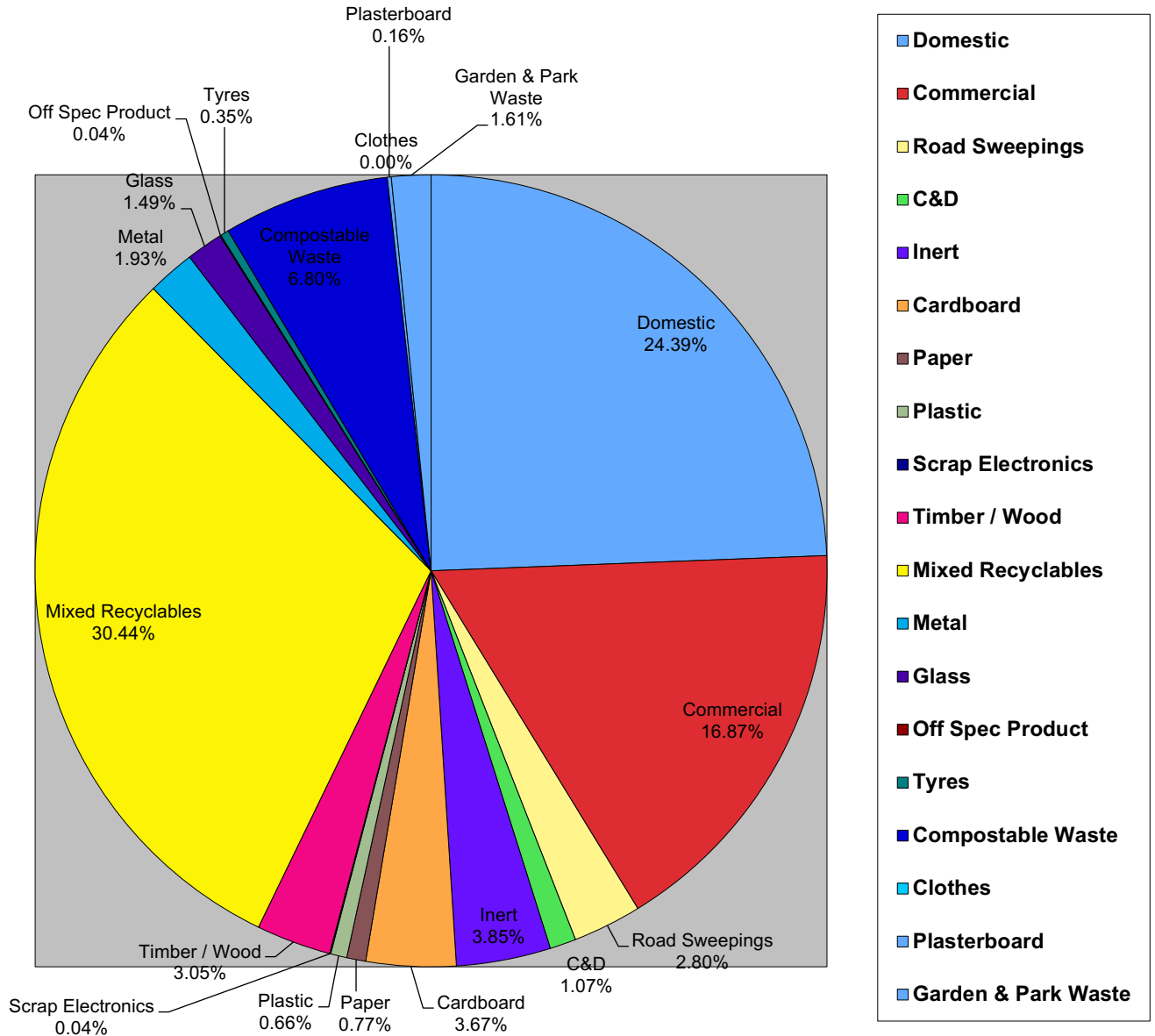


Figure 2.11.0:
Breakdown of Waste Received on site from 1st January 2011 – 31st December 2011

Waste in for 2011: Table of quantities by waste type

WASTE TYPE	WASTE IN (tonnes per annum)
EWC 200301 Domestic	18335.45
EWC 200301 Commercial	12681.69
EWC 200303 Street / Road Sweepings	2108.55
EWC 170904 Mixed C & D	804.43
EWC 170107 Inert	2894.68
EWC 200201 Garden & Park Waste	1207.05
EWC 150101 Cardboard	2755.96
EWC 200101 Paper	582.18
EWC 200103 Plastic	498.60
EWC 160201 Scrap Electronics / WEEE	33.54
EWC 200138 Timber / Wood / Green	2295.07
EWC 200199 Mixed Kerbside Recyclables	22887.50
EWC 170407 Metal	1454.38
EWC 200102 Glass	1121.93
EWC 160304 Off Spec Product	30.12
EWC 200108 Food Waste	5109.98
EWC 200304 Sludge Compostable materials	
EWC 170802 Plasterboard / Gypsum	121.58
EWC 160103 Tyres	260.45
EWC 200110 Clothes	0.10
TOTAL	75,183.24 TONNES

Table 2.11.1: Total Wastes Incoming 1st January 2011 – 31st December 2011

Waste Out 2011

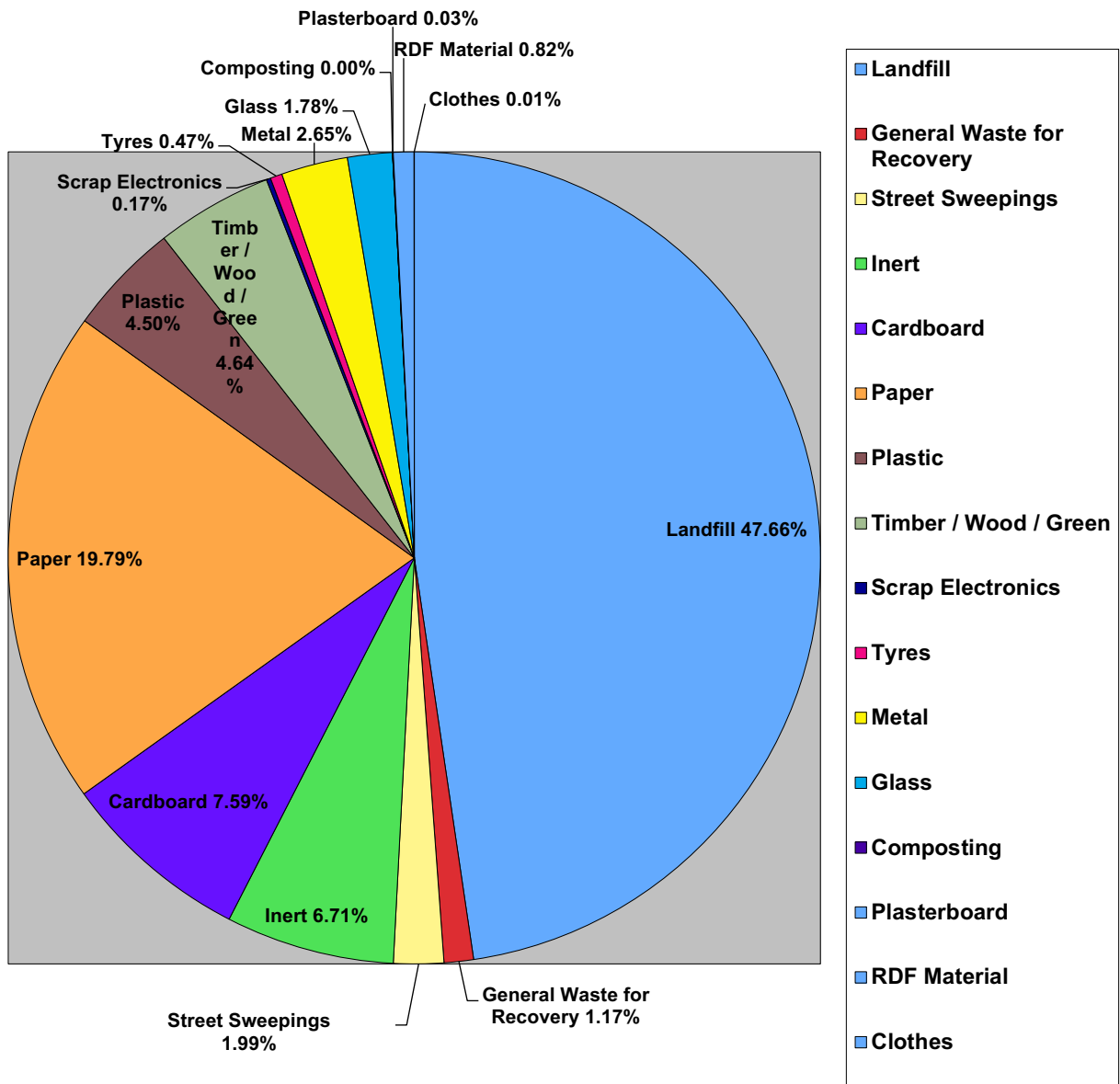


Figure 2.11.2:
Breakdown of Waste going off site for Recovery or Disposal from 1st January 2011 – 31st December 2011

Waste out for 2011: Table of quantities by waste type:-

WASTE TYPE	WASTE OUT (tonnes per annum)
EWC 191212 Mechanically treated mixed waste for landfill	32,094.62
EWC 191212 Mechanically treated mixed waste for recovery (send to Indaver Meath Facility)	788.14
EWC 200303 Road / Street Sweepings	1340.58
EWC 200202 Inert	4520.28
EWC 191201 Cardboard	5111.17
EWC 191201 Paper	13328.88
EWC 191204 Plastic	3031.88
EWC 191207 Timber / Wood / Green	3125.35
EWC 160201 Scrap Electronics	114.46
EWC 160103 Tyres	318.36
EWC 191203 Metal	1784.65
EWC 191205 Glass	1199.26
EWC 191208 Clothes	5.92
EWC 170802 Gypsum / Plasterboard	19.50
EWC 200108 or EWC 200304 Compostable Material	0.58
EWC 191210 Refuse Derived Fuel	551.32
EWC 200199 Mixed Recycling	108.06
TOTAL	67,443.01 TONNES

Table 2.11.3: Total Wastes Outgoing 1st January 2011 – 31st December 2011

RECYCLING SUMMARY FOR 2011

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2011. This table only shows the RECYCLABLE / RECOVERABLE material types and lists the total tonnage recycled during 2011 and the % split that each waste type provides towards the total recycling figure:-

WASTE TYPE (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
EWC 200202 Inert	4520.28	13%
EWC 191201 Cardboard	5111.17	15%
EWC 191201 Paper	13328.88	39%
EWC 191204 Plastic	3031.88	9%
EWC 191207 Timber / Wood / Green	3125.35	9%
EWC 160201 Scrap Electronics	114.46	Less than 1%
EWC 160103 Tyres	318.36	1%
EWC 191203 Metal	1784.65	5%
EWC 191205 Glass	1199.26	4%
EWC 191208 Clothes	5.92	Less than 1%
EWC 170802 Gypsum / Plasterboard	19.50	Less than 1%
EWC 200108 or EWC 200304 Compostable Material	0.58	Less than 1%
EWC 191210 Refuse Derived Fuel	551.32	2%
EWC 191212 Mechanically treated mixed waste for recovery (send to Indaver Meath Facility)	788.14	2%
EWC 200199 Mixed Recycling	108.06	Less than 1%
TOTAL	34007.81	45% of total waste in was recycled for 2011

Table 2.11.4: Breakdown of recycling waste out for 1st January 2011 – 31st December 2011

Waste In / Out Reports for 2012

WASTE IN (2012)

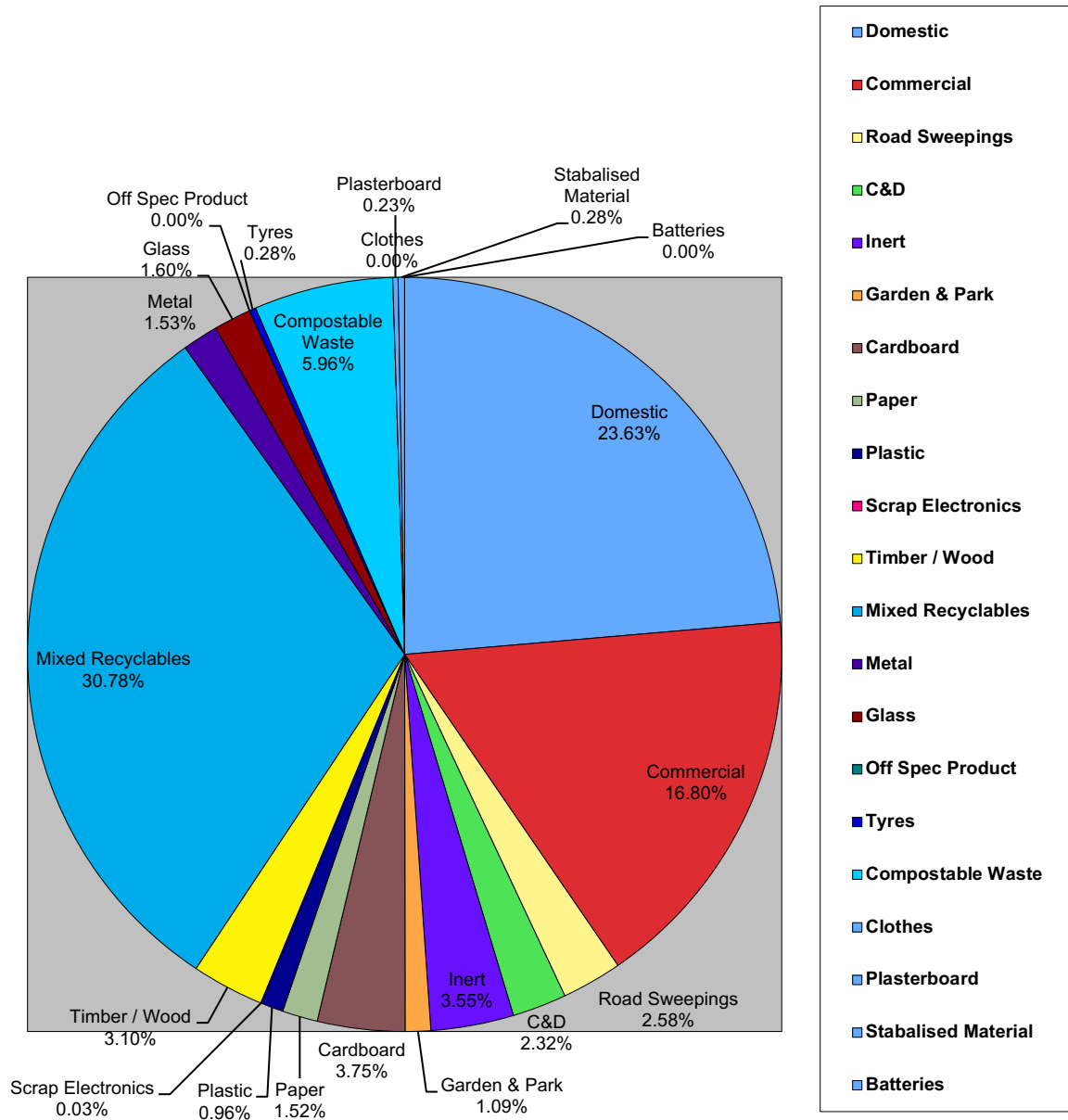


Figure 2.12.0:
Breakdown of Waste Received on site from 1st January 2012 – 31st December 2012

Waste in for 2012: Table of quantities by waste type

WASTE TYPE	WASTE IN (tonnes per annum)
EWC 200301 Domestic	16973.75
EWC 200301 Commercial	12065.34
EWC 200303 Street / Road Sweepings	1855.76
EWC 170904 Mixed C & D	1667.91
EWC 170107 Inert	2550.56
EWC 200201 Garden & Park Waste	782.98
EWC 150101 Cardboard	2689.79
EWC 200101 Paper	1088.49
EWC 200103 Plastic	689.21
EWC 160201 Scrap Electronics / WEEE	22.90
EWC 200138 Timber / Wood	2224.68
EWC 200199 Mixed Kerbside Recyclables	22106.40
EWC 170407 Metal	1100.56
EWC 200102 Glass	1151.56
EWC 160304 Off Spec Product	1.46
EWC 200108 Food Waste	3943.42
EWC 200304 Sludge	339.36
Compostable materials	
EWC 170802 Plasterboard / Gypsum	161.68
EWC 160103 Tyres	202.67
EWC 200110 Clothes	0.08
EWC 190305 Stabilised Material	198.06
EWC 160604 Alkaline Batteries	1.56
TOTAL	71818.18 TONNES

Table 2.12.1: Total Wastes Incoming 1st January 2012 – 31st December 2012

Waste Out 2012

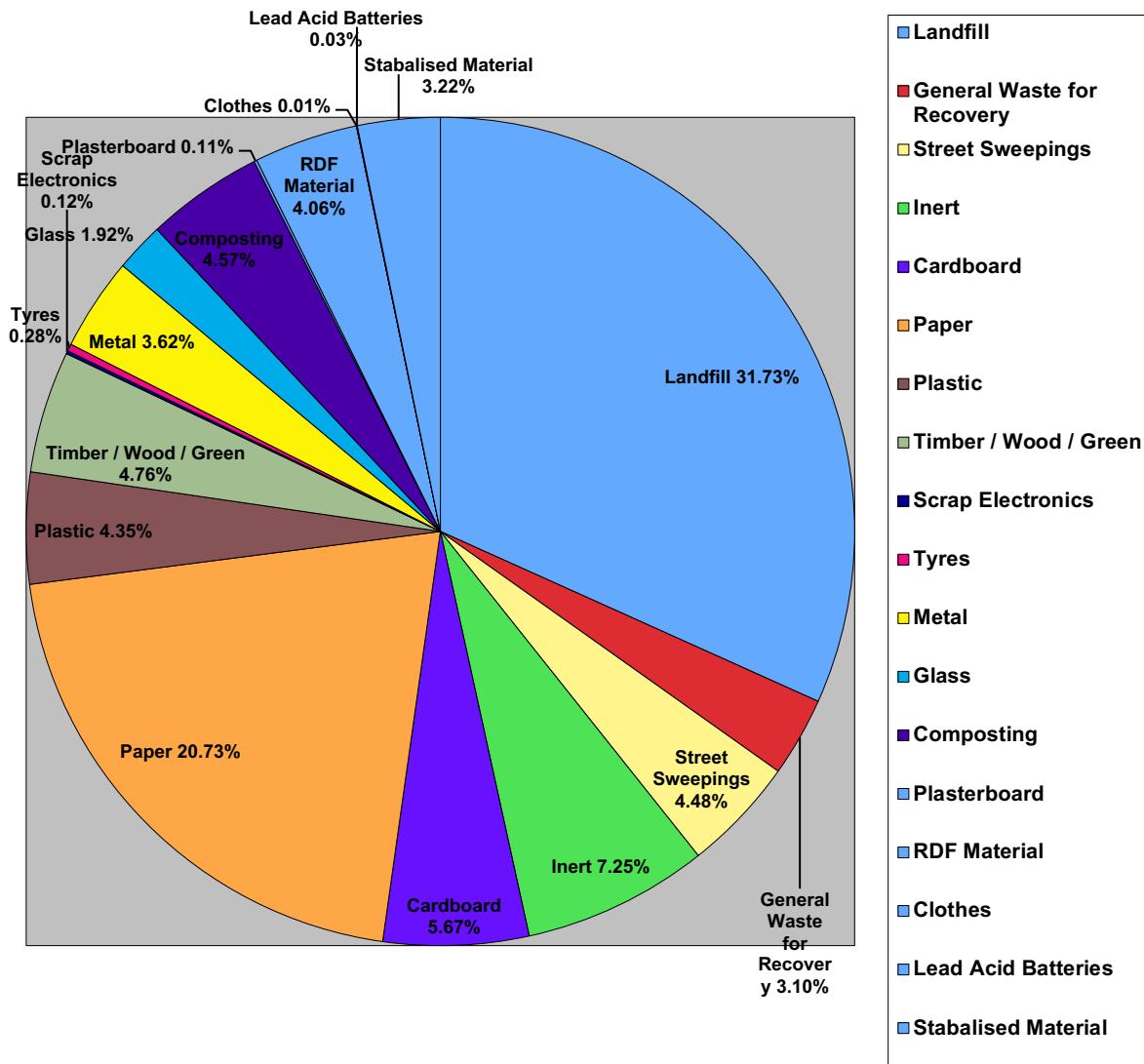


Figure 2.12.2:
Breakdown of Waste going off site for Recovery or Disposal from 1st January 2012 – 31st December 2012

Waste out for 2012: Table of quantities by waste type:-

WASTE TYPE	WASTE OUT (tonnes per annum)
EWC 191212 Mechanically treated mixed waste for landfill	21779.16
EWC 191212 Mechanically treated mixed waste for recovery (sent to Indaver Meath Facility)	2126.82
EWC 200303 Road / Street Sweepings / Stabilised Material	3075.32
EWC 200202 Inert	4979.22
EWC 191201 Cardboard	3891.44
EWC 191201 Paper	14231.94
EWC 191204 Plastic	2982.70
EWC 191207 Timber / Wood / Green	3267.66
EWC 160201 Scrap Electronics	83.50
EWC 160103 Tyres	190.78
EWC 191203 Metal	2487.72
EWC 191205 Glass	1316.74
EWC 191208 Clothes	5.24
EWC 170802 Gypsum / Plasterboard	76.3
EWC 200108 or EWC 200304 Compostable Material	3138.16
EWC 191210 Refuse Derived Fuel	2787.04
EWC 160601* Lead Acid Batteries	18.74
EWC Stabilised Material	2207.52
TOTAL	68,646.00 TONNES

Table 2.12.3: Total Wastes Outgoing 1st January 2012 – 31st December 2012

RECYCLING SUMMARY FOR 2012

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2012. This table only shows the RECYCLABLE / RECOVERABLE material types and lists the total tonnage recycled during 2012 and the % split that each waste type provides towards the total recycling figure:-

WASTE TYPE (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
EWC 200202 Inert	4979.22	8%
EWC 191201 Cardboard	3891.44	9%
EWC 191201 Paper	14231.94	34%
EWC 191204 Plastic	2982.70	7%
EWC 191207 Timber / Wood / Green	3267.66	8%
EWC 160201 Scrap Electronics	83.50	Less than 1%
EWC 160103 Tyres	190.78	Less than 1%
EWC 191203 Metal	2487.72	6%
EWC 191205 Glass	1316.74	3%
EWC 191208 Clothes	5.24	Less than 1%
EWC 170802 Gypsum / Plasterboard	76.3	Less than 1%
EWC 200108 or EWC 200304 Compostable Material	3138.16	7%
EWC 191210 Refuse Derived Fuel	2787.04	7%
EWC 191212 Mechanically treated mixed waste for recovery (send to Indaver Meath Facility)	2126.82	5%
EWC 100601* Lead Acid Batteries	18.74	Less than 1%
EWC 190305 Stabilised Material	2207.52	5%
TOTAL	43,791.52	61% of total waste in was recycled or recycled for 2012

Table 2.12.4: Breakdown of recycling waste out for 1st January 2012 – 31st December 2012

Waste In / Out Reports for 2013

WASTE IN (2013)

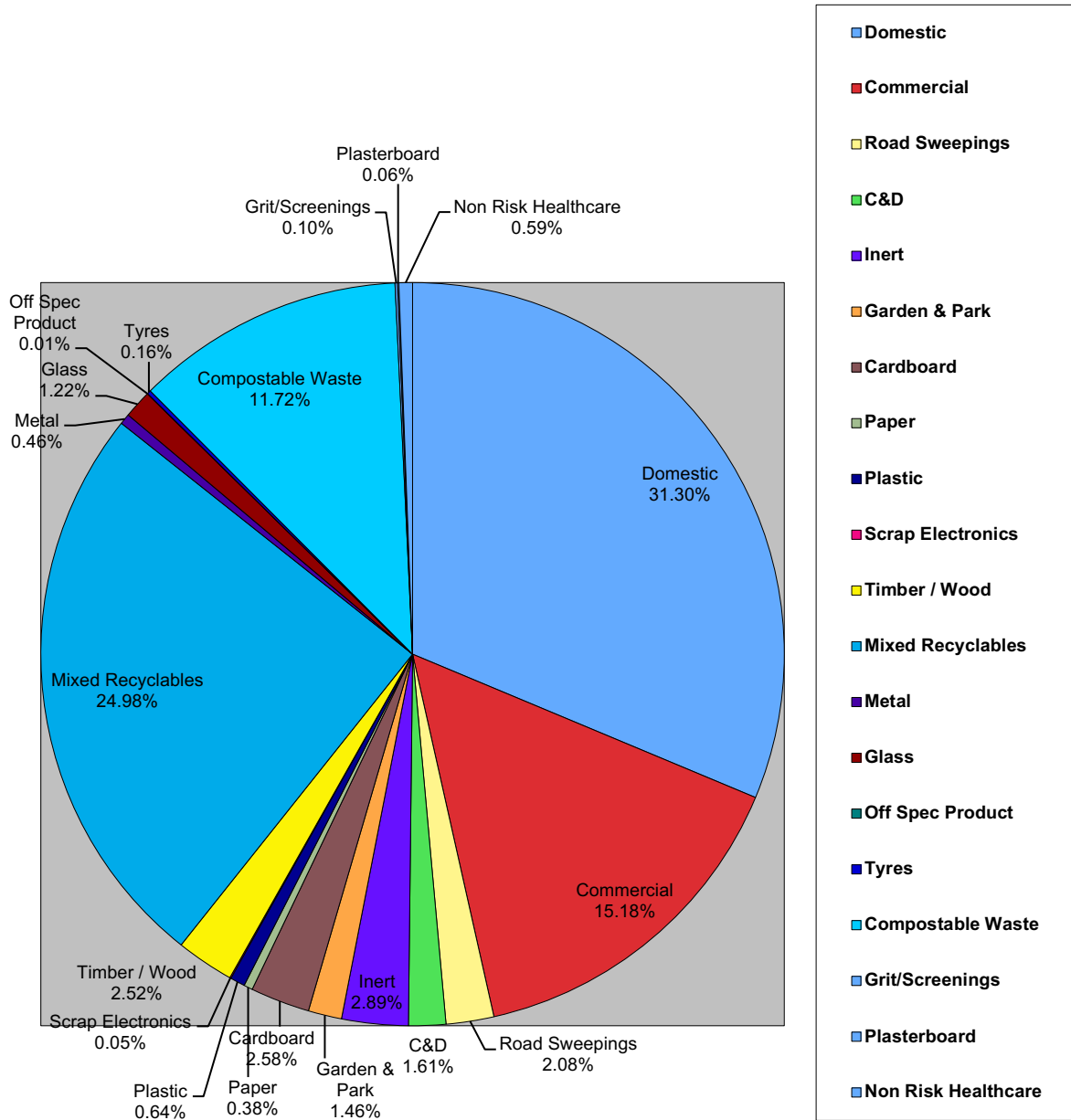


Figure 2.13.0:
Breakdown of Waste Received on site from 1st January 2013 – 31st December 2013

Waste in for 2013: Table of quantities by waste type

WASTE TYPE	WASTE IN (tonnes per annum)
EWC 200301 Domestic	27986.41
EWC 200301 Commercial	13573.78
EWC 200303 Street / Road Sweepings	1857.32
EWC 170904 Mixed C & D	1443.15
EWC 170107 Inert	2580.85
EWC 200201 Garden & Park Waste	1302.56
EWC 150101 Cardboard	2305.97
EWC 200101 Paper	343.16
EWC 200139 Plastic	576.08
EWC 160201 Scrap Electronics / WEEE	45.66
EWC 200138 Timber / Wood	2250.91
EWC 200199 Mixed Kerbside Recyclables	22329.26
EWC 170407 Metal	409.81
EWC 200102 Glass	1093.22
EWC 160304 Off Spec Product	10
EWC 200108 Food Waste	10224.03
EWC 200304 Sludge	250.24
Compostable materials	
EWC 170802 Plasterboard / Gypsum	54.22
EWC 160103 Tyres	147.03
EWC 190801 Grit/screenings	92.68
EWC 180104 Non risk healthcare waste	526.53
TOTAL	89402.87TONNES

Table 2.13.1: Total Wastes Incoming 1st January 2013 – 31st December 2013

Waste Out 2013

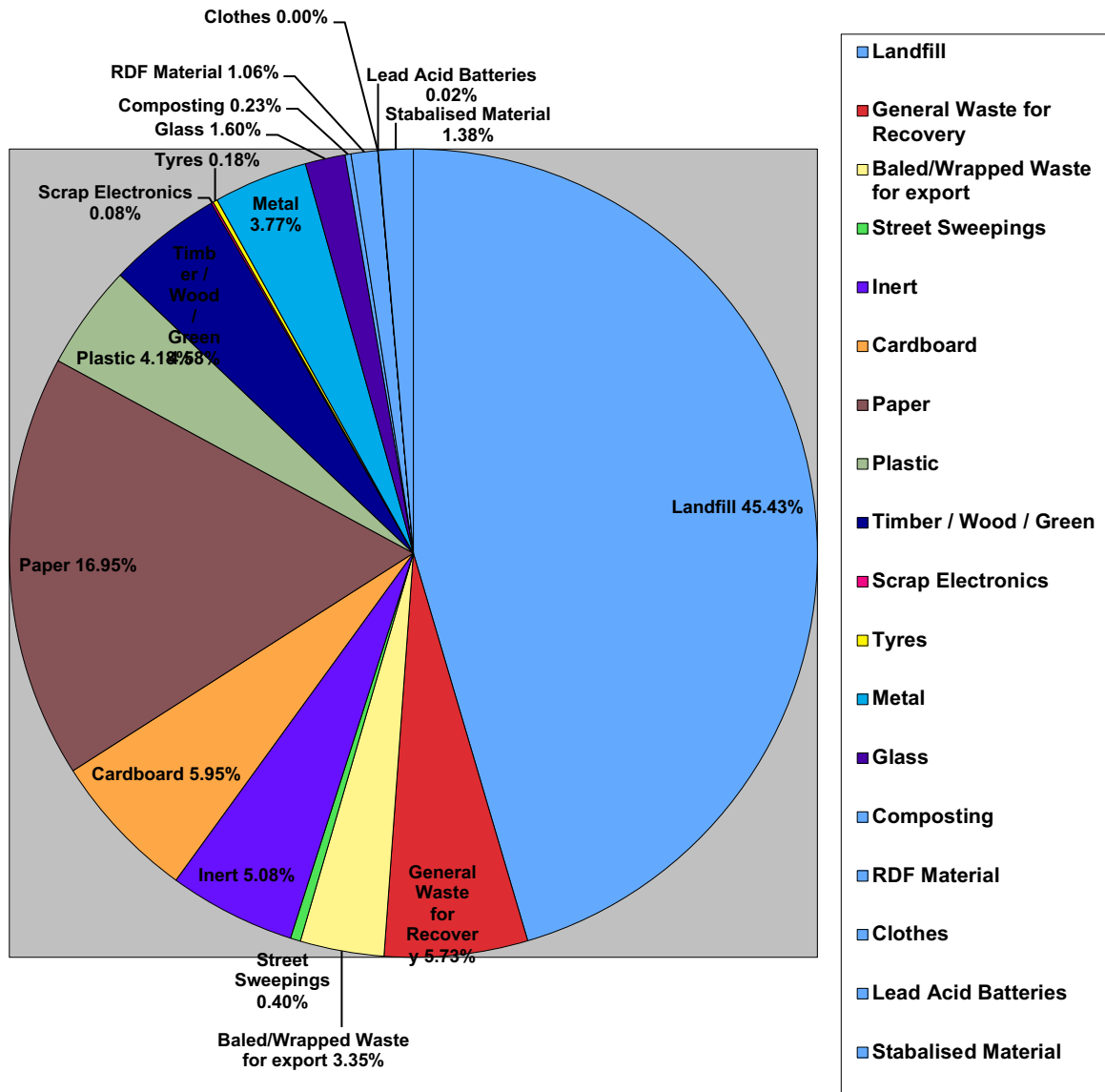


Figure 2.13.2:
Breakdown of Waste going off site for Recovery or Disposal from
1st January 2013 – 31st December 2013

Waste out for 2013: Table of quantities by waste type:-

WASTE TYPE	WASTE OUT (tonnes per annum)
EWC 200301 Mechanically treated mixed waste for landfill	34302.85
EWC 191212 Mechanically treated mixed waste for recovery (sent to Indaver Meath Facility)	4324
EWC 200301 Baled/Wrapped waste for export & recovery	2532.58
EWC 200303 Road / Street Sweepings	305.6
EWC 200202 Inert	3834.37
EWC 191201 Cardboard	4494.68
EWC 191201 Paper	12796.88
EWC 191204 Plastics	3156.18
EWC 191207 Timber / Wood / Green	3460.42
EWC 160201 Scrap Electronics	62.92
EWC 160103 Tyres	136.88
EWC 191203 Metal	2844.99
EWC 191205 Glass	1208.76
EWC 191208 Clothes	3.18
EWC 200108 or EWC 200304 Compostable Material	176.56
EWC 191210 Refuse Derived Fuel	803.2
EWC 160601* Lead Acid Batteries	13.24
EWC Stabilised Material (Compost)	1045.22
TOTAL	75502.51 TONNES

Table 2.13.3: Total Wastes Outgoing 1st January 2013 – 31st December 2013

RECYCLING SUMMARY FOR 2013

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2013. This table only shows the RECYCLABLE / RECOVERABLE material types and lists the total tonnage recycled during 2012 and the % split that each waste type provides towards the total recycling figure:-

WASTE TYPE (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
EWC 200202 Inert	3834.37	9%
EWC 191201 Cardboard	4494.68	11%
EWC 191201 Paper	12796.88	31%
EWC 191204 Plastic	3156.18	8%
EWC 191207 Timber / Wood / Green	3460.42	8%
EWC 160201 Scrap Electronics	62.92	Less than 1%
EWC 160103 Tyres	136.88	Less than 1%
EWC 191203 Metal	2844.99	7%
EWC 191205 Glass	1208.76	3%
EWC 191208 Clothes	3.18	Less than 1%
EWC 200301 Baled/Wrapped waste for export for recovery	2532.58	6%
EWC 200108 or EWC 200304 Compostable Material	176.56	Less than 1%
EWC 191210 Refuse Derived Fuel	803.2	2%
EWC 191212 Mechanically treated mixed waste for recovery (send to Indaver Meath Facility)	4324	11%
EWC 100601* Lead Acid Batteries	13.24	Less than 1%
EWC 190305 Stabilised Material	1045.22	3%
TOTAL	40894.06	54% of total waste in was sent for recycling or recovery for 2013

Table 2.13.4: Breakdown of recycling waste out for 1st January 2013 – 31st December 2013

Waste In / Out Reports for 2014

WASTE IN (2014)

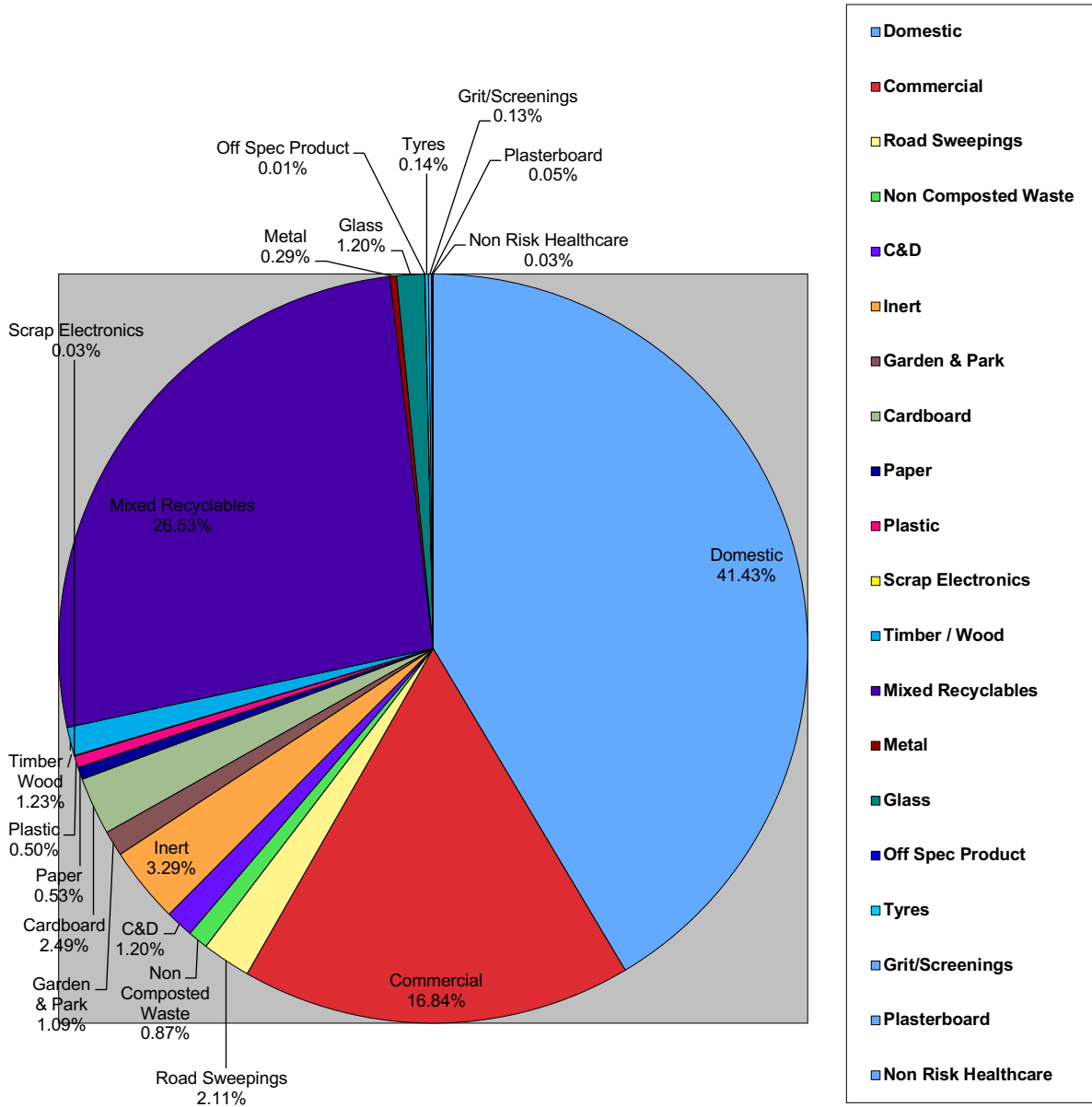


Figure 2.14.0:
Breakdown of Waste Received on site from 1st January 2014 – 31st December 2014

Waste in for 2014: Table of quantities by waste type

WASTE TYPE	WASTE IN (tonnes per annum)
EWC 200301 Domestic	36866.37
EWC 200301 Commercial	14988.20
EWC 200303 Street / Road Sweepings	1874.14
EWC 190501 Non Composted Fraction of Municipal Wastes	778.46
EWC 170904 Mixed C & D	1068.71
EWC 170107 Inert	2928.46
EWC 200201 Garden & Park Waste	971.86
EWC 150101 Cardboard	2213.77
EWC 200101 Paper	473.98
EWC 200139 Plastic	447.21
EWC 160201 Scrap Electronics / WEEE	28.40
EWC 200138 Timber / Wood	1090.60
EWC 200199 Mixed Kerbside Recyclables	23606.58
EWC 170407 Metal	256.80
EWC 200102 Glass	1068.46
EWC 160304 Off Spec Product	11.44
EWC 170802 Plasterboard / Gypsum	41.12
EWC 160103 Tyres	128.24
EWC 190801 Grit/screenings	111.88
EWC 180104 Non risk healthcare waste	28.96
EWC 200108 Food Waste / Grease (not compostable)	2.96
EWC 200303 Septic Tank Sludge	298.16
EWC 200134 Household Batteries	0.86
EWC 200110 Clothes / Textiles	0.04
TOTAL	89,285.66 tonnes

Table 2.14.1: Total Wastes Incoming 1st January 2014 – 31st December 2014

Waste Out 2014

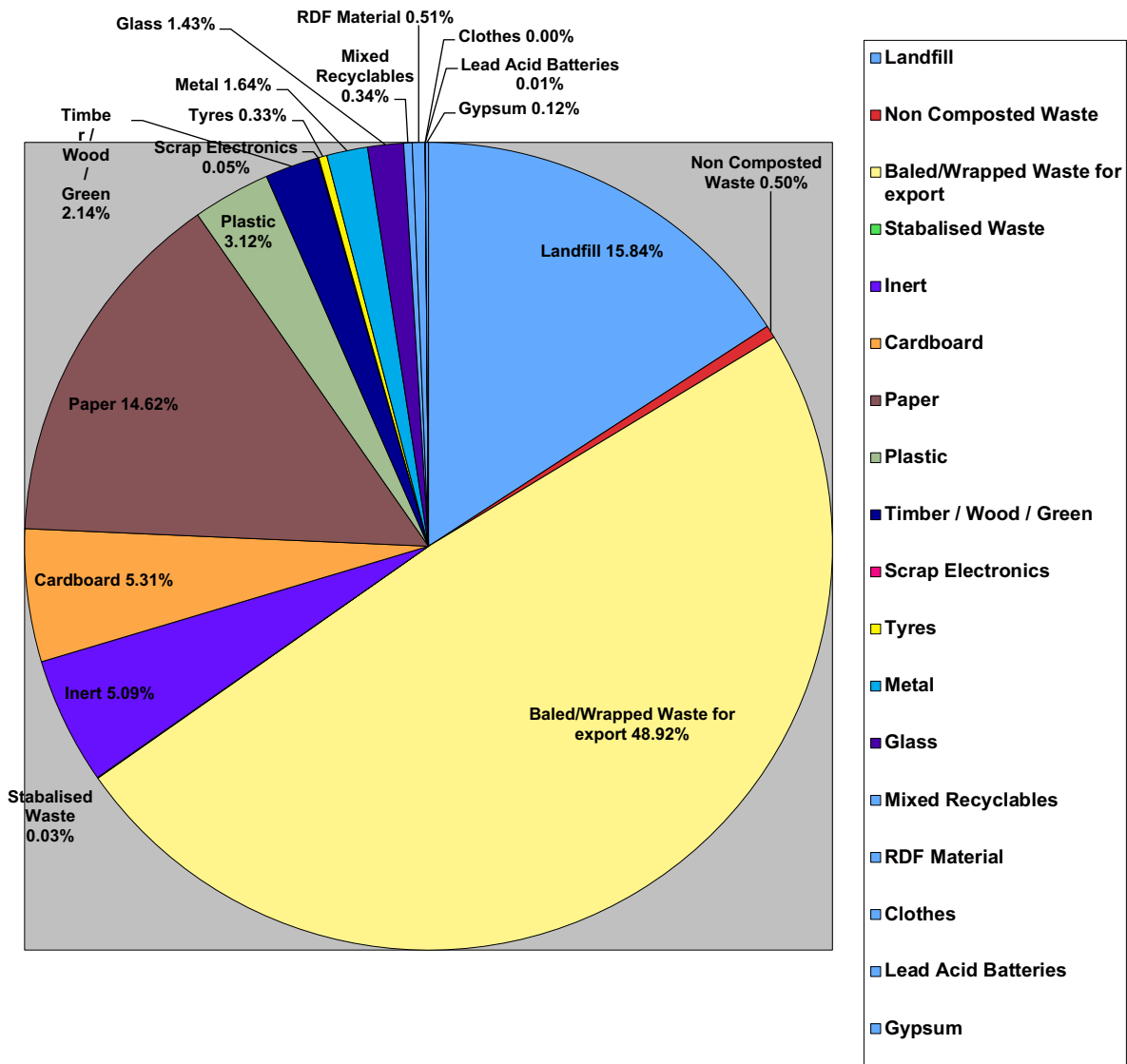


Figure 2.14.2:
Breakdown of Waste going off site for Recovery or Disposal from
1st January 2014 – 31st December 2014

Waste out for 2014: Table of quantities by waste type:-

WASTE TYPE	WASTE OUT (tonnes per annum)
EWC 200301 Pre-sorted waste for landfill	13,462.33
EWC 200301 Mechanically treated mixed waste for recovery (Baled / Wrapped MSW)	41,586.38
EWC 190501 Non Composted Municipal Waste (compost out throws)	428.94
EWC 190305 Stabilised Waste for Disposal	25.32
EWC 200202 Inert	4325.98
EWC 191201 Cardboard	4515.44
EWC 191201 Paper	12,428.92
EWC 191204 Plastics	2648.06
EWC 191207 Timber / Wood / Green	1821.42
EWC 160201 Scrap Electronics	40.82
EWC 160103 Tyres	277.28
EWC 191203 Metal	1391.58
EWC 191205 Glass	1217.30
EWC 191208 Clothes	1.24
EWC 190801 Grit/screenings	285.82
EWC 200303 Septic Tank Sludge	
EWC 170802 Gypsum / Plasterboard	103.28
EWC 200301 Mixed Recyclables (unsorted)	289.40
EWC 191210 Refuse Derived Fuel	433.82
EWC 160601* Lead Acid Batteries	8.14
TOTAL	85,291.47 tonnes

Table 2.14.3: Total Wastes Outgoing 1st January 2014 – 31st December 2014

RECYCLING / RECOVERY SUMMARY FOR 2014

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2013. This table only shows the RECYCLABLE / RECOVERABLE material types and lists the total tonnage recycled during 2012 and the % split that each waste type provides towards the total recycling figure:-

WASTE TYPE (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
EWC 200301 Mechanically treated mixed waste for recovery (Baled / Wrapped MSW)	41,586.38	58%
EWC 200202 Inert	4325.98	6%
EWC 191201 Cardboard	4515.44	6%
EWC 191201 Paper	12,428.92	17%
EWC 191204 Plastics	2648.06	4%
EWC 191207 Timber / Wood / Green	1821.42	3%
EWC 160201 Scrap Electronics	40.82	0%
EWC 160103 Tyres	277.28	0%
EWC 191203 Metal	1391.58	2%
EWC 191205 Glass	1217.30	2%
EWC 191208 Clothes	1.24	0%
EWC 190801 Grit/screenings EWC 200303 Septic Tank Sludge	285.82	0%
EWC 170802 Gypsum / Plasterboard	103.28	0%
EWC 200301 Mixed Recyclables (unsorted)	289.40	0%
EWC 191210 Refuse Derived Fuel	433.82	1%
EWC 160601* Lead Acid Batteries	8.14	0%
TOTAL	71,271.60	80% of total waste in was sent for recycling or recovery for 2014

Table 2.14.4: Breakdown of recycling waste out for 1st January 2014 – 31st December 2014

Waste In / Out Reports for 2015

WASTE IN (2015)

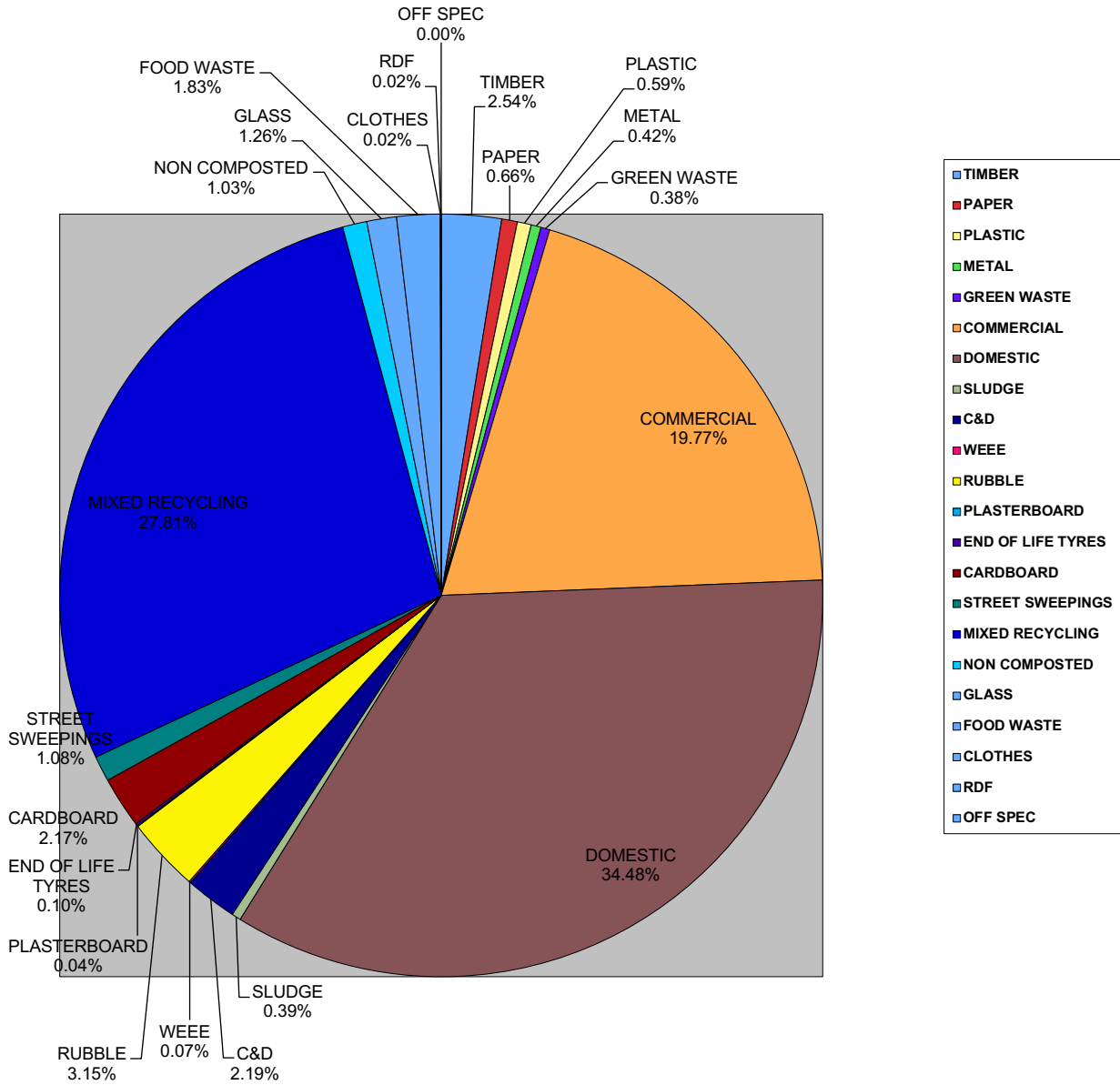


Figure 2.15.0:
Breakdown of Waste Received on site from 1st January 2015 – 31st December 2015

Waste in for 2015: Table of quantities by waste type

WASTE TYPE	WASTE IN (tonnes per annum)
EWC 200301 Domestic	32621.73
EWC 200301 Commercial	18701.08
EWC 200303 Street / Road Sweepings	1022.77
EWC 190501 Non Composted Fraction of Municipal Wastes	973.04
EWC 170904 Mixed C & D	2076.32
EWC 170107 Inert	2977.82
EWC 200201 Garden & Park Waste	356.27
EWC 150101 Cardboard	2052.87
EWC 200101 Paper	626.86
EWC 200139 Plastic	558.57
EWC 160201 Scrap Electronics / WEEE	67.58
EWC 200138 Timber / Wood	2402.92
EWC 200199 Mixed Kerbside Recyclables	26310.88
EWC 170407 Metal	397.42
EWC 200102 Glass	1190.28
EWC 160304 Off Spec Product	3.34
EWC 170802 Plasterboard / Gypsum	39.24
EWC 160103 Tyres	90.44
EWC 190801 Grit/Screenings	365.53
EWC 200301 RDF	21.58
EWC 200108 Food Waste	1732.91
EWC 200110 Clothes / Textiles	14.82
TOTAL	94,604.27 tonnes

Table 2.15.1: Total Wastes Incoming 1st January 2015 – 31st December 2015

Waste Out 2015

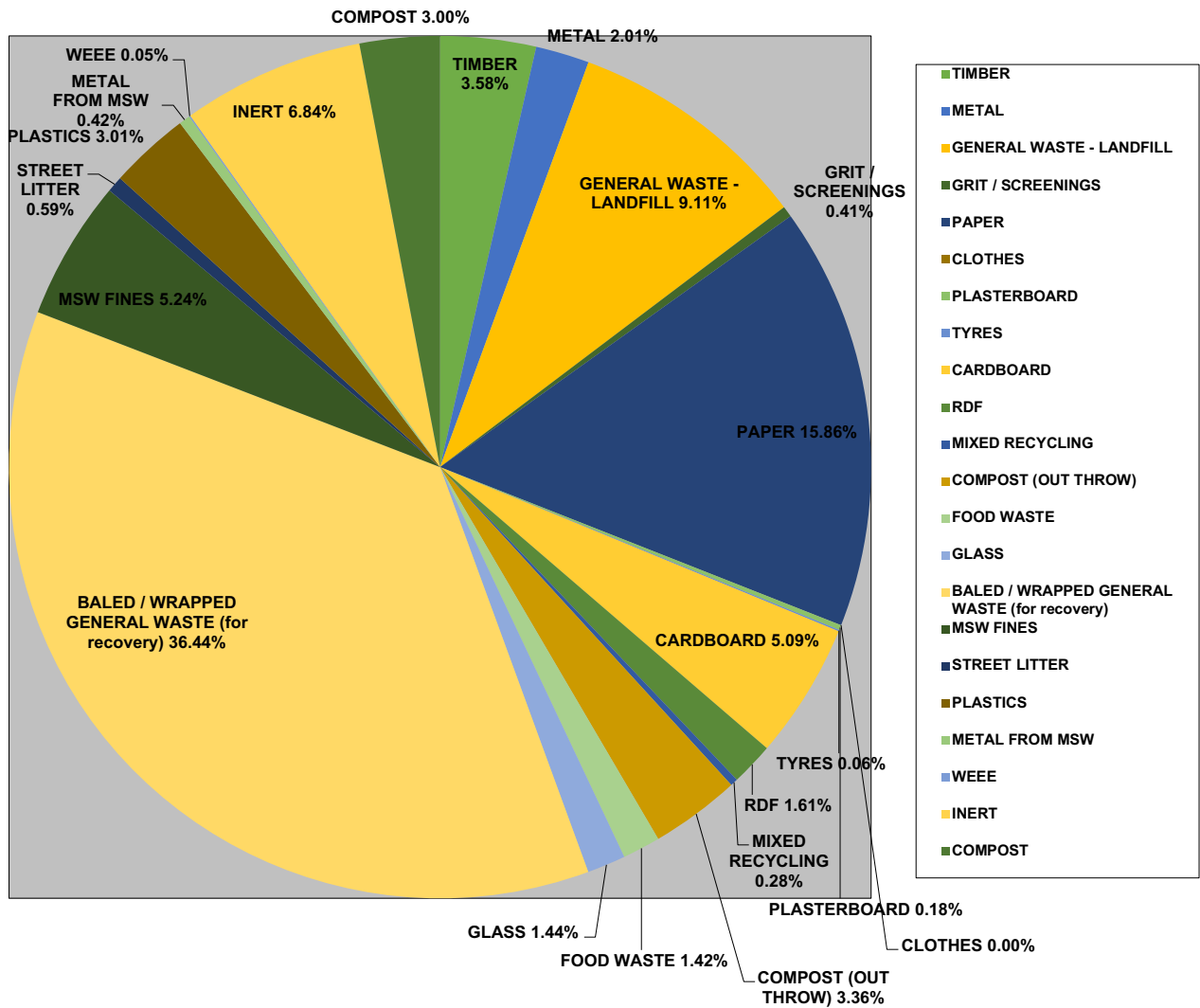


Figure 2.15.2:
Breakdown of Waste going off site for Recovery or Disposal from
1st January 2015 – 31st December 2015

Waste out for 2015: Table of quantities by waste type:-

WASTE TYPE	WASTE OUT (tonnes per annum)
EWC 200301 Pre-sorted waste for landfill	8,085.30
EWC 200301 Mechanically treated mixed waste for recovery (Baled / Wrapped MSW)	32,335.61
EWC 190501 Non Composted Municipal Waste (compost out throws)	2,982.19
EWC 190305 Stabilised Waste for Disposal	
EWC 191203 Metal from MSW Processing	371.28
EWC 191212 MSW Fines from Mechanical Treatment	4646.10
EWC 200202 Inert	6066.95
EWC 200303 Street Cleaning Residues	526.88
EWC 191201 Cardboard	4513.36
EWC 191201 Paper	14077.77
EWC 191204 Plastics	2674.26
EWC 191207 Timber / Wood / Green	3179.63
EWC 160201 Scrap Electronics	44.06
EWC 160103 Tyres	50.06
EWC 191203 Metal	1784.45
EWC 191205 Glass	1277.74
EWC 191208 Clothes	1.48
EWC 190801 Grit/screenings	361.88
EWC 200303 Septic Tank Sludge	
EWC 170802 Gypsum / Plasterboard	163.46
EWC 200301 Mixed Recyclables (unsorted)	248.70
EWC 191210 Refuse Derived Fuel	1427.30
Compost – processed clean compost for farmers	2662.38
EWC 200108 Food Waste (unprocessed)	1258.66
TOTAL	88,739.43 tonnes

Table 2.15.3: Total Wastes Outgoing 1st January 2015 – 31st December 2015

RECYCLING / RECOVERY SUMMARY FOR 2015

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2015. This table only shows the RECYCLABLE / RECOVERABLE material types and lists the total tonnage recycled during 2015 and the % split that each waste type provides towards the total recycling figure:-

WASTE TYPE (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
EWC 200301 Mechanically treated mixed waste for recovery (Baled / Wrapped MSW)	32,335.61	34%
EWC 200202 Inert	6066.95	6%
EWC 191201 Cardboard	4513.36	5%
EWC 191201 Paper	14077.77	15%
EWC 191204 Plastics	2674.26	3%
EWC 191207 Timber / Wood / Green	3179.63	3%
EWC 160201 Scrap Electronics	44.06	0%
EWC 160103 Tyres	50.06	0%
EWC 191203 Metal	1784.45	2%
EWC 191205 Glass	1277.74	1%
EWC 191208 Clothes	1.48	0%
EWC 190801 Grit/screenings	361.88	0.5%
EWC 200303 Septic Tank Sludge		
EWC 170802 Gypsum / Plasterboard	163.46	0%
EWC 200301 Mixed Recyclables (unsorted)	248.70	0.5%
EWC 191210 Refuse Derived Fuel	1427.30	2%
EWC 200108 Food Waste	1258.66	1%
Compost – processed clean compost for farmers	2662.38	3%
TOTAL	72,127.75	76% of total waste in was sent for recycling or recovery for 2015

Table 2.15.4: Breakdown of recycling waste out for 1st January 2015 – 31st December 2015

Waste In / Out Reports for 2016

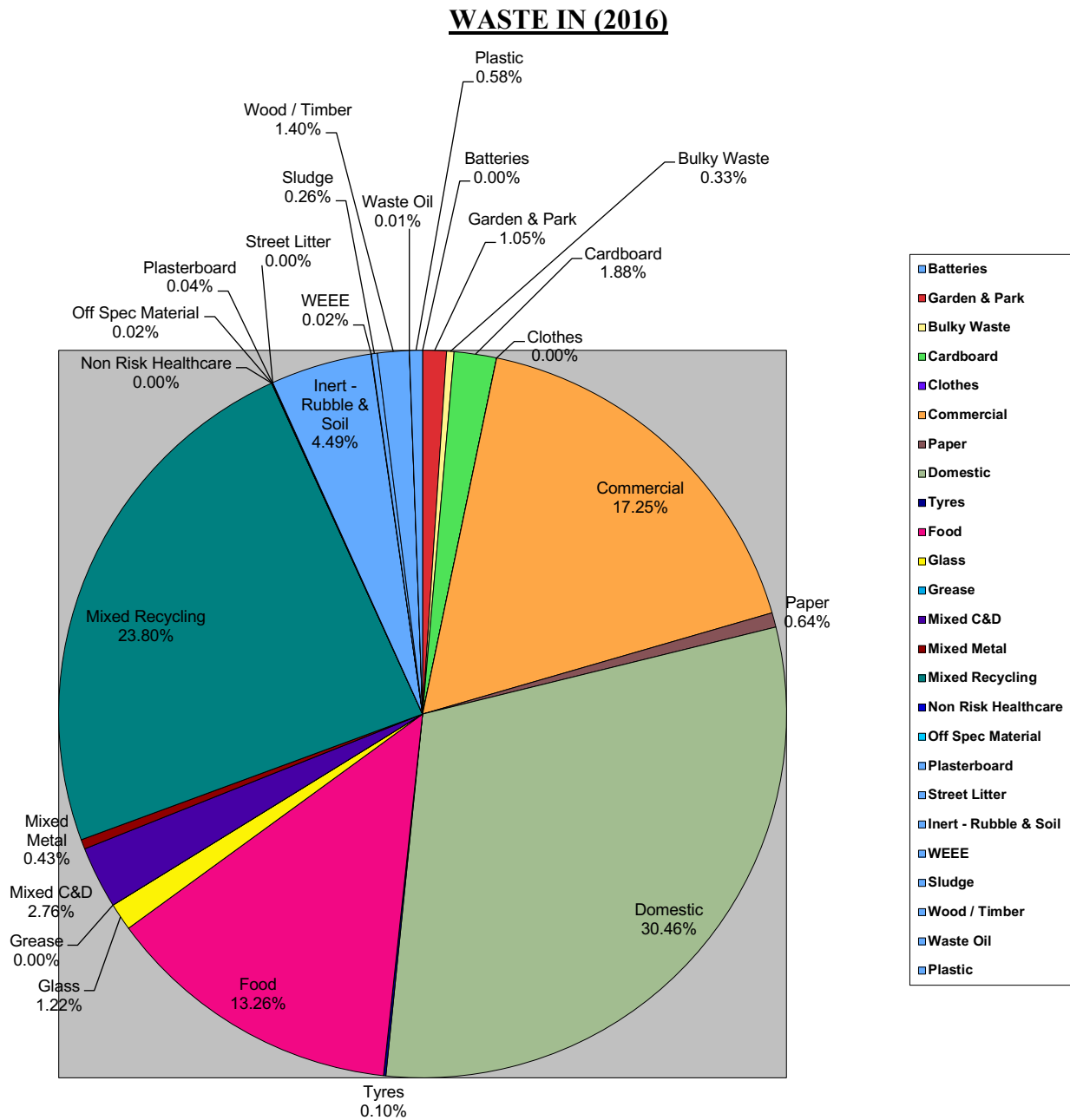


Figure 2.16.0:
Breakdown of Waste Received on site from 1st January 2016 – 31st December 2016

Waste in for 2016: Table of quantities by waste type

WASTE TYPE	WASTE IN (tonnes per annum)
EWC 200301 Domestic	32337.35
EWC 200301 Commercial	18312.97
EWC 200307 Bulky Waste	348.73
EWC 180104 Non Risk Healthcare Waste	4.74
EWC 200303 Street / Road Sweepings	1.26
EWC 170904 Mixed C & D	2927.34
EWC 170107 Inert	4764.63
EWC 200201 Garden & Park Waste	1117.13
EWC 150101 Cardboard	1994.57
EWC 200101 Paper	682.18
EWC 200139 Plastic	613.34
EWC 160201 Scrap Electronics / WEEE	23.60
EWC 200138 Timber / Wood	1490.15
EWC 200199 Mixed Kerbside Recyclables	25273.35
EWC 170407 Metal	452.63
EWC 200102 Glass	1296.25
EWC 160304 Off Spec Product	17.04
EWC 170802 Plasterboard / Gypsum	37.3
EWC 160103 Tyres	109.43
EWC 200108 Food Waste	14083.00
EWC 130208 Waste Oil	5.34
EWC 200304 Sludge	277.07
EWC 200110 Clothes / Textiles	4.72
TOTAL	106,174.12 tonnes

Table 2.16.1: Total Wastes Incoming 1st January 2016 – 31st December 2016

Waste Out 2016

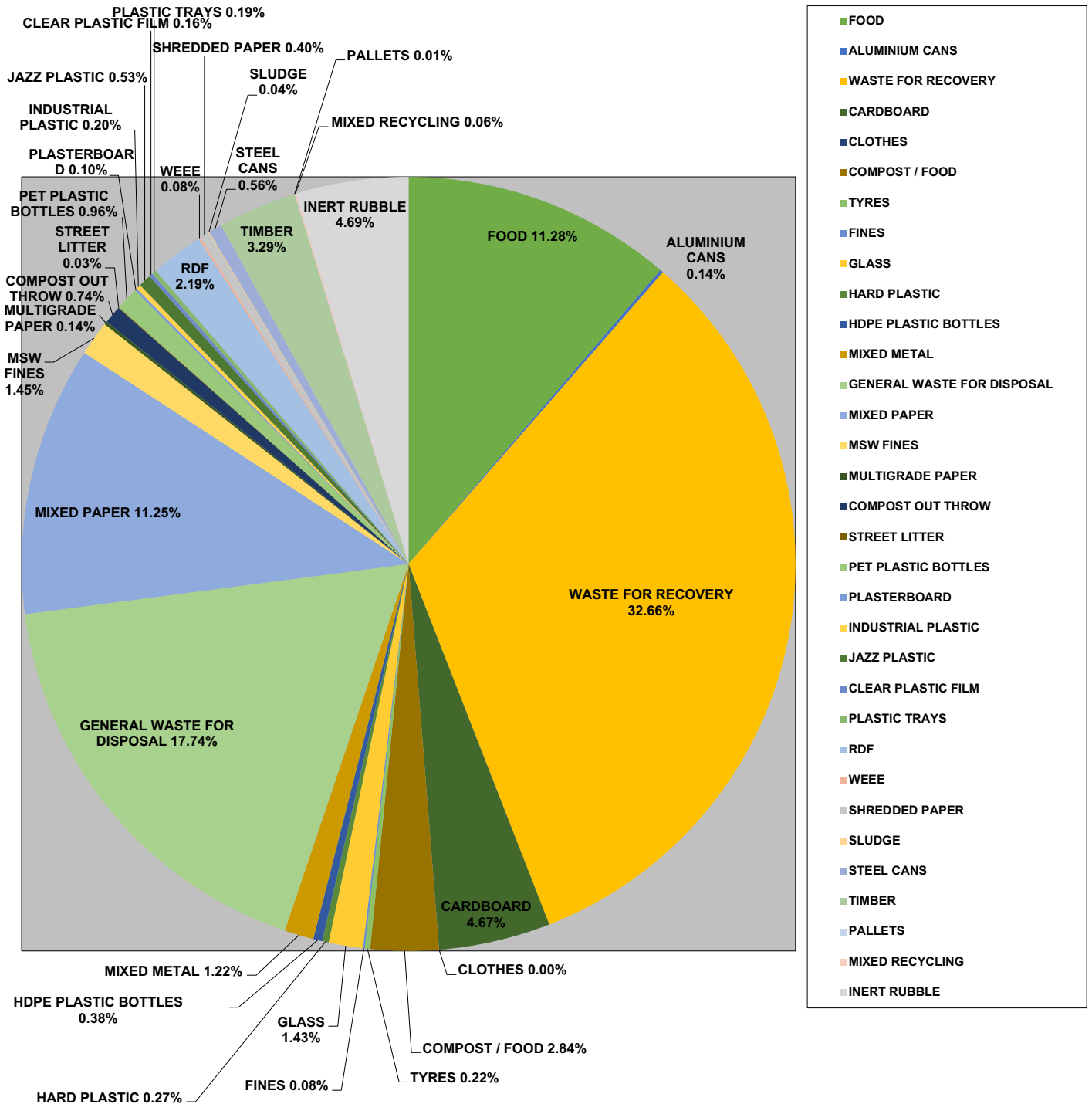


Figure 2.16.2:
Breakdown of Waste going off site for Recovery or Disposal from 1st January 2016 – 31st December 2016

Waste out for 2016: Table of quantities by waste type:-

WASTE TYPE	WASTE OUT (tonnes per annum)
EWC 200301 Pre-sorted waste for landfill	18,010.37
EWC 200301 Mechanically treated mixed waste for recovery (Baled / Wrapped MSW)	33,150.24
EWC 190501 Non Composted Municipal Waste (compost out throws)	750.89
EWC 191212 MSW Fines from Mechanical Treatment	1,548.55
EWC 200202 Inert	4,764.63
EWC 200303 Street Cleaning Residues	29.18
EWC 191201 Cardboard	4,735.84
EWC 191201 Paper	11,969.44
EWC 191204 Plastics	2,731.12
EWC 191207 Timber / Wood / Green	3,346.73
EWC 160201 Scrap Electronics	85.18
EWC 160103 Tyres	224.90
EWC 191203 Metal	1,240.66
EWC 150104 Metal Packaging	705.32
EWC 191205 Glass	1,449.78
EWC 191208 Clothes	0.70
EWC 200303 Septic Tank Sludge	36.06
EWC 170802 Gypsum / Plasterboard	103.10
EWC 200301 Mixed Recyclables (unsorted)	60.70
EWC 191210 Refuse Derived Fuel	2,227.56
Compost – processed clean compost for farmers	2,885.01
EWC 200108 Food Waste (unprocessed)	11,452.24
TOTAL	101,508.20 tonnes

Table 2.16.3: Total Wastes Outgoing 1st January 2016 – 31st December 2016

RECYCLING / RECOVERY SUMMARY FOR 2016

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2016. This table only shows the RECYCLABLE or RECOVERABLE material types and lists the total tonnage recycled during 2016 and the % split that each waste type provides towards the total recycling figure:-

WASTE TYPE (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
EWC 200301 Mechanically treated mixed waste for recovery (Baled / Wrapped MSW)	33.150.24	41%
EWC 200202 Inert	4764.63	6%
EWC 191201 Cardboard	4735.84	6%
EWC 191201 Paper	11,969.44	15%
EWC 191204 Plastics	2731.12	3%
EWC 191207 Timber / Wood / Green	3346.73	4%
EWC 160201 Scrap Electronics	85.18	<1%
EWC 160103 Tyres	224.90	<1%
EWC 191203 Metal	1240.66	2%
EWC 1501?? Metal Packaging	705.32	1%
EWC 191205 Glass	1449.78	2%
EWC 191208 Clothes	0.70	<1%
EWC 200303 Septic Tank Sludge	36.06	<1%
EWC 170802 Gypsum / Plasterboard	103.10	<1%
EWC 200301 Mixed Recyclables (unsorted)	60.70	<1%
EWC 191210 Refuse Derived Fuel	2227.56	3%
Compost – processed clean compost for farmers	2885.01	3%
EWC 200108 Food Waste (unprocessed)	11,452.24	14%
TOTAL	81,169.21 tonnes	76% of total waste in was sent for recycling or recovery for 2016

Table 2.16.4:
Breakdown of recycling waste out for 1st January 2016 – 31st December 2016

WASTE IN (2017)

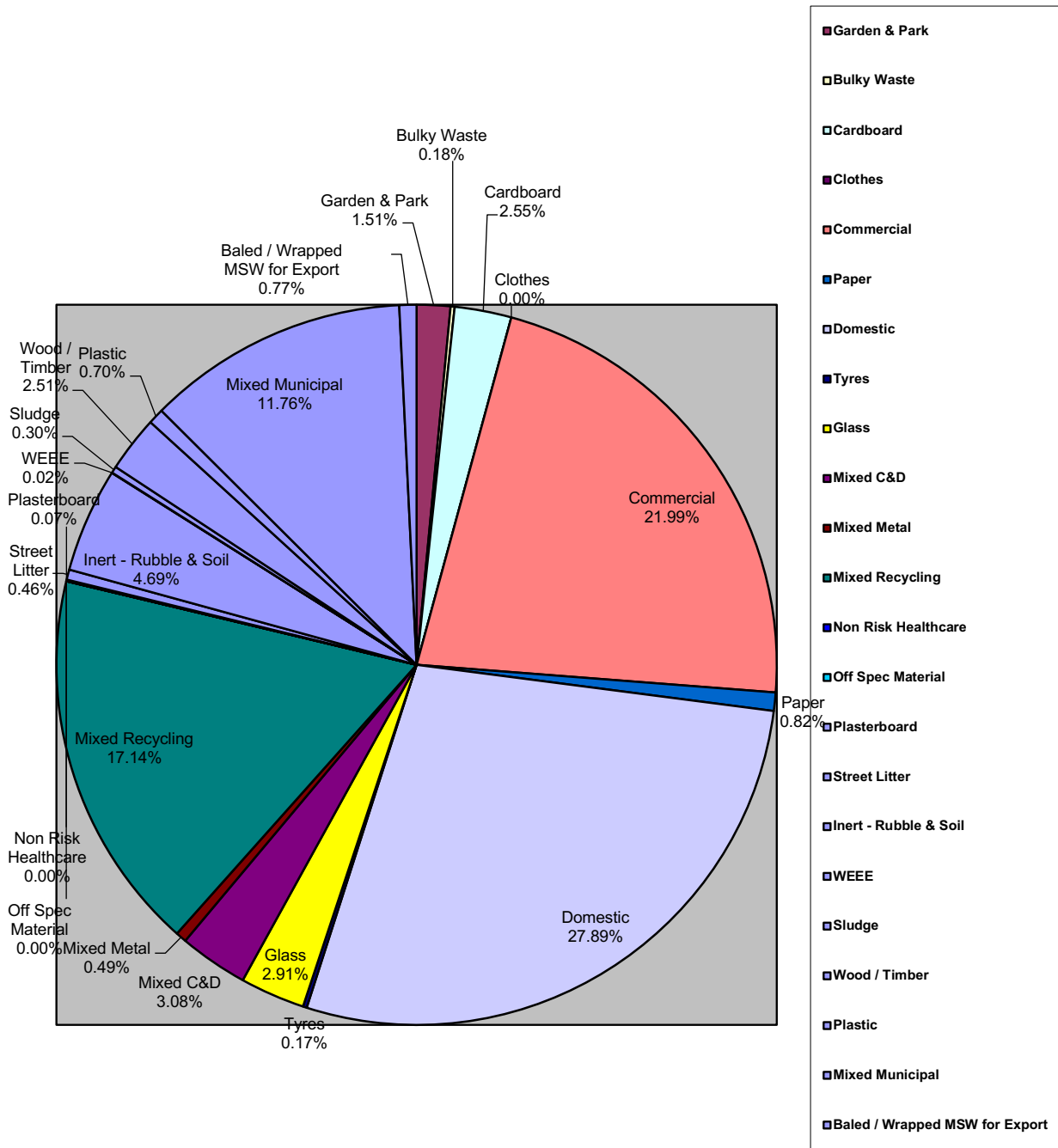


Figure 2.17.0:
Breakdown of Waste Received on site from 1st January 2017 – 31st December 2017

Waste in for 2017: Table of quantities by waste type

WASTE TYPE	WASTE IN (tonnes per annum)
EWC 200301 Domestic	25038.30
EWC 200301 Commercial	19741.09
EWC 200301 Mixed Municipal Waste	10,559.84
EWC 200301 Baled Wrapped Waste for Export	690.30
EWC 200307 Bulky Waste	161.96
EWC 180104 Non Risk Healthcare Waste	0.46
EWC 200303 Street / Road Sweepings	410.05
EWC 170904 Mixed C & D	2769.47
EWC 170107 Inert	4207.36
EWC 200201 Garden & Park Waste	1353.69
EWC 150101 Cardboard	2288.26
EWC 200101 Paper	738.61
EWC 200139 Plastic	629.98
EWC 160201 Scrap Electronics / WEEE	15.34
EWC 200138 Timber / Wood	2251.95
EWC 200199 Mixed Kerbside Recyclables	15391.29
EWC 170407 Metal	437.82
EWC 200102 Glass	2610.74
EWC 160304 Off Spec Product	2.38
EWC 170802 Plasterboard / Gypsum	61.34
EWC 160103 Tyres	153.38
EWC 200108 Food Waste	Recorded in compost section
EWC 200304 Sludge	265.34
EWC 200110 Clothes / Textiles	0.12
TOTAL	89,779.08 tonnes

Table 2.17.1: Total Wastes Incoming 1st January 2017 – 31st December 2017

Waste Out 2017

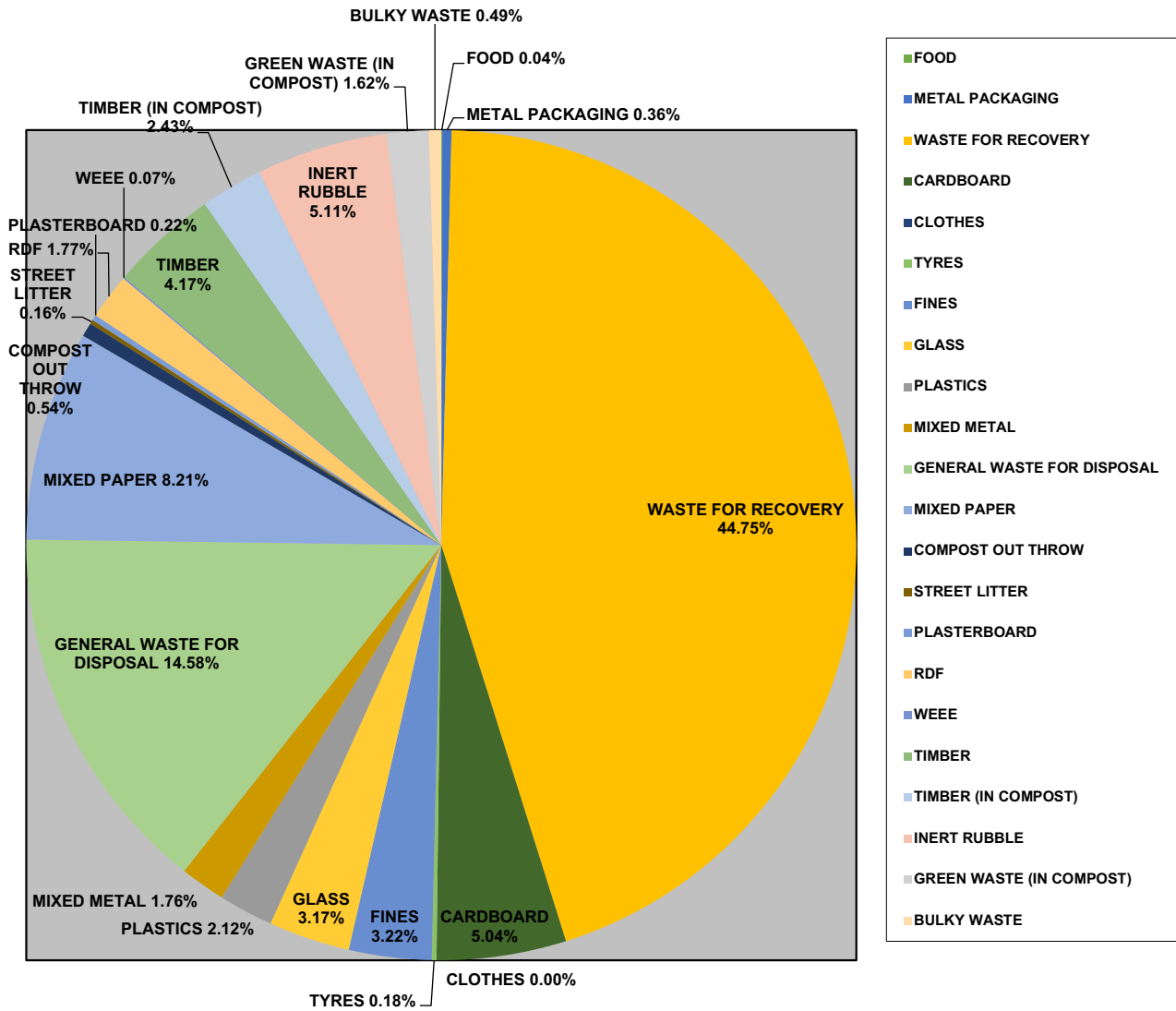


Figure 2.17.2:
Breakdown of Waste going off site for Recovery or Disposal from 1st January 2017 – 31st December 2017

Waste out for 2017: Table of quantities by waste type:-

WASTE TYPE	WASTE OUT (tonnes per annum)
EWC 200301 Pre-sorted waste for landfill	12,157.60
EWC 200301 Mechanically treated mixed waste for recovery (Baled / Wrapped MSW)	37,316.83
EWC 190501 Non Composted Municipal Waste (compost out throws)	453.04
EWC 191212 MSW Fines from Mechanical Treatment	2683.22
EWC 200307 Bulky Waste (includes fly tipping)	405.10
EWC 200202 Inert	4261.38
EWC 200303 Street Cleaning Residues	133.28
EWC 191201 Cardboard	4201.78
EWC 191201 Paper	6842.60
EWC 191204 Plastics	1769.62
EWC 191207 Timber / Wood / Green	3480.60
EWC 160201 Scrap Electronics	55.10
EWC 160103 Tyres	152.68
EWC 191203 Metal	1470.42
EWC 150104 Metal Packaging	297.94
EWC 191205 Glass	2640.14
EWC 191208 Clothes	0.88
EWC 170802 Gypsum / Plasterboard	181.14
EWC 191210 Refuse Derived Fuel	1474.24
Compost – processed clean compost for farmers	Recorded in compost section
EWC 200201 Green Waste (used in compost)	1353.69
EWC 191207 Timber (used in compost)	2028.30
EWC 200108 Food Waste (unprocessed)	31.86
TOTAL	83,391.44 tonnes

Table 2.17.3: Total Wastes Outgoing 1st January 2017 – 31st December 2017

RECYCLING / RECOVERY SUMMARY FOR 2017

The following table shows the % breakdown of the recyclable materials sent off site for recovery / recycling during 2017. This table only shows the RECYCLABLE or RECOVERABLE material types and lists the total tonnage recycled during 2017 and the % split that each waste type provides towards the total recycling figure:-

WASTE TYPE (Recyclable materials only)	RECYCLING (tonnes per annum)	% OF TOTAL RECYCLING
EWC 200301 Mechanically treated mixed waste for recovery (Baled / Wrapped MSW)	37,316.83	41%
EWC 191212 MSW Fines from Mechanical Treatment	2683.22	
EWC 200202 Inert	4261.38	6%
EWC 191201 Cardboard	4201.78	6%
EWC 191201 Paper	6842.60	15%
EWC 191204 Plastics	1769.62	3%
EWC 191207 Timber / Wood / Green	5508.90	4%
EWC 160201 Scrap Electronics	55.10	<1%
EWC 160103 Tyres	152.68	<1%
EWC 191203 Metal	1470.42	2%
EWC 1501?? Metal Packaging	297.94	1%
EWC 191205 Glass	2640.14	2%
EWC 191208 Clothes	0.88	<1%
EWC 170802 Gypsum / Plasterboard	181.14	<1%
EWC 191210 Refuse Derived Fuel	1474.24	3%
EWC 200108 Food Waste (unprocessed)	31.86	14%
EWC 200201 Green Waste (used in compost)	1353.69	
TOTAL	70,242.42 tonnes	78% of total waste in was sent for recycling or recovery for 2017**

**** This figure does NOT include compost processed and given to local farmers this is reported in the compost section ****

**Table 2.17.4:
Breakdown of recycling waste out for 1st January 2017 – 31st December 2017**

Explanation of Tonnage on Site at the end of 2017

As can be seen from the waste in and out records outlined above the following are the annual totals for the Barna Recycling site in Carrowbrowne:-

Total Waste In:-	89,779.08 tonnes
Total Waste Out:-	83,391.44 tonnes

This gives a difference of 6,387.64 tonnes of a difference outlining stock on site at the end of the reporting year.

During the course of the reporting year as a company we would always hold a level of stock on site of various products waiting to be processed. As a rule we try to clear the site as much as possible of recyclables etc to reduce the value of stock held at the end of the reporting year and ensure we are in compliance with our Waste Storage Plan and insurance requirements. Due to insurance and licence restrictions it is not permitted that excessive stock levels are held in any one area of the site at any time so stock rotation is an important part of our business.

As an example of typical main items of stock (not taking into account smaller items) at the end of 2017 the following stock was recorded:-

Mixed Recyclables:	450 tonnes
Landfill Waste (loose):	1250 tonnes
Bulky Waste:	350 tonnes
Saleable Recycling Bales:	550 tonnes
Baled / Wrapped MSW:	3250 tonnes
MSW Fines:	150 tonnes
Timber:	150 tonnes
Glass	120 tonnes
RDF:	100 tonnes
Civic Amenity Site:	100 tonnes
Construction & Demolition	200 tonnes
Total:	6670 tonnes

All of these are typical stock items and vary in quantity during the reporting year and are only being used to give an example of the typical stock items that make up end of year counts on site. There is always more in stock at year end than in normal times due to places closing for holidays and in this case we had a boat of MSW scheduled to be loaded in week 1 2018.

It was decided because composting material naturally breaking down skews stock figures that compost and waste / recycling would be reported separately in order to give a better picture of waste movements on site.

Compost Facility

Waste In / Out 2017 Summary

Barna Recycling also operate a composting facility on site which is licenced by both the EPA under our existing waste licence 106/2 and in additional is accredited by the Department of Agriculture Fish and the Marine (DAFM) under licence number COMP 40.

The waste in / out of the composting facility is measured on a daily basis and tracked internally.

Tonnage received into the composting facility will never balance like normal waste types in terms of quantities of waste equating to quantities of end product removed from the site due the natural breakdown of the material.

During 2016 it should be noted that Barna Recycling's Composting Site was closed due to significant upgrades to our material reception and odour management processes. This involved the construction and implementation of three new tunnels at the front end of the process which allow new fresh material to be processed in a temperature controlled enclosed tunnel rather in an open air aisle to help control the temperature and odour of the material.

During this period all fresh material received on site for composting was stored and transferred to alternative facilities for processing and was not delivered into our own composting facility. The works were fully completed in November 2016 and therefore only from late November and the end of December material started to be allowed into our own composting facility in 2016.

The operation of the facility ran as normal during this new reporting period of 2017 and all tonnages delivered to site were processed through the composting facility. Tonnages detailed below reflect the change to normal production of January to December.

A summary of waste in for the composting facility specific to 2017 is included below:-

2017 INTAKE SUMMARY

JANUARY	970.54
FEBRUARY	861.17
March	1242
April	1263
May	1571
June	1568
July	1473
August	1481
September	1439
October	1264
November	1289
December	1062
TOTAL	15483.71

This intake tonnage was made up by the delivery of our own materials and also some third party tonnages from other waste collectors in the region. Intake materials consist of category 3 catering waste and green garden waste in the main.

The end product compost material once it has passed all relevant testing for E-Coli, F-Coli, Quality, Nutrition's, Salmonella and AT4 then it is stored in the clean area of the facility for shipment once the 21 day maturation period has passed.

The following compost produce was shipped during 2017:-

2017 OUTGOING SUMMARY

Total Tonnes of Compost Shipped: 3100 tonnes

All end products were shipped to the agriculture industry for use by local farmers as either tillage of pasture land and all farms receiving end products are registered with the Department of Agriculture in advance of receiving their first load. All outgoing shipments are tracked using official commercial documents and these are on file as part of the HACCP plan for review during any inspections.

Detail of the end destination outlets for each load shipped are detailed below:-

Date	Vehicle Reg	Customer/Destination	Address	End Usage	Batch Number	Nett Weight(kgs)
26/01/2017	04G11237	Finnegans Farm	Cortoon, Tuam, Co Galway	Tillage	21032016	25340
26/01/2017	02M05312	Eanna Canavan	The Bungalow, Belclare, Co. Galway	Pastureland	21032016	13360
27/01/2017	08MH8231	Finnegans Farm	Cortoon, Tuam, Co Galway	Tillage	21032016	26980
27/01/2017	08MH8231	Finnegans Farm	Cortoon, Tuam, Co Galway	Tillage	21032016	25800
30/01/2017	08MH8231	Finnegans Farm	Cortoon, Tuam, Co Galway	Tillage	21032016	26900
31/01/2017	02M05312	Eanna Canavan	The Bungalow, Belclare, Co. Galway	Pastureland	21032016	16040
31/01/2017	02M05312	Eanna Canavan	The Bungalow, Belclare, Co. Galway	Pastureland	21032016	14720
31/01/2017	02M05312	Eanna Canavan	The Bungalow, Belclare, Co. Galway	Pastureland	21032016	17800
08/05/2017	02M05312	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	13320
08/05/2017	02M05312	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	11940
08/05/2017	04MH7190	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	14000
08/05/2017	04MH7190	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	13180
08/05/2017	04MH7190	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	15060
09/05/2017	04MH7190	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	16360
09/05/2017	04MH7190	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	15860
09/05/2017	04MH7190	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	14640
09/05/2017	02M05312	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	14060
09/05/2017	02M05312	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	13520
09/05/2017	02M05312	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	14120
09/05/2017	02M05312	Padraig Boyle	Ryhill, Monivea, Co Galway	Pastureland	25112016	14360
10/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	25112016	13100
10/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	25112016	16320
10/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	25112016	16380
10/05/2017	02M05312	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	25112016	11820
10/05/2017	02M05312	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	25112016	14140
10/05/2017	02M05312	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	25112016	15360
10/05/2017	02M05312	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	25112016	14760
10/05/2017	05G5895	Angus (Michael Murphy)	Pillagh, Moycullen, Co Galway	Pastureland	25112016	17500
10/05/2017	05G5895	Michael Moloney	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	25112016	16500
10/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	16300
11/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	16500
11/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	17520
11/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	17800
11/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	16920
11/05/2017	02M05312	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	14940
11/05/2017	02M05312	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	15720
11/05/2017	02M05312	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	15300
11/05/2017	02M05312	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	15860
12/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	16340

12/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	13140
12/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	16760
12/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	14700
12/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	8122016	15600
15/05/2017	04MH7190	Finton Cosgrove	Ballinamona, Ballyglunin, Tuam, Co. Galway	Pastureland	29122016	16060
15/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	15360
15/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	13360
16/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	15140
16/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	11480
16/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	16200
17/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	16660
17/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	15820
17/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	17840
17/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	14920
18/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	17620
18/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	16940
18/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	17300
19/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	16480
19/05/2017	04MH7190	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29122016	15960
12/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	15320
12/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	15660
12/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	15320
13/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	16120
16/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	12580
16/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	12620
19/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	14060
19/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	13560
19/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	13840
20/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	12520
20/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	13420
20/06/2017	04MH7190	Thomas Meehan	Moylough	Tillage	12012017	13220
20/06/2017	04MH7190	Tom Moran	Craughwell	Landscaping	12012017	12840
21/06/2017	04MH7190	Tom Moran	Craughwell	Landscaping	12012017	13680
21/06/2017	04MH7190	Tom Moran	Craughwell	Landscaping	12012017	12860
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	15080
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	14620
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	14780
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	15000
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	16440
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	15540
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	13200
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	15100
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	13980
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	13480
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	13460
10/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	13320
11/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	15760
11/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	15640
11/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	14640
11/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	13820
11/07/2017	04MH7190	Padraig Small	Castlegar	Pastureland	30012017	14000
11/07/2017	04MH7190	Thomas Meehan	Moylough	Tillage	16022017	13020
11/07/2017	04MH7190	Thomas Meehan	Moylough	Tillage	16022017	13180
11/07/2017	04MH7190	Thomas Meehan	Moylough	Tillage	16022017	13100
11/07/2017	04MH7190	Thomas Meehan	Moylough	Tillage	16022017	13500
12/07/2017	04MH7190	Thomas Meehan	Moylough	Tillage	16022017	14500
12/07/2017	04MH7190	Thomas Meehan	Moylough	Tillage	16022017	14680
12/07/2017	04MH7190	Thomas Meehan	Moylough	Tillage	16022017	14940
12/07/2017	04MH7190	Thomas Meehan	Moylough	Tillage	16022017	14460
12/07/2017	04MH7190	Thomas Meehan	Moylough	Tillage	16022017	14560
12/07/2017	02MO5312	Tom Moran	Craughwell	Landscaping	16022017	12660

12/07/2017	02MO5312	Tom Moran	Craughwell	Landscaping	16022017	13300
13/07/2017	02MO5312	Tom Moran	Craughwell	Landscaping	16022017	12220
13/07/2017	02MO5312	Tom Moran	Craughwell	Landscaping	16022017	11520
13/07/2017	02MO5312	Tom Moran	Craughwell	Landscaping	16022017	11600
13/07/2017	02MO5312	Tom Moran	Craughwell	Landscaping	16022017	11640
14/07/2017	02MO5312	Thomas Meehan	Moylough	Tillage	16022017	11500
27/07/2017	04MH7190	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	11560
31/07/2017	04MH7190	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	12220
31/07/2017	04MH7190	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	11200
31/07/2017	04MH7190	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	12920
01/08/2017	04MH7190	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	13520
01/08/2017	04MH7190	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	13180
01/08/2017	04MH7190	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	13700
02/08/2017	04MH7190	Joerg Muller	Doon West, Roscahill, Co Galway	Landscaping	6032017	14060
02/08/2017	04MH7190	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	9280
03/08/2017	04MH7190	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	12980
25/08/2017	02MO5312	Galway County Council, Athenry	Tonroe, Clarenbridge, Co Galway	Landscaping	6032017	15140
25/08/2017	02MO5312	Galway County Council, Athenry	Tonroe, Clarenbridge, Co Galway	Landscaping	6032017	16840
28/08/2017	04RN2702	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	14280
28/08/2017	04RN2702	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	6032017	14600
29/08/2017	04RN2702	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	18032017	13620
29/08/2017	04RN2702	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	18032017	13540
29/08/2017	04RN2702	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	18032017	15600
29/08/2017	04RN2702	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	18032017	14520
30/08/2017	04RN2702	Gerry Heavey	Cloonoran Oughter, Moylough	Tillage	18032017	14740
30/08/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18032017	14980
30/08/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18032017	14680
30/08/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18032017	14640
30/08/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18032017	12680
31/08/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18032017	13460
31/08/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18032017	14220
01/09/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18032017	14120
01/09/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18032017	14810
01/09/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18042017	15240
01/09/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18042017	16280
01/09/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18042017	15840
01/09/2017	04RN2702	Gerry Forde	Corrandulla, Co Galway	Tillage	18042017	16280
04/09/2017	02MO5312	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	18042017	14140
04/09/2017	02MO5312	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	18042017	15500
04/09/2017	02MO5312	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	18042017	13280
04/09/2017	04RN2702	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	18042017	15240
04/09/2017	04RN2702	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	18042017	14260
04/09/2017	04RN2702	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	18042017	13800
05/09/2017	02MO5312	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29042017	13900
05/09/2017	02MO5312	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29042017	13520
05/09/2017	02MO5312	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29042017	13520
05/09/2017	02MO5312	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29042017	13640
05/09/2017	04RN2702	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29042017	14480
05/09/2017	04RN2702	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29042017	14860
05/09/2017	04RN2702	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29042017	14000
06/09/2017	04RN2702	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29042017	13740
06/09/2017	04RN2702	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29042017	14940
06/09/2017	04RN2702	Galway County Council, Athenry	Tonroe, Clarenbridge, Co Galway	Landscaping	29042017	14660
06/09/2017	02MO5312	Gerald Harney	Lisnagranchy, Ardrahan, Co Galway	Pastureland	29042017	12740
06/09/2017	02MO5312	Ciarán O' Neill	Dringeen, Cong, Co Mayo	Pastureland	29042017	13620
06/09/2017	02MO5312	Ciarán O' Neill	Dringeen, Cong, Co Mayo	Pastureland	29042017	13820
11/10/2017	03G11202	Mark KilKelly	Cahercarney, Kinvara, Co Galway	Pastureland	15052017	11480
11/10/2017	03G11202	Mark KilKelly	Cahercarney, Kinvara, Co Galway	Pastureland	15052017	12700
11/10/2017	03G11202	Mark KilKelly	Cahercarney, Kinvara, Co Galway	Pastureland	15052017	13300
12/10/2017	03G11202	Mark KilKelly	Cahercarney, Kinvara, Co Galway	Pastureland	15052017	12640
13/10/2017	03G11202	Mark KilKelly	Cahercarney, Kinvara, Co Galway	Pastureland	15052017	13360

13/10/2017	03G11202	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	15052017	13160
13/10/2017	03G11202	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	15052017	12560
17/10/2017	03G11202	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	15052017	13320
18/10/2017	03G11202	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	15052017	10640
18/10/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	15052017	10900
19/10/2017	03G11202	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	15052017	11080
20/10/2017	03G11202	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	15052017	10600
07/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	13020
07/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	14120
07/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	15000
08/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	12680
10/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	14200
13/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	16140
13/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	13140
14/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	12820
14/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	13880
15/11/2017	05CE3638	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	14240
15/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	14680
15/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	14480
15/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	13840
15/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	14360
16/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	27052017	14880
16/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	15300
16/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	14720
16/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	15900
20/11/2017	04RN2702	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	15660
20/11/2017	04RN2702	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	14080
20/11/2017	04RN2702	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	14180
22/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	15000
22/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	15080
22/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	14920
23/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	13860
23/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	15000
23/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	15580
23/11/2017	02MO5312	Larry Curran	Derryloughane West, Spiddal, Co Galway	Pastureland	12062017	15520
12/12/2017	05CE3638	Mark Kilkelly	Cahercarney, Kinvara, Co Galway	Pastureland	30062017	12560
12/12/2017	02MO5312	Mark Kilkelly	Cahercarney, Kinvara, Co Galway	Pastureland	30062017	14640
12/12/2017	02MO5312	Mark Kilkelly	Cahercarney, Kinvara, Co Galway	Pastureland	30062017	14380
12/12/2017	04MH7190	Padraig McNulty	Tully, Ballinahown, Co Galway	Pastureland	30062017	12900
12/12/2017	04MH7190	Padraig McNulty	Tully, Ballinahown, Co Galway	Pastureland	30062017	13600
13/12/2017	05CE3638	Mark Kilkelly	Cahercarney, Kinvara, Co Galway	Pastureland	30062017	12700
13/12/2017	05CE3638	Mark Kilkelly	Cahercarney, Kinvara, Co Galway	Pastureland	30062017	13200
13/12/2017	02MO5312	Mark Kilkelly	Cahercarney, Kinvara, Co Galway	Pastureland	30062017	15860
13/12/2017	02MO5312	Mark Kilkelly	Cahercarney, Kinvara, Co Galway	Pastureland	30062017	15840
13/12/2017	02MO5312	Mark Kilkelly	Cahercarney, Kinvara, Co Galway	Pastureland	30062017	14180
14/12/2017	05CE3638	Paraic Ó Fáthartha	Cloch Mór, Baile na hAbhainn, Co na Gaillimhe	Pastureland	30062017	13680
14/12/2017	05CE3638	Paraic Ó Fáthartha	Cloch Mór, Baile na hAbhainn, Co na Gaillimhe	Pastureland	30062017	13980
14/12/2017	02MO5312	Paraic Ó Fáthartha	Cloch Mór, Baile na hAbhainn, Co na Gaillimhe	Pastureland	30062017	15580
14/12/2017	02MO5312	Paraic Ó Fáthartha	Cloch Mór, Baile na hAbhainn, Co na Gaillimhe	Pastureland	18072017	14440
19/12/2017	04G11237	Larry Carr	Carnmore, Oranmore, Co Galway	Tillage	18072017	24800

Processed material must pass a quality test based on conditions set out in our EPA licence. Compost is checked for traces of metals, impurities and gravel or stones to ensure the composting process had produced a good quality material.

There were no instances of quality failures of any batch during this reporting period.

We had one rejected or failed composting batch during this reporting period due to detection of ECOLI in superbatches SB12092017. This was the first and only incident where a fail was detected. This batch was notified to the DAFM Officials in November who advised to return the batch to the dirty area for re-pasteurisation. There have been no issues since this with any other batches in the process and once re-processed the batch passed all requirements. The cause was determined to be an untrained member of staff not taking samples correctly and therefore this process has been changed and only the Compost Manager or approved deputy will take samples moving forward. A corrective action has been noted for this batch and DAFM were satisfied with the resolution.

All completed batches are allowed to mature for at least 21 days prior to consideration for shipment as per the requirements of our EPA licence.

Finally all material must be put through an AT4 test to determine if the material was stabilised and the composting process has been completed. The AT4 test must show that the material is <10mg/o2/g and once again all composting batches processed in 2017 reached the appropriate standard as specified in our EPA licence.

The following records are available on request in relation to our composting:

- E-Coli Test Results
- Salmonella Test Results
- AT4 Test Results
- Trace Element (Compost Quality) Test Results
- HACCP Plan and associated procedures

Waste In / Out 2017 Final Summary

Tonnages through the facility in 2017 decreased very slightly in comparison to the previous reporting year to just over 105,000 incoming tonnes compared to 106,000 tonnes from 2016 and 109,000 tonnes accepted in 2015.

As a company we have three main waste types which we focus on which are our mixed recyclables which can be processed via our own picking station, our composting facility which we are trying to have reach it's capacity of 20,000 tonnes over the next few years and then the mixed municipal waste's which can be processed via our mechanical treatment process and sent for recovery.

During 2017 there was a dramatic reduction in the mixed recycling tonnage accepted at the facility this was down to a business decision to divert some of the recycling from our sister sites to another company for sorting. This allowed us to reduce the picking on our own site to one shift. In addition there was an increase of around 5,000 tonnes in the general waste transferred back to our facility and this was to assist in the preparation for mechanical treatment of this waste which increased in 2017. Those were the two main operational changes in 2017 affecting tonnages on site.

The company EPA licence which is for 166,000 tonnes means we have no issues in relation to tonnage limits of site and currently operate well within our licence limits.

2.17.5 Summary of Recycling Outlets used in 2017

Barna Recycling 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 currently quoting and purchasing material is included below:

Metals

Galway Metal (Galway) – WFP-G-09-0006-05

Green Dragon Recycling – IRE/G074/15

Cardboard & Paper

Peute Papier Recycling (Holland) – IRE/G006/14

Recycling UK (England) – IRE/G069/15

IPR Irish Packaging Recycling (Panda, Ireland) – IRE/G133/15

Agnail Limited – IRE/AG117/16

Cellmark (USA) – IRE/AG175/15

Northwood recycling Limited – IRE/G282/15

Polystyrene

WRC Recycling (Scotland) – IRE/G121/12

Leinster Environmental – IRE/G127/15

Plasterboard

Envirogrind – WP0405

Macnabb Brothers – LN/09/111/M

Plastics

WRC Recycling (Scotland) – IRE/G121/15

Leinster Environmental – IRE/G127/15

Peute Plastic Recycling (Holland) – IRE/G281/14

Jayplas (England) – IRE/G058/12

Shabra (Monaghan) – WFP-MN-08-0022-01

Materia Environmental Limited – IRE/AG161/15

Nevis Resource Limited – IRE/G422/16

Textiles

Textile Recycling Ireland Limited - [NWCPO-08-01225-01](#)

Glass

Rehab Glassco – WFP-KE-08-0957-01

Green Waste

Barna Waste Composting Site (Galway) – EPA 106/2

Wood

Barna Waste Composting Site (Galway) – EPA 106/2

Drehid Landfill – EPA 0201-03

Rathroeen Landfill – EPA 0067/02

East Galway Landfill – EPA 0178/02

OCR Waste Management – WFP-RN-10-0001

WEEE

Electrical Waste Management – WFP-DS-09-0012-01
WEEE Ireland – no licence / permit

Batteries

Electrical Waste Management – WFP-DS-09-0012-01

Tyres

MSM Recycling (Birr) – WFP-TN-11-0003-02

General Waste – Landfill

Drehid Landfill – EPA 0201-03

Rathroeen Landfill – EPA 0067/02

East Galway Landfill – EPA 0178/02

Bulky Waste

Barna Waste (Galway) – EPA WL106/02

General Waste – For Recovery

Indaver Ireland – EPA WO167/03

Cellmark (USA) – IRE/AG175/15

Processed Compost

All to local farmers in County Galway

Paperwork / Certification for Recyclable Loads & National TFS Office

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.

Barna Recycling are registered as a shipper of green list material with the TFS office in Dublin and our broker's registration number for 2017 / 2018 currently is:-

IRE/G032/19 which is valid until 31st December 2019.

The National TFS Office monitor, track and inspect loads of waste / recyclables being shipped from Ireland to destinations worldwide. This process has been welcomed by Barna Recycling and ensures that everyone who we sell material to are also registered as an approved broker with the TFS office and that the end destinations which they use for our material are also registered and checked by the National TFS Office. The process of checking random containers at ports in Ireland means it is essential that we produce a good quality material via our picking station to ensure inspections are passed and no materials are rejected.

The introduction of the National TFS Office has regulated the business of shipping recyclable material and everyone now works to the same process.

All outlets used by Barna Recycling are registered with the National TFS Office and therefore ensures all our material is looked after properly and by reputable companies.

As part of our internal procedures we do not sell material to any destination / broker unless that person makes an effort to personally visit our facility. This is done for two reasons, one to ensure that they see the material they propose to purchase in person and can confirm they are happy with the quality on show and in the way the material is processed. Secondly this gives us a feel for the proposed partner and how they work. We do not ship to anyone who does not make the effort to visit the facility even if they offer the best price and we feel this is the best way to ensure long term sustained partners, reliable payment and the avoidance of using companies who may not look after the material in a proper manner.

3.0 Actual & Projected Waste Quantities

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					
	2006	2007	2008	2009	2010	2011
Household	29328.22	28840.92	18539.17	22356.82	19,140.78	18,335.45
Commercial	16095.29	22150.64	26433.11	12905.46	11,613.86	14,637.36
Construction and Demolition	6234.14	5988.48	2729.37	1202.76	1,192.84	804.43
Others	33,489.19	35625.35	35784.14	33288.99	33,117.07	34,936.09
Biowaste	0	1525.88	1674.44	1,960.91	4,303.09	6,469.91
Total	85146.84	94,131.27	85,160.23	71,714.94	69,367.64	75,183.24

WASTE TYPE	TONNES PER ANNUM						PROJECTION
	2012	2013	2014	2015	2016	2017	2018
Household	16973.75	27,986.41	36,866.37	32621.73	32337.35	30,318.22	30,500
Commercial	12065.34	13,573.78	14988.20	18701.08	18312.97	25,021.01	25,000
Construction and Demolition	1667.91	1,443.15	1068.71	2076.32	2927.34	2769.47	3,000
Others	36,828.40	36,175.50	36,362.38	39,472.23	38,513.46	31,670.38	32,000
Biowaste	4282.78	10,224.03	14,788.91	16,274.27	14083.00	15,483.71	16,500
Total	71,818.18	89,402.87	104,074.57	109,145.63	106,174.12	105,262.79	107,000

4. Site Infrastructure and Operations

4.1 Existing Facility & Operations

This section of the report is designed to give the reader an overview of our facility in relation to how it is set-up, the plant and machinery available to us, the facilities we have on site and our key operational areas. Therefore the infrastructure and set-up of the existing Barna Recycling facility is outlined below. The site has been continually developed over the past 15 years and at the end of the current reporting period was laid out as follows:

- **Site Accommodations:**

- 1) **Canteens** – all staff both in the yard areas and office areas have their own canteens equipped with modern electrical equipment, hot and cold water and changing facilities
- 2) **Administration Offices** – comprises of a weighbridge office adjacent to our two weighbridges supported by a larger administration office building housing administration staff including Facility Manager, Operations Manager, Transport Manager and all Accounts and Sales staff, meeting rooms and archive storage . The main reception area is located within this office.
- 3) **Toilet Facilities** – toilet facilities in place at the front and rear of the facility
- 4) **Changing Facilities** – locker rooms, changing & washing facilities available for all staff on site both in Operations and Administration. There is a specific changing room allocated to the staff who work in the composting facility. These facilities were all upgraded during this reporting period.
- 5) **First Aid Room** – fully stocked first aid room and trained first aiders at the site.

Site Infrastructure

- Two calibrated weighbridges (weigh in / weight out) system at the entrance of the facility which are equipped with weighbridge software
- The main transfer building incorporates several areas for:

Section 1: NON RECOVERABLE BULKY 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

Section 8: MSW MECHANICAL TREATMENT AREA

Section 9: COMPOSTING BUILDING

Section 10: CIVIC AMENITY SITE

Section 11: WRAPPED BALE STORAGE AREA

Section 12: WEIGHBRIDGE OFFICE & ENTRANCE

Section 13: ADMINISTRATION OFFICE

Section 14: GARAGE AND MAINTENANCE BUILDING

- 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 from skips and the other side of the building is used for managing the recyclable materials. Mixed general waste from skips are sorted by hand and grab machine or loading shovel to ensure any materials that can be recovered are salvaged before the bulky or non-recoverable material is sent to landfill or for baling / wrapping. In normal circumstances the floor is cleared at the end of each working day.
- Our picking station is equipped at the front end with ballistic separators which pre-sort the material before manual sorting. Once through the front end of the process material is manually sorted by our operators who use positive and negative picking to sort material by grade. The picking process is supported by a magnet and edicurrent for sorting metal / aluminium. In 2014 an optical sorting machine which assists with the automated sorting of paper products was added to the line. Material sorted from the picking station is then baled directly in the adjacent balers.
- The MSW Mechanical Treatment Process for baling / wrapping waste is set-up in the new part of our site and allows us the ability to produce a mechanically treated MSW product for export to recovery outlets. This area is equipped with adequate storage space for the loose MSW, it has a shredder for shredding the MSW and removing metal, a trommel screen to remove organic fines and then a combined baling and wrapping machine to wrap the end produce ready for export.
- Wrapped Bale Storage Area was constructed during this reporting period which allows for the storage of up to 4500 bales of wrapped MSW product in the open yard area of the site
- 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. A new roof was constructed during 2014 which links the baling area with the storage area and means this entire operation now takes place inside under roof.
- Maintenance building and garage for carrying out maintenance work and general plant / fleet repairs. This section has full time on site mechanics, fitters and technical support teams. This area is also kitted with a bunded oil storage area for fresh and used oil.
- 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 for members of the public.
- Composting Building – for the acceptance and processing of biodegradable material to a European Standard. This process is equipped with fans, scrubbers, curtains, air supplies and mobile plant to ensure composting can be produced at the back end of the facility. During 2016 new tunnels were installed at the front end of our process to assist with both odour management and the general processing of the material itself.
- 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 equipped with loading bays which allow containers to be backed up to the entrance of 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
- Shed on permitted area of the site which as yet is not in use but a business plan will be developed for this in 2018.

This current set-up allows us to accept and process the volumes and types of waste / recycling that we currently collect. The plant and equipment we have in place is adequate to support these processes and we have a good quality support staff in place to ensure our operations are able to be carried out as required. Changes to the facility and new investments are always being considered but the current site is equipped with the technology and equipment we require to manage the materials we have today.

Environmental Management System (EMS)

The operation of our facility is supported by our EMS system as required by our EPA licence. 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 at least an annual basis.

This system is ISO 14001 accredited by the NQA. Barna Recycling were audited again during 2017 and successfully retained the ISO14001 certification for another year. Details of the audit result are available on request from Barna Recycling.

Significant Change to EMS

During 2014 there was a significant change to our EMS which involved the incorporation of all procedures required to operate our new composting facility into the existing EMS. These procedures were all written specifically for our own composting facility and include forms for recording all necessary records within the facility. All composting procedures can be uniquely identified by the 'COM' in the filename of the procedure. The Compost Manager and Facility Manager are responsible for the maintenance and implementation of these new procedures.

In 2016 and 2017 a full review of all composting documents was carried out as a result of a significant change in the process with the construction of the new tunnels. No new documents were added but the changes involved amendments to existing procedures.

The following details a complete list of the names / titles of all procedures and documents used at the facility at the end of 2016. This is included to give the reader of this report an overview of the policies / procedures we use internally and to provide evidence that an adequate and detailed EMS system is in place:

4.1 Environmental Management System

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	OBSOLETE - 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 document 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
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	Housekeeping/Nuisance Inspection Procedure
43. BW/Ops/007	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	OBSOLETE - 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	Obsolete - Boston Scientific Procedure
61. BW/Ops/025	Obsolete - 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	BBT Composting Odour Management Procedure
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
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/Ops/049	Compost Processing Procedure
86. BW/Ops/050	Procedure for Handling a Rejected Load of SRF
87. BW/TRA/001	Training Versatility Chart
88. BW/TRA/002	BW Induction Process
89. BW/TRA/003	OBSOLETE - Employee Roll Call Listing
90. BW/TRA/004	OBSOLETE - Approved Forklift Drivers Listing
91. BW/TRA/005	Bin Lorry Lifting Equipment Training Procedure
92. BW/TRA/006	Health & Safety Equipment - Ear Muffs Fitting Instructions
93. BW/TRA/007	Health & Safety Equipment - Foam Plugs Fitting Instructions

Barna Compost – EMS Procedure Contents

94. BW/COM/001	Feedstock Acceptance Procedures
95. BW/COM/002	Feedstock Supply Contact
96. BW/COM/003	Guide to Barna Compost Acceptable Waste Types
97. BW/COM/004	Rejected Waste Form (Weighbridge)
98. BW/COM/005	Barna Compost Material Delivery Form
99. BW/COM/006	Waste Inspection Log & Rejection Form (OBSOLETE)
100. BW/COM/007	Procedures in Relation to Transformation Parameter Achievement
101. BW/COM/008	Batch Record Document
102. BW/COM/009	Particle Size Record Sheet (OBSOLETE)
103. BW/COM/010	Super Batch Record Sheet
104. BW/COM/011	Barna Waste Pasteurisation Procedure
BW/COM/012	Not currently in use
BW/COM/013	Not currently in use
105. BW/COM/014	Temperature Failure Investigation
106. BW/COM/015	Barna Compost Sampling Procedures
107. BW/COM/016	Sampling Record E. COLI
108. BW/COM/017	Sampling Record Salmonella
109. BW/COM/018	Microbial Failure Procedure
110. BW/COM/019	Microbial Sampling Failure Record Sheet
111. BW/COM/020	Cleaning and Hygiene Procedures Personnel
112. BW/COM/021	Hygiene Inspection Sheet
113. BW/COM/022	Cleaning and Hygiene Procedures
114. BW/COM/023	Vehicles Exiting via Emergency Exit Recording Sheet
115. BW/COM/024	Cleaning in Clean Area Record Sheet

116. BW/COM/025	Procedures to Prevent Re-contamination of Compost
117. BW/COM/026	Barna Compost Vermin and Pest Control
BW/COM/027	Not currently in use
118. BW/COM/028	Barna Compost Records Maintenance & Calibration
BW/COM/029	Not currently in use
119. BW/COM/030	Cold Spots Check Record Sheet
120. BW/COM/031	Maintenance Check Record Sheet
121. BW/COM/032	Compost Dispatch Procedure
122. BW/COM/033	Compost Dispatch Record Sheet
BW/COM/034	Not currently in use
BW/COM/035	Not currently in use
123. BW/COM/036	HACCP Audit Procedure
124. BW/COM/037	Barna Compost Internal Audit Checklist
125. BW/COM/038	Barna Compost Training Procedure
126. BW/COM/039	Record of Training by Barna Compost Personnel
BW/COM/040	Not currently in use
127. BW/COM/041	Barna Compost HACCP
128. BW/COM/042	Vehicles Exiting via Clean Area Recording Sheet
129. BW/COM/043	Compost Probe Location Map
130. BR-SAL-004	Dataset Commercial System - Placing an Account On Off Hold (Rev 0)
131. BR-SAL-005	Creating a Ring In Collection (REV 0)
132. BR-SAL-005	Creating a Ring In Collection (REV 0)

4.3. Plant & Machinery / Road Fleet

This section of the report details the plant and equipment available for use both on site and in relation to the collection of waste / recyclables. The plant and fleet are under constant review to ensure they meet the requirements of our business.

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

This is the current list of equipment for the end of the 2017 reporting period:-

- 5 x large loading shovels for managing waste in the transfer area and composting building
- 2 x mini loading shovels for managing waste in the picking station bays or main transfer station
- 2 x track machine excavators
- 5 x Liebherr grab machines for loading trucks and managing movements of waste
- 7 x forklifts
- 2 x Teleporters
- 1 x Finger Screener
- 2 x mobile trommels
- 1 x Extec Stone Shredder/Crusher
- 1 x Pre Shredder / Waste Reducing machine
- 1 x Shredder fitted with magnetic separator
- 2 x EXCEL Baler (1 with bottle piercer)
- 1 x Harris Twin-Ram Baler
- 2 x Paper Shredding machines
- 3 x Picking Station Conveyers and
- 6 x Material Bunkers on Picking Station
- 2 x Ballistic Separating Machines
- 1 x Mobile road sweeper
- 1 x Fire Engine
- 1 x Diesel Tanker (used to fill all plant / machinery on site)

- 2 x Weighbridges with Computer system and software
- 1 x Mobile Power Washer
- 1 x Hoist
- 4 x 45ft storage containers
- 1 x Toyota Clamp Loading Forklift
- 1 x Mitsubishi Clamp Loading Forklift
- 1 x Swarf Metal Baler / Briquetter
- 1 x Compost Turning Mobile Unit
- 1 x Titech Optical Sorting Machine
- 18 x Calibrated Temperature Probes
- 1 x Baler & Wrap Machine
- 1 x Debagger on Picking Station
- 2 x Dock Loading Bays for Containers

The above list of plant / machinery provides us with the equipment to manage our busy waste transfer station. This is supported with a full fleet of collection vehicles for different types of collections such as standard RCV's, hook bin lorries, curtainsiders, vans & skip lorries. The above list of equipment is not in permanent use 100% of the time and some of the equipment acts as backup in times where we suffer breakdowns 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 our Operations Manager is responsible for ensuring maintenance and proper use of the machinery within the transfer station. The management team are backed up by onsite mechanics and fitters who try to repair 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 in cases of a serious malfunction would our collections or production be seriously affected. Barna Recycling try to invest some of our annual budget each year towards the upgrading of the above list of plant and equipment.

Our main priorities at present are to ensure that we develop our twin pack collection vehicles to offer us the ability to collect both waste and recyclable material from our customers on the same day thus reducing collections from weekly to fortnightly and reducing our costs and carbon footprint.

In addition last year we identified that we must improve the efficiency of our pay by weight through to invoicing structure to allow us access to good quality data and streamline this process. Investment in new systems for this started in 2014 and has continued through 2017 with the incorporation of data systems (eg. MOBA) on the backs of most of our trucks and introduction of handheld devices for our drivers and helpers.

A review of the fleet and machinery in terms of age is also underway and a plan is in place to gradually reduce the age of the equipment over the next few years on a phased approach.

For the moment we are comfortable that the above list of machinery / plant is 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 / Specified Engineering Works

The Barna Recycling Facility in Carrowbrowne has been in an almost constant state of change over the past 15 years. We want the facility to continually develop to meet the demands of our customers and the ever changing legislation that affects us as well as being responsive to new technologies which come onto the market.

2017 Planned Developments (Update on Progress)

During the current reporting period the company again made changes to improve the site and the following is a summary of the main infrastructural changes:-

- **Composting**

During this reporting period we made a significant improvement in the compost process by improving the segregation of the clean and dirty areas on site. Although the Department of Agriculture Fisheries and the Marine were happy and had approved the process as it was we felt it was time to complete the segregation and therefore we implemented this during 2017. The segregation of the two areas is now complete floor to ceiling where before it was only an 8ft wall that separated the two areas. This upgrade is permanent and dramatically reduces any risk of cross contamination between both areas.

- **Maintenance**

The new site garage is now fully operational on site with the ability to carry out our own repairs and tests on all our vehicles. The garage is manned by a team of mechanics who can be on site 24 hours as required. The garage allows us to ensure the fleet is always in compliance with RSA requirements and carry out repairs in a timely manner to get fleet on the road. This garage is not part of the licenced operation.

- **Site Walkways**

During 2017 we also made significant changes and improvements in the site walkways to improve pedestrian access throughout the facility. This process involved the construction of new walkways in some areas and the widening of walkways in other areas. Part of this process also included a maintenance programme on the walkways so they are kept clear, clean and tidy at all times.

- **Skip Office**

During this reporting period we also put in place a new office on site dedicated to managing our skip business. This office had been part of the weighbridge office but in order to centralise and manage all of our skip business from the Galway Facility an office was put on site to manage this process. This skips department is now set up with staff dedicated to specific areas within the region and all the work is done via this new office.

- **Archive Room**

Also in 2017 significant upgrades were made to the archive room on site to allow us to better store and manage our archived company records. This archive room was completely cleared and cleaned, new floor put down and new fresh racking was constructed to allow for each departments files to be sorted and stored in a controlled manner. This archive room is located in the main administration office.

2018 Proposed Developments

The company are committed to continuous improvement of the site and therefore at the beginning of each reporting year we identify areas on the site which are important to provide investment in and ensure they improve and progress. During discussions for 2018 the following have been set as priorities for improvement:-

- 1) Investigate the possibility of constructing and implementing an MBT process on site. This will take significant investment and will require EPA approval in advance of the project. It is hoped sometime in Q1 or Q2 2018 that a proposal will be submitted to the EPA for there review and approval. We believe that investing in an MBT process on site will really enhance our processing capabilities and the future of the company.
- 2) Develop a business plan for the empty constructed shed outside of the current licenced site and work to have this site developed and included within the scope of our licence by the end of 2018. This had been planned for 2017 but other priorities meant it was delayed to this new year. This project will also take into account new storage bays for the outside storage of some materials.
- 3) Due to the number of staff currently within the administration offices it will be essential during 2018 to review car parking on site and make some improvements for staff and visitors and this will be reviewed most likely in the second half of this new reporting year.
- 4) We also plan to review and potentially make improvements in the processing capability of the site picking station however due to the current downturn on the worldwide recycling markets which we are experiencing in Q4 2017 and Q1 2018 this will be discussed in more detail before being finalised but at present it is in the plans for this new year.

5. Complaints Summary

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

- Environmental Complaints Form (BW-OPS-015)

Any environmental non-compliances are recorded and documented by the EPA via audits / site visits and are the responsibility of the Management Team to fix and ensure the appropriate corrective and preventive actions are put in place.

Internal audits are also carried out as part of our ISO 14001 certification and continual improvement plans. Internal audits are carried out by the Facility Manager who is qualified to conduct them.

Results of these are recorded on:

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

All results are on file and available for review via the Facility Manager.

All documented Complaint 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 by the EPA will be documented on the EDEN online management system and records of those will be kept on that system only.

Any complaints received will immediately be assigned to a member of the management team to find a solution / corrective action. They will be taken seriously and dealt with as a priority.

In relation to the 2017 AER we can confirm the following:-

- **No official complaints of an Environmental nature were received directly by the company.**
- **The EPA also had no complaints received during this reporting period about our facility or collection activities.**
- **The NWCPO who manage our collection permit also recorded no complaints against the company during 2017.**

The fact that no complaints were received by any of the enforcement authorities about our facility during 2017 emphasises the success of our odour management process implemented in the composting facility during 2016 and our commitment to ensuring we do things properly in terms of how we collect, manage, process and transfer our products.

We are however committed to ensure any complaints that are received are dealt with appropriately in terms of priority and the type of action taken in each circumstance.

5.1 Environmental Incidents

Barna Recycling are responsible under the Agencies new guidance in relation to Environmental Incidents to notify the Agency immediately or any serious occurrence on site or the exceedance of licence limits or pre-defined trigger levels as a result of environmental monitoring.

There were no notifiable incidents during this reporting period of 2017.

Barna Recycling have completed the EPA's published AER template in relation to summarising complaints and incidents and this is attached as Appendix A of this report.

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. The purpose of these nuisance checks is to verify that there are no issues at the facility with regards to vermin, birds, flies, dust, housekeeping or odours.

We recently (during 2014) added waste stockpiles as a check on the daily nuisance processes. This was done with a view to ensuring stock was reviewed on a daily basis to maintain a focus on moving material off site as soon as possible and not allowing any materials to accumulate in excessive quantities and if they did they immediately came into focus.

Odour checks are also carried out as an individual assessment using the Agencies own guidance and these factor in all of our nearest sensitive receptors both upwind and downwind of the facility namely domestic dwellings or commercial premises. The method used is a 5 minute sniff test at these pre-determined locations on a daily basis.

We feel that given we have a composting facility on site it is necessary to carry out these checks this frequently. Results for odour checks during 2017 did not highlight any major issues in relation to odour which is of primary importance due to the issues back in 2015 and clearly demonstrates the success of the new process we implemented in the composting building for managing the odours.

The other parameters such as dust on site we had no issues to report. During periods of dry weather on site there can always be a level of dust on site but we have misting equipment installed internally and water dosing pumps on our approach roads to control dust levels as required. As a results dust monitoring reports highlighted no dust issues on site during this reporting period of 2017. Daily nuisance checks are always valuable to highlight the need for having pumps on / off during any period and these daily checks will continue.

Vermin, birds and flies are monitored internally on a daily basis and again no major issues were evident during this reporting period. Barna Recycling partner with Ecolab in relation to the management of all types of vermin, birds and flies and have active controls on site for rats and mice as well as flies. There has been no need to put controls in place in relation to birds on site as all sheds are covered and the nuisance of birds has never been an issue. The control of rats and flies and carried out on contracts. The vermin (rats) are checked on a fortnightly basis by an external contractor and flies are sprayed (compost area only) up to five times per annum requested by our Compost Manager as required.

All Ecolab reports are on file and up to date to show their own monitoring results.

Due to insurance requirements as well as our own Waste Licence control of stockpiles has become a very important part of our business and that is why it now forms part of our nuisance checks. During 2016 there was a period where larger stocks of general waste were stored on site than would have been permitted and this was due to limited landfill availability and the exports for mechanically treated MSW also being unavailable for a period during the year. This was highlighted during an Agency inspection as well during that year. The stockpiling of waste is not a normal practice and during 2017 we were almost always able to maintain the stock levels to ensure they were within our waste storage plan. The only exception to this rule is when we are closely approaching the date to ship a boat load of MSW from Galway Docks which may demand in the days prior to loading enough stock of loose waste is on site to ensure the boat is filled to capacity.

In summary the nuisance checks still play a valuable role in the day to day monitoring of our facility and they are carried out properly to ensure we get the full benefit from them. In general the site is running well and can be considered on the basis of the daily results not to be causing any major nuisance to our neighbours or the environment and this opinion is supported by the fact there are currently no complaints logged against the company.

7. Environmental Monitoring

The required monitoring programme at the Barna Recycling 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 of the waste licence. The following monitoring was carried out for the reporting period and all are as required by the schedule declared in the licence:

Surface & Foul Water Monitoring (Quarterly)

During 2017 reporting period sampling was carried out as follows:

- Surface & Foul Water Monitoring carried out by Complete Lab Solutions on 22/02/2017
- Surface & Foul Water Monitoring carried out by Complete Lab Solutions on 05/05/2017
- Surface & Foul Water Monitoring carried out by Complete Lab Solutions on 04/08/2017
- Surface & Foul Water Monitoring carried out by Complete Lab Solutions on 26/10/2017

Dust Monitoring (three times per year)

During the 2017 reporting period sampling was carried out as follows:

- Dust Monitoring was carried out by Complete Lab Solutions
- 3 times per annum must be twice from May to September
- Dust pots are left on site by contractor for a period of approximately 30 days as per licence
- The sampling dates for 2017 were as follows:-

Round 1: Monday 17/07/2017 to Thursday 17/08/2017
Round 2: Friday 15/09/2017 to Monday 16/10/2017
Round 3: Monday 16/10/2017 to Thursday 16/11/2017

Noise Monitoring (annually)

During 2017 reporting period sampling was carried out as follows:

- Noise Monitoring was carried out by Complete Laboratory Solutions
- 2017 testing completed on 24/03/2017

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

Complete Laboratory Solutions were employed as part of the Environmental Management Team to carry out and report on all monitoring requirements for 2017. They won this business through a tender selection process which is run to identify the best possible company to partner with in relation to environmental monitoring. We have on file all the relevant names and qualifications held by the people carrying out the testing on our behalf.

The tender process is coordinated by the Facility Manager and he makes the decision on the awarding of the contracts. Barna Recycling recognise the importance of appointing the best possible contractor to ensure the environmental monitoring programme is carried out on schedule using the proper equipment / methods and that the reports supplied for submission to the EPA are of a high standard.

7.1. Summary of Monitoring Results

Environmental monitoring results are sent to the Agency within 10 days of quarter end for water monitoring and as soon as results are available for both dust and noise monitoring. All results are now uploaded via the Agencies online EDEN system which allows for the notification of any incidents or general issues in relation to the monitoring results.

A summary of the monitoring results for the current reporting period of 2017 have been transferred into the Agencies own AER template for monitoring results for all parameters (water, dust and noise) and these are included in that format as appendix A of this report.

I can confirm for summary purposes that there were no issues or incidents during this reporting period on any aspect of the monitoring results and for all parameters tested results were within either licence requirement or below agreed trigger levels. No investigations or corrective actions were required during 2017.

A snapshot of the results over the last rounds of sampling is included below but can also be seen in Appendix A as part of the EPA AER template:-

SURFACE WATER

Parameter	Warning (lower) Trigger Level	Action (Upper) Trigger Level	Q2 '16 Result	Q3 '16 Result	Q4 '16 Result	Q1 '17 Result	Q2 '17 Result	Q3 '17 Result	Q4 '17 Result
Fats, Oils & Greases (mg/l)	12	15	<5	<5	<5	<5	<5	<5	6
pH (pH units)	6-8	6-9	7.3	7.2	7.3	6	7.4	7.9	7.2
Ammonium (mg/l)	0.5	1	0.121	0.115	0.01	0.019	0.01	0.08	0.01
Mineral Oil (mg/l)	2.5	5	0.065	0.065	0.065	0.065	0.0325	0.0130	0.065
BOD	2	25 (per EPA licence)	<1	<1	<1	<1	2	1	2
Suspended Solids	15	35 (as per EPA licence)	10	<2	14	5.5	5	4	5

FOUL WATER

Parameter	Emission Limit Value (per EPA licence)	Q2 '16 Result	Q3 '16 Result	Q4 '16 Result	Q1 '17 Result	Q2 '17 Result	Q3 '17 Result	Q4 '17 Result
Fats, Oils & Greases (mg/l)	100	<5	<5	<5	<5	6	6	15
Ammonium (mg/l)	Not specified	0.067	<0.005	0.019	0.005	0.626	0.020	<0.005
Sulphate	400	7.78	30.1	<5	5.83	13	<5	<5
COD	1000	105	41	61	350	404	45	42
BOD	350	3	<1	<1	189	7	4	8
Suspended Solids	400	121	13	26	20	335	53	19

DUST

Parameter	Emission Limit Value	Period of Monitoring	D1 Result	D2 Result	D3 Result	D4 Result	Comment / Trend
DUST	350	Monday 17/07/2017 to Thursday 17/08/2017	2015: 30 2016: 49 2017: 178	2015: 37 2016: 70 2017: 82	2015: 206 2016: 95 2017: 54	2015: 59 2016: 57 2017: 127	All results within the ELV set in the licence
DUST	350	Friday 15/09/2017 to Monday 16/10/2017	2015: 51 2016: 66 2017: 49	2015: 231 2016: 94 2017: 58	2015: 30 2016: 61 2017: 64	2015: 55 2016: 77 2017: 57	All results within the ELV set in the licence
DUST	350	Monday 16/10/2017 to Thursday 16/11/2017	2015: 78 2016: 82 2017: 118	2015: 64 2016: 98 2017: 41	2015: 61 2016: 5 2017: 85	2015: 58 2016: 99 2017: 146	All results within the ELV set in the licence

7.2. Compost Monitoring Results

The composting process has its own requirements for monitoring on site and that involves emissions as well as on the compost product itself. In relation to the compost product as already outlined in the report the following records are available on request in relation to our composting for each individual batch of product:

- E-Coli Test Results
- F-Coli Test Results
- Salmonella Test Results
- AT4 Test Results
- Trace Element (Compost Quality) Test Results

The above are all requirements we must carry out for either the EPA and / or Department of Agriculture Fisheries and the Marine (DAFM). In addition to the above we also carry out tests for the following:

- Nutrition Levels (NPK) on Compost
- PAH / PHP Levels

Any issues with monitoring results for compost must immediately be notified to the Agency and the Department and those may result in a rejected batch of compost.

During this reporting period there were one incident in relation to a composting failure. The rejected or failed composting batch during this reporting period due to detection of ECOLI in superbatches SB12092017. This was the first and only incident where a fail was detected. This batch was notified to the DAFM Officials in November who advised to return the batch to the dirty area for re-pasteurisation. There have been no issues since this with any other batches in the process and once re-processed the batch passed all requirements. The cause was determined to be an untrained member of staff not taking samples correctly and therefore this process has been changed and only the Compost Manager or approved deputy will take samples moving forward. A corrective action has been noted for this batch and DAFM were satisfied with the resolution.

All compost testing results are checked during site audits by both the Agency and the Department and all sampling is carried out by a DAFM approved laboratory.

Most importantly in relation to monitoring our internal results show that the scrubber system on site is adequately doing its job. We use a Kitagawa monitoring system to measure the levels of Ammonia, Hydrogen Sulphide and Mercaptans from the system and none of the monitoring results for 2017 highlighted an exceedance of the limits specified in our EPA licence. Therefore from the results recorded it can be assumed that the scrubber system on site is performing its duty adequately.

7.3. Bio Aerosol Air Monitoring

As part of the Agencies new air monitoring requirements Barna Recycling carried out Bio Aerosol monitoring during 2017 to meet these requirements. This monitoring was carried out by Anua Environmental Consultants who are part of the Board Na Mona group on the 18th September 2017.

This monitoring was carried out at 3 locations on site taking note to ensure that both upwind and downwind readings were taken. Total Bacteria was detected at all monitoring locations with average concentrations ranging from >217cfu/m³ upwind, >257cfu/m³ downwind location 1 and >83cfu/m³ at downwind location 2. *Aspergillus fumigatus* was detected at all locations ranging from >3.5cfu/m³ upwind, >9cfu/m³ downwind locations.

The results reported for bio aerosols highlighted no issues at the facility in relation to the emission of bio aerosols as a result of our activities and readings were normal. There were no actions highlighted within the report and no recommendations for improvement by the sampling team once results were reviewed.

7.4. Monitoring Locations

A map of the monitoring locations at the site is attached as appendix D to this report as required by the Agency.

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 2017 (approximately): 506,245 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 wastes and our fleet of on the road vehicles used for the collection and disposal of waste	Diesel, hydraulic oils
Site Operations	Road sweeper for maintenance of road surfaces and wash bay hose for washing bins, trucks	Water
Odour Controls	Used on an as required basis and pumped into the scrubbers within the compost building	Composting Scrubber System & Chemicals
Offices	Administration & Management of the facility usage of electricity for computers, phones etc	Electricity

Table 9.2: Usage of Energy and Resources up to 31st December 2017

Resource	Consumption for Reporting Period
Odour Control Chemicals	2012: Approximately 60litres 2013: Approximately 4,500 litres 2014: Approximately 5,200 litres 2015: Approximately 11,250 litres 2016: Approximately 14,700 litres 2017: Approximately 4,500 litres
Electricity	2017: 1,554,713 (KW) 2016: 1,445,628 (KW) 2015: 2,006,951 (KW) 2014: 2,204,366 (KW) 2013: 1,874,775 (KW) 2012: 1,695,879 (KW) 2011: 1,590,165 (KW) 2010: 1,327,372 (KW) 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	1,064,000 (litres approx)
Hydraulic Oils	12,800 (litres approx)

10. Tank, Pipeline and Bund Testing and Inspection Report

The underground drainage pipeline and tank network was surveyed during reporting period (2015) as per the requirement of our licence

The report concluded that the site drainage and tanks were overall in a good condition and no immediate actions were necessary throughout the site. Some minor intrusions on pipelines were found but no cracks or leaks and they have not recommended any immediate actions are required as a result of this survey.

Full copies of the report and DVD are on file and available from the Facility Manager on site.

A new survey will be carried out during 2018 as the requirement within our licence is to assess this every 3 years.

11. Financial Provision for the Facility

Barna Recycling are required by our licence to have an up to date financial provision in place which covers the cost of emergency clean up in the event of an environmental incident or restoration and aftercare work as a result of the company closing.

Financial provision for the company is outlined in our Environmental Liabilities Risk Assessment (ELRA) report combined with our Closure Restoration Aftercare Management Plan (CRAMP) which offers two separate calculations that combine to make up our Financial Provision.

These documents are produced following the guidance documents issued by the Agency and are submitted on an annual basis for approval prior to the financial bonds being put in place.

The Financial Provision for 2014 was:-	€1,202,202.12
The Financial Provision for 2015 was:-	€1,559,382.90
The Financial Provision for 2016 was:-	€1,566,670.00
The current Financial Provision for 2017 period was:-	€1,566,670.00

This document is due for review again later in 2018.

The above amounts are agreed with the Agency and reflect the provision put aside in the official bond document.

The full documents for ELRA / CRAMP / FP are available on request from Barna Recycling but the amounts above are already approved by the Agency and a new bond will be put in place a couple of months before the existing one expires.

For the 2017 reporting period we have completed the Agencies own AER template in relation to summarising the ELRA and Financial Provision data and this is included as part of appendix A of this report.

12. Management Structure at the Facility

An up to date company organisation chart is included in the company EMS system and a current copy is attached to this report as an appendix as required by our licence.

There were no major changes during 2017 reporting period and the Management Structure in the main has remained very similar to what was reported in 2016. The minor change is that we no longer have an Operations Manager in place and we have two site Supervisors within operations that report directly to the company Managing Director. This structure works well and has removed a layer of management within that department. There are no plans to replace the Operations Manager's position at this time. The Management Team all report directly into our Managing Director and the General Manager position which was in place during 2014 and 2015 is no longer required within the structure.

In relation to the Agencies main point of contact the Facility Manager (Campbell Finnie) remains the main point of contact for the Facility.

The Management Structure is outlined fully in Appendix E of the Report.

Any major changes in the Management Structure at the site will be advised to the agency immediately.

13. Public Information / Site Visits

All official records kept by Barna Recycling under the terms of our EPA licence or in relation to any of our activities from either the collection service 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. Campbell Finnie is the current Facility Manager and can be contacted via the main office.

All reasonable requests by the public or any other interested party for information will be answered as quickly as possible.

Barna Recycling also operate an ‘open door policy’ in relation to our site and all customers, partners, members of the public or any interested party are welcome to visit our facility by arrangement to tour the facilities, carry out inspections or get answers to any issues they may have in relation to our operations / activities. This is available to small groups and adults only and must be organised in advance via the Facility Manager.

14. Environmental Management Plan & Targets / Objectives

The setting of targets and objectives for the company is very important. Not only is it a requirement of our licence but it ensures the site and the company are always working towards continuous improvement in all areas of the business. The targets set should be ideally out with the scope of our licence.

The company recognise it is not only important to set these targets but to ensure during the reporting period it successfully works towards achieving the targets. As a result we produce a new Schedule of Targets and Objectives as part of our overall EMP and this is issued and re-defined on an annual basis to include both new targets which are relevant and also update on the success or otherwise of achieving the targets set for the previous reporting period.

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 Recycling have produced a new EMP for 2018 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 Recycling has made in all areas during this reporting period and outlines the major tasks ahead during the new reporting period.

For full details of the EMP and Schedule of Targets & Objectives refer to appendix C.

15. AER / PRTR Emissions Data for 2017

The EPA requires Barna Recycling 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 2017 AER / PRTR Emissions Report Database is included in this report as appendix B.

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 will be updated to the Agency website as soon as the full report including the AER / PRTR is included which will be before end March 2018 as required by the Agency.

Access to the PDF version of the full report will then be available via the EPA website or on request directly to Barna Recycling.

Final Comments

This year's Annual Environmental Report has been compiled in very similar format as previous years to keep it consistent and we have also integrated the Agencies new Excel templates into the report.

All figures and updates quoted are specifically for the 2017 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 Recycling during 2017 in all areas of the business. We believe the report in its current format achieves this successfully. However Barna Recycling welcomes 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 for future submissions.

The report has been compiled internally by Barna Recycling.

Updates on any of Barna Recycling 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 and as stated above will be made available in full in a downloadable format from the Agency website before end of March 2018.

Report Appendices

The following documents have been specifically requested by the Agency to be included in the Annual Environmental Report and are attached to this document and form part of the final report:

- Appendix A:** AER Summary Report in EPA's own Excel Format
(this includes results and information in relation to Air, Water, Bunds, ELRA, EMP, Noise, Resource / Energy, Complaints / Incidents and Waste Quantities)
- Appendix B:** AER / PRTR Workbook for 2017
- Appendix C:** EMP & Schedule of Targets and Objectives 2017 / 2018
- Appendix D:** Map of site monitoring locations
- Appendix E:** Current Company Management Structure (March 2018)

Next Submission

The next submission of this report is due on 31st March 2019.

Contacts

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



Appendix A:

AER Summary Report in EPA's own Excel Format

(this includes results and information in relation to Air, Water, Bunds, ELRA, EMP. Noise, Resource / Energy, Complaints / Incidents and Waste Quantities)

Facility Information Summary	
AER Reporting Year	2017
Licence Register Number	W0106-02
Name of site	Barna Waste
Site Location	Carrowbrowne, Headford Road, Galway
NACE Code	3821
Class/Classes of Activity	D13, D14, D15, R3, R4, R5, R11, R12 and R13
National Grid Reference (6E, 6 N)	53.3301, -9.01825

The principal activities carried out on site are D13, D14, D15, R3, R4, R5, R11, R12 and R13. Tonnage of waste received in 2017 was 89,779.08 which was down approx. 15.4% on 2016 figures of 106,174.10 tonnes. 78% of waste received was sent for recycling / recovery in 2017 which compares to 88% in 2016. The facility maintained certification to ISO 14001, the international standard for Environmental Management Systems. There were no complaints during the year. In relation to environmental monitoring there were no issues in 2017.

A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year **and an overview of compliance with your licence listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.**

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

	24/03/2018
Signature Group/Facility manager <small>(or nominated, suitably qualified and experienced deputy)</small>	Date

AIR-summary template Lic No: W0106-02 Year 2017

Answer all questions and complete all tables where relevant

Additional information

1 Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If **you do not have** licenced emissions and **do not complete a solvent management plan** (table A4 and A5) you do not need to complete the tables

No	
----	--

Periodic/Non-Continuous Monitoring

2 Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below

No	
----	--

3 Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? [Basic air monitoring checklist](#) [AGN2](#)

No	
----	--

Table A1: Licensed Mass Emissions/Ambient data-periodic monitoring (non-continuous)

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision thereof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments - reason for change in % mass load from previous year if applicable
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		
	SELECT			SELECT		SELECT	SELECT	SELECT		

Note 1: Volumetric flow shall be included as a reportable parameter

AIR-summary template	Lic No: W0106-02	Year: 2017
Continuous Monitoring		

4 Does your site carry out continuous air emissions monitoring?

If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV)

5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below

6 Do you have a proactive service agreement for each piece of continuous monitoring equipment?

7 Did your site experience any abatement system bypasses? If yes please detail them in table A3 below

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
	ELV in licence or any revision therof								
	<input type="text" value="SELECT"/>		<input type="text" value="SELECT"/>	<input type="text" value="SELECT"/>					
	<input type="text" value="SELECT"/>			<input type="text" value="SELECT"/>					
	<input type="text" value="SELECT"/>			<input type="text" value="SELECT"/>					
	<input type="text" value="SELECT"/>			<input type="text" value="SELECT"/>					

note 1: Volumetric flow shall be included as a reportable parameter.

Table A3: Abatement system bypass reporting table [Bypass protocol](#)

Date*	Duration** (hours)	Location	Reason for bypass	Impact magnitude	Corrective action

* this should include all dates that an abatement system bypass occurred

** an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link

Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5

No

Table A4: Solvent Management Plan Summary
 Total VOC Emission limit value

Solvent regulations Please refer to linked solvent regulations to complete table 5 and 6

Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as % of solvent input	Total Emission Limit Value (ELV) in licence or any revision thereof	Compliance
					SELECT
					SELECT

Table A5: Solvent Mass Balance summary

Solvent	(I) Inputs (kg)		(O) Outputs (kg)						Total emission of Solvent to air (kg)
	(I) Inputs (kg)	Organic solvent emission in waste	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g. by-	Solvents destroyed onsite through		
Total									

Bund/Pipeline testing template Lic No: W0106-02 Year: 2017

Bund testing dropdown menu click to see options

Are you required by your licence to undertake integrity testing on bunds and containment structures? If yes please fill out table B1 below listing all new bunds and containment structures on site, in addition to all bunds which failed the integrity test - all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period (mobile bunds and chemstore included)

- 1 Please provide integrity testing frequency period
Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)
 - 2 How many bunds are on site?
 - 3 How many of these bunds have been tested within the required test schedule?
 - 4 How many mobile bunds are on site?
 - 5 Are the mobile bunds included in the bund test schedule?
 - 6 How many of these mobile bunds have been tested within the required test schedule?
 - 7 How many sumps on site are included in the integrity test schedule?
 - 8 How many of these sumps are integrity tested within the test schedule?
- Please list any sump integrity failures in table B1
- 11 Do all sumps and chambers have high level liquid alarms?
 - 12 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
 - 13 Is the Fire Water Retention Pond included in your integrity test programme?

Additional information	
Yes	3.12.5 requires 3 yearly test of all underground pipes and tanks and bunds
3 years	
Yes	
1	
1	
No	N/A
SELECT	
SELECT	
SELECT	

Table B1: Summary details of bund /containment structure integrity test

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
Shed Diesel / Oil Bund	other (please specify)	Steel	Diesel / Oil	4.284m3	3.3m3	Other (please specify)	Hydrostatic	28.01.2015	Yes	Pass				
	SELECT					SELECT			SELECT	SELECT		SELECT		

* Capacity required should comply with 25% or 110% containment rule as detailed in your licence
Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?

- 16 Are channels/transfer systems to remote containment systems tested? [bunding and storage guidelines](#)
- 17 Are channels/transfer systems compliant in both integrity and available volume?

Commentary	
Yes	
Yes	
Yes	

Pipeline/underground structure testing

Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc? If yes please fill out table 2 below listing all underground structures and pipelines on site which failed the integrity test and all which have not been tested within the integrity test period as specified

- 1 Please provide integrity testing frequency period
- *please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

Yes	
3 years	

Table B2: Summary details of pipeline/underground structures integrity test

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type of secondary containment	Type integrity testing	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest(if in current reporting year)
Section 1 (MH P2 - MH P3)	Foul	pvc	No	SELECT	CCTV	Yes	Pass				
Section 2 (MH P3 - End Line 1)	Foul	pvc	No		CCTV	Yes	Pass				SELECT
Section 3 (MH P4 - End Line 2)	Foul	pvc	No		CCTV	Yes	Pass				
Section 4 (MH P4 - MH P3)	Foul	pvc	No		CCTV	Yes	Pass				
Section 5 (MH P2 - MH P5)	Foul	pvc	No		CCTV	Yes	Pass				
Section 6 (MH P2 - MH P1 Tank)	Foul	pvc	No		CCTV	Yes	Pass				
Section 7 (MH P6 - MH P1 Tank)	Foul	pvc	No		CCTV	Yes	Pass				
Section 8 (MH P6 - MH P7)	Foul	pvc	No		CCTV	Yes	Pass				
Section 9 (MH P8 - MH P9)	Foul	pvc	No		CCTV	Yes	Pass				
Section 10 (MH P8 - End Line)	Foul	pvc	No		CCTV	Yes	Pass				

Please use commentary for additional details not answered by tables/ questions above

Groundwater/Soil monitoring template	Lic No:	W0106-02	Year	2017
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		Comments
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	no
2	Are you required to carry out soil monitoring as part of your licence requirements?	no
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Groundwater monitoring template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	SELECT
5	Is the contamination related to operations at the facility (either current and/or historic)	SELECT
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	SELECT
7	Please specify the proposed time frame for the remediation strategy	SELECT
8	Is there a licence condition to carry out/update ELRA for the site?	SELECT
9	Has any type of risk assesment been carried out for the site?	SELECT
10	Has a Conceptual Site Model been developed for the site?	SELECT
11	Have potential receptors been identified on and off site?	SELECT
12	Is there evidence that contamination is migrating offsite?	SELECT

Please enter interpretation of data here

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	SELECT**	Upward trend in pollutant concentration over last 5 years of monitoring data
							SELECT			SELECT
							SELECT			SELECT

.* where average indicates arithmetic mean

++. maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

Table 2: Downgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTV's*	SELECT**	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
							SELECT			SELECT
							SELECT			SELECT

Groundwater/Soil monitoring template	Lic No: W0106-02	Year: 2017
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*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed by the EPA. [Groundwater monitoring template](#)

More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance [Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites \(EPA 2013\)](#) (see the link in G31)

**Depending on location of the site and proximity to other sensitive receptors alternative Receptor based Water Quality standards should be used in addition to the GTV e.g. if the site is close to surface water compare to Surface Water Environmental Quality Standards (SWEQS). If the site is close to a drinking water supply compare results to the Drinking Water Standards (DWS).

	Groundwater	Drinking water			
	Surface	regulations	(private supply)	Drinking water (public	Interim Guideline
	water EQS	GTV's	standards	supply) standards	Values (IGV)

Groundwater/Soil monitoring template Lic No: W0106-02 Year 2017

Table 3: Soil results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit
							SELECT
							SELECT

Where additional detail is required please enter it here in 200 words or less

Environmental Liabilities template

Lic No:

W0106-02

Year

2017

[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

		Commentary
1	ELRA initial agreement status	Submitted and agreed by EPA
2	ELRA review status	Review required and completed
3	Amount of Financial Provision cover required as determined by the latest ELRA	€1,566,670.40 This is the total unknown liabilities - ELRA
4	Financial Provision for ELRA status	Submitted and agreed by EPA
5	Financial Provision for ELRA - amount of cover	€865,887.90 unknown liabilities - ELRA
6	Financial Provision for ELRA - type	bond
7	Financial provision for ELRA expiry date	01/01/2018
8	Closure plan initial agreement status	Closure plan submitted and agreed by EPA
9	Closure plan review status	Review required and completed
10	Financial Provision for Closure status	Submitted and agreed by EPA
11	Financial Provision for Closure - amount of cover	€700,782.50 Amount for Closure Plan only
12	Financial Provision for Closure - type	bond
13	Financial provision for Closure expiry date	01/01/2019

Environmental Management Programme/Continuous Improvement Programme template	Lic No: W0106-02	Year 2017
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	Highlighted cells contain dropdown menu click to view	Additional Information
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes This system is approved to ISO 14001 standards
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes This is part of our EMS system
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes Yes this is produced annually and submitted along with the companies AER
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	Yes

Environmental Management Programme (EMP) report

Review of targets set for 2017 and report on progress

Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Health & Safety	Review fire safety at the site and implement recommendations of independent report produced at the start of 2017 by Tobin Consulting Engineers	Ongoing - 80%	This work is progressing very well. A fire improvement team has been put in place focusing on implementing the reports recommendations and other fire related improvements. Excellent progress made, and the team will continue in 2018.	Facility Manager / Health & Safety Manager	
Health & Safety	Carry out upgrades to operations staff canteens and include shower rooms within the new set-up	Complete - 100%	Canteens painted and new equipment installed throughout.	Operations Manager / Facility Manager / Managing Director	
Composting	Amend air flow options in compost pasteurisation tunnels to increase efficiency of the back-end process	Complete - 100%	This has been successfully implemented. The maturing time of compost batches in pasteurisation tunnels has reduced significantly during 2017 and this part of the process is working very well.	Compost Manager	

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	W0106-02	Year	2017
Transport	carry out a full review of all skip containers and ensure they are all brought to the new NWCPO condition requirements before being re-used	Complete - 99%	This work is 99% complete. All skips in rotation have been updated as required. We just have a few older skips to finish in order that the programme is fully complete.	Skips Manager			
Training	Carry out training on all aspects of safety and good work practice on the roads for all vehicle drivers and helpers	Complete - 100%	This training programme was completed fully during 2017	Transport Manager			
Training	Carry out training for all drivers and helpers on the rules and regulations behind driver working hours and driving time	Complete - 100%	This training programme was completed fully during 2017	Transport Manager			
Training	Carry out training on the Use of our new handheld units for all drivers and helpers to ensure a smooth transition to our paper free docket free system when moving to pay by weight	Complete - 100%	This training programme was completed fully during 2017	Transport Manager			
Environmental	Find a regular and sustainable market for hard plastics which have been a problem to move over the last couple of years on a consistent basis to one buyer who will accept the quality of material that we produce	Complete - 100%	This process is ongoing but excellent progress has been made. We are currently working with Van Werwen plastics in relation to a long term sustainable option for this material. Five trials loads have been sent and the material approved. We are due to deliver the final trial load in April 2018 before a long-term contract is offered.	Facility Manager			

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	W0106-02	Year	2017
Environmental	Implement the proposed agreement with Glassco to provide a central collection point for glass collections in the Galway area and assist bulk transfer to their facility in NAAS	Complete - 100%	This process is in place and a contract in place with Glassco	Facility Manager			
Health & Safety	Carry out an assessment throughout the organisation of ergonomics and implement findings recommended for each employee before the end of 2017	Complete - 50%	An ergonomics assessment has taken place with all staff and a report of findings has been produced. Recommendations to be implemented during 2018.	Health & Safety Manager			
Management Systems	Complete implementation of integrated management systems to incorporate Quality, Environment and Health / Safety and get certification to ISO 9001, ISO 14001 and ISO 18001 standards	Ongoing - 20% complete	The process of implementing these new standards is still under review by the company. No major progress in 2017.	Health & Safety Manager / Facility Manager			
Operations	Devise plan and tonnage model to ensure the composting facility is capable of accepting and processing 20,000 tonnes of material per annum running and tonnage increases year on year through 2018	Complete - 100%	This work has been completed during 2017 and with quicker processing time we plan to increase tonnage towards 20,000 tonnes in 2018. In addition there were no odour complaints about the composting during 2017 and that was also part of the improvements implemented as part of this action within the compost process.	Compost Manager			

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	W0106-02	Year	2017
Operations	Material Sorting Facility (picking station) – integrate the recently purchased equipment including optical sorting units into the facility to further enhance picking capabilities	Incomplete	This work was not completed during 2017 and will be rolled into 2018. This action was not ignored it was scheduled for Q4 however due to the significant downturn in the recycling markets it was decided to put the project on hold.	Managing Director			
Operations	Continue strategy / policy for phasing out older plant and machinery around the site and introducing fresh newer equipment (to include mobile plant)	Ongoing	This programme is ongoing but good progress was made in 2018 with upgrades purchased for both forklifts and loading shovels on site (x1 of each). These improvements will continue in the new reporting year.	Managing Director			
Operations	Review the situation with temporary work staff make decision if this is best practice or not and if we maintain temporary staff we must incorporate them into the company vaccination programme as soon as possible	Complete - 100%	This programme was completed during 2017 and a final decision made to cease use of agency staff on site. This was implemented from Q2 2017 onwards and no agency staff have been used since.	Managing Director / Operations Supervisor			
IT Systems	Implement a self-weighing facility into the site weighbridges for specific transactions only	Complete - 100%	This functionality is now available on site.	IT Manager			
IT Systems	Review Genysys software for company reports and request update reports to be released to cover all departmental requirements	Complete - 100%	This work has been completed and the system now includes all reports for each department within our company. This programme will continue annually as the system develops further to ensure we always have the ability to pull the data needed for reporting	IT Manager			

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	W0106-02	Year	2017
Pay by Weight	Implement pay by weight capability across all fleet and implement a system that offers capability to run from the 'back of truck' through to 'invoicing'. This will only be implemented when legislation that requires pay by weight as a requirement by the Government is fully implemented	Complete - 100%	This project has been successfully implemented and pay by weight is now available to both commercial and domestic customers	Management Team (All)			
Environmental	Continue to develop the energy and power saving programmes within the waste transfer station and all areas of the site to reduce the usage during both operational and non-operating hours	Ongoing	This programme is always under review but no major progress was made in 2017.	Management Team (All)			
Environmental	Continue to review the Irish recycling market to identify possible recycling options for various materials within the Country to reduce our carbon footprint	Ongoing	This option is always under review. The major progress to report in 2017 was the development on the local hard plastic market and also agreeing a deal with AES in relation to the management of tyres within the country.	Facility Manager			
Compliance	Continue to implement a plan to introduce brown bins to all our domestic customers. Training programmes for the domestic customer should be developed as part of this project.	Complete - 100% but still ongoing	We are up to schedule with all brown bins to be distributed under current regulations all areas that require a brown bin service have been given the option.	Sales Manager.			

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	W0106-02	Year	2017
Community Relations	Continue programme of school visits and presentation to target the younger generation interested in recycling	Complete - 100% but still ongoing	This programme continues and school visits and dialogue continued throughout 2017. The company have a presentation specifically designed for visiting schools.	Facility Manager / Sales Manager			
Training	Continue to support all staff training to ensure we meet health and safety and other compliance standards as well as develop our workforce – main focus in 2016 to be on manual handling refresher courses and training for drivers and helpers on best practice on the backs of trucks with bins lifts etc	Complete - 100%	All training scheduled for 2017 was successfully implemented	Management Team (All)			
Operations	Permitted site – once this site is in a proper condition prepare a plan for the EPA with a proposal / application to have this site integrated into the EPA licence	Incomplete	No progress in 2017 in relation to this project.	Managing Director			
<i>New List of Targets and Objectives for 2018</i>							
Health & Safety / Environment	Continue to implement fire safety improvements throughout the site during 2018	Open - New for 2018		Management Team (All)			
Health & Safety	Implement the recommendations from the organisation's ergonomics testing before the end of 2018	Open - New for 2018		Health & Safety Manager			
Operations	Carry out a full safety review and implement improvements at all company civic amenity facilities	Open - New for 2018		Health & Safety Manager			

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	W0106-02	Year	2017
Management Systems	Make a final decision on the implementation of integrated management systems to incorporate Quality, Environment and Health / Safety and get certification to ISO 9001, ISO 14001 and ISO 18001 standards	Open - New for 2018		Management Team (All)			
Transport	Implement safety camera's systems to all vehicles to enhance monitoring of health and safety on the road. Camera's can also be used for operational reasons such as missed bins etc	Open - New for 2018		Transport Manager			
Environment / Operations	Devise plan and prepare EPA submission for an MBT or bio drying process on site to try and produce an EWC 191210 product to increase options for the MSW material once processed	Open - New for 2018		Managing Director			
Environment / Operations	Devise plan and tonnage model to ensure the composting facility is capable of accepting and processing 20,000 tonnes of material per annum running and tonnage increases year on year through 2018 and for the next five years	Open - New for 2018		Compost Manager / Managing Director			

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	W0106-02	Year	2017
Operations	Material Sorting Facility (picking station) – integrate the purchased equipment including optical sorting units into the facility to further enhance picking capabilities that will develop over the next one to five years	Open - New for 2018		Managing Director / Operations Supervisor			
Operations	Continue strategy / policy for phasing out older plant and machinery around the site and introducing fresh newer equipment (mainly mobile plant such as loading shovels / forklifts). The age of the fleet should be significantly reduced over the next 5 years	Open - New for 2018		Managing Director			
Environment	Continue to develop the energy and power saving programmes within the waste transfer station and all areas of the site to reduce the usage during both operational and non-operating hours over the next 5 years	Open - New for 2018		Management Team (All)			
Environment	Continue to review the Irish recycling market to identify possible recycling options for various materials within the Country to reduce our carbon footprint over the next 5 years	Open - New for 2018		Facility Manager			

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	W0106-02	Year	2017
Environmental Compliance	Continue to implement a plan to introduce brown bins to all our domestic customers. Training programmes for the domestic customer should be developed as part of this project.	Open - New for 2018		Sales Manager.			
Community Relations	Continue programme of school visits and presentations to target the younger generation interested in recycling	Open - New for 2018		Facility Manager / Sales Manager			
Operations	Permitted site – once this site is in a proper condition prepare a plan for the EPA with a proposal / application to have this site integrated into the EPA licence	Open - New for 2018		Managing Director			
Training	Continue to support all staff training to ensure we meet health and safety and other compliance standards as well as develop our workforce	Open - New for 2018		Management Team (All)			
Community Relations	Investigate the possibility of working with local community groups especially in relation to gardens where compost might be able to be used this will be good for environment and connecting with local communities on the work we are doing	Open - New for 2018		Composting Manager / Facility Manager			

Noise monitoring summary report Lic No: W0106-02 Year 2017

- 1 Was noise monitoring a licence requirement for the AER period?
If yes please fill in table N1 noise summary below
- 2 Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6?
- 3 Does your site have a noise reduction plan?
- 4 When was the noise reduction plan last updated?
- 5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

[Noise Guidance note NG4](#)

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is site compliant with noise limits (day/evening/night)?
24/03/2017	daytime	On site	N1 Reading 1	52.7	48.5	54.7	75.7	Yes	Yes		Yes
24/03/2017	daytime	On site	N1 Reading 2	50.7	47.2	52.4	74.4	Yes	Yes		Yes
24/03/2017	daytime	On site	N1 Reading 3	49.7	47.2	51.3	69.5	Yes	Yes		Yes
24/03/2017	daytime	Off site	N2 Reading 1	40.8	37.2	42	64.4	No			Yes
24/03/2017	daytime	Off site	N2 Reading 2	40.4	37.6	41.7	69.5	No			Yes
24/03/2017	daytime	Off site	N2 Reading 3	41.4	35.8	42.1	70.5	No			Yes

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options?

** please explain the reason for not taking action/resolution of noise issues?
Any additional comments? (less than 200 words)

- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below
- 2 Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information
- 3 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

Additional information	
Enter date of audit	
SELECT	
SELECT	

Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)				
Total Energy Generated (MWHrs)				
Total Renewable Energy Generated (MWHrs)				
Electricity Consumption (MWHrs)	1,446	1,417	-2%	
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)				
Light Fuel Oil (m3)	1,097	1064	-3%	
Natural gas (m3)				
Coal/Solid fuel (metric tonnes)				
Peat (metric tonnes)				
Renewable Biomass				
Renewable energy generated on site				

* where consumption of energy can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Water Emissions	Water Consumption	Unaccounted for Water:
					Volume Discharged back to environment(m ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	
Groundwater							
Surface water							
Public supply							
Recycled water							
Total							

* where consumption of water can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)					
Non-Hazardous (Tonnes)					

Resource Usage/Energy efficiency summary Lic No: W0106-02 Year 2017

Table R4: Energy Audit finding recommendations								
Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
			SELECT					
			SELECT					
			SELECT					

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry) please complete the following information

	Unit ID	Unit ID	Unit ID	Unit ID	Station Total
Technology					
Primary Fuel					
Thermal Efficiency					
Unit Date of Commission					
Total Starts for year					
Total Running Time					
Total Electricity Generated (GWH)					
House Load (GWH)					
KWH per Litre of Process Water					
KWH per Litre of Total Water used on Site					

Complaints and Incidents summary template Lic No: W0106-02 Year 2017

Complaints Additional information

Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below

SELECT

Table 1 Complaints summary

Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
Total complaints open at start of reporting year							
Total new complaints received during reporting year							
Total complaints closed during reporting year							
Balance of complaints end of reporting year							

Incidents Additional information

Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below

No None

*For information on how to report and what constitutes an incident [What is an incident](#)

Table 2 Incidents summary

Date of occurrence	Incident nature	Location of occurrence	Incident category* please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurrence
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT	SELECT	SELECT			SELECT		SELECT
Total number of incidents current year		0												
Total number of incidents previous year		1												
% reduction/increase	100% reduction (1 incidents last year, down to 0)													

WASTE SUMMARY	Lic No: W0106-02	Year: 2017
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES	PRTR facility logon	dropdown list click to see options

SECTION B- WASTE ACCEPTED ONTO SITE-TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

Were any wastes **accepted onto** your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility?; (waste generated within your boundaries is to be captured through PRTR reporting)

No	Additional Information
----	------------------------

If yes please enter details in table 1 below

2 Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information

No	Additional Information
----	------------------------

3 Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information

No	Additional Information
----	------------------------

Table 1 Details of waste accepted onto your site for recovery, disposal or treatment (do not include wastes generated at your site, as these will have been reported in your PRTR workbook)

Licensed annual tonnage limit for your site (total tonnes/annum)	EWC code	Source of waste accepted	Description of waste accepted <i>Please enter an accurate and detailed description - which applies to relevant EWC code</i> European Waste Catalogue EWC codes	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/ Increase over previous year +/- %	Reason for reduction/ increase from previous reporting year	Packaging Content (%) - only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -
	20 03 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Domestic Municipal Waste	25,038.30	32,337.35	-22.57%	Market Demand	0%	D13- Blending or mixing prior to submission to any of the operations numbered D1 to D12	0	
	20 03 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Commercial Municipal Waste	19,741.09	18,312.97	7.80%	Market Demand	0%	D13- Blending or mixing prior to submission to any of the operations numbered D1 to D12	0	
	20 03 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Mixed Municipal Waste	10,559.84	0.00	#DIV/0!	Market Demand	0%	D13- Blending or mixing prior to submission to any of the operations numbered D1 to D12	0	
	20 03 03	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Street / Road Sweepings	410.05	1.26	32443.65%	Market Demand	0%	R5-Recycling/reclamation or other inorganic materials which includes soil celening resulting in recovery of the soil and recycling of inorganic construction materials	0	
	17 09 04	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Mixed C & D waste	2,769.47	2,927.34	#REF!	Market Demand	0%	R5-Recycling/reclamation or other inorganic materials which includes soil celening resulting in recovery of the soil and recycling of inorganic construction materials	0	
	17 02 01	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Wood /Timber	0	1,490.15	100.00%	Market Demand	0%	R5-Recycling/reclamation or other inorganic materials which includes soil celening resulting in recovery of the soil and recycling of inorganic construction materials	0	
	20 02 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Garden and Park Waste	1,353.69	1,117.13	#REF!	Market Demand	0%	R3-Recycling/reclamation or organic substances which are not used as solvents(including composting asanother biological transformation process)which includes gasification and pyrolysis	0	

WASTE SUMMARY		Lic No:		W0106-02		Year		2017	
15 01 01	15- WASTE PACKAGING, ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	Cardboard	2,288.26	1,994.57	14.72%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
20 01 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Paper	738.61	626.86	17.83%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
20 01 39	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Plastic	629.98	613.34	2.71%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
16 01 20	16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST	Sorted windscreen flat glass	0	0	0.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0

WASTE SUMMARY		Lic No:		W0106-02		Year		2017		
	20 01 38	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Timber / Wood	2,251.95	0	#DIV/0!	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
	20 01 40	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Metals		0	100.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
	17 04 07	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Metals	457.82	452.63	-3.27%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
	20 03 06	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Skips at treatment plants		0	100.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0

WASTE SUMMARY		Lic No:		W0106-02		Year		2017	
16 03 04	16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST	Off Spec Product	2.38	17.04	-86.03%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
20 01 08	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Food Waste	15,483.71	14,082.28	9.95%	Market Demand	0%	R3-Recycling/reclamation or organic substances which are not used as solvents(including composting asanother biological transformation processes)which includes gasification and pyrolysis	0
15 01 02	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	segregated plastic packaging		0	0.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
17 08 02	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Plasterboard / Gypsum	61.34	37.3	64.45%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
16 01 03	16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST	Tyres	153.38	109.43	40.16%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0

WASTE SUMMARY		Lic No:		W0106-02		Year		2017		
	20 01 10	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Clothes	0.12	4.72	-97.46%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
	19 08 01	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Grit / Screenings		0	#DIV/0!	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
	15 01 03	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	wood packaging		0	0.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
	15 01 04	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	Aluminium cans		0	0.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0

WASTE SUMMARY		Lic No: W0106-02		Year 2017				
16 06 04	16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST	Alkaline Batteries	0.48	0.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
15 01 07	15- WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED	sorted glass	0	0.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
16 02 13	16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST	TVs and Monitors	0	0.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
16 02 14	16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST	Small domestic appliances	0	0.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (If there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
17 02 02	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	sorted non packaged glass	0	0.00%	Market Demand	0%	R5-Recycling/reclamation or other inorganic materials which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials	0

WASTE SUMMARY		Lic No:		W0106-02		Year		2017		
	17 04 11	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	electric cables		0	0.00%	Market Demand	0%	R5-Recycling/reclamation or other inorganic materials which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials	0
	17 05 04	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	inert rubble and soils material		4,764.63	100.00%	Market Demand	0%	R5-Recycling/reclamation or other inorganic materials which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials	0
	19 05 01	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	outhrow from compost		0	#DIV/0!	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
	17 01 07	17- CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)	Inert Waste	4,207.36	0	#DIV/0!	Market Demand	0%	R5-Recycling/reclamation or other inorganic materials which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials	0
	16 02 01	16- WASTES NOT OTHERWISE SPECIFIED IN THE LIST	Scrap Electronics / WEEE	15.34	23.12	-33.65%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
	20 01 99	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Mixed Kerbside Recyclables	15,391.29	25,273.35	-39.10%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0

WASTE SUMMARY		Lic No:		W0106-02		Year		2017		
	20 01 02	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Glass	2,610.74	1,296.25	101.41%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
	20 03 04	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Sludge / Compostable Materials	265.34	277.07	100.00%	Market Demand	0%	R3-Recycling/reclamation or organic substances which are not used as solvents(including composting as another biological transformation processes)which includes gasification and pyrolysis	0
	18 01 04	18- WASTES FROM HUMAN OR ANIMAL HEALTH CARE AND/OR RELATED RESEARCH (except kitchen and restaurant wastes not arising from immediate RESEARCH (except kitchen and restaurant wastes not arising from immediate health care)	Non-Risk Healthcare Waste	0.46	4.74	100.00%	Market Demand	0%	R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	0
	20 30 01	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	RDF (Baled Waste for Export)	690.3	0	#DIV/0!	Market Demand	0%	D13- Blending or mixing prior to submission to any of the operations numbered D1 to D12	0
	19 08 09	19- WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE	Grease	0	0.72	100.00%			R12-Exchange of waste for submission to any of the operations numbered R1 to R11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as amongst others, dismantling, sorting, crushing, compacting, pelleting, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)	
	20 03 07	20- MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS	Bulky Waste	161.96	348.73	100.00%			D13- Blending or mixing prior to submission to any of the operations numbered D1 to D12	

WASTE SUMMARY		Lic No:	W0106-02	Year	2017
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Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

Was meteorological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under 553(A)(5) of WMA been submitted in reporting year	Comments

+ please refer to Landfill Manual linked above for relevant Landfill Directive monitoring standards

Table 5 Capping-Landfill only

Area uncapped*	Area with temporary cap	Area with final cap to LD Standard m ² ha, a	Area capped other	Area with waste that should be permanently capped to date under licence	What materials are used in the cap	Comments
SELECT UNIT	SELECT UNIT					

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9 Is leachate from your site treated in a Waste Water Treatment Plant?

SELECT

10 Is leachate released to surface water? If yes please complete leachate mass load information below

SELECT

Volume of leachate in reporting year(m ³)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH ₄) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m ³	Power generated (MW / kWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	



Appendix B:

AER / PRTR Workbook for 2017



Environmental Protection Agency

| PRTR# : W0106 | Facility Name : Bruscar Bhearna Teoranta (Carrowbrowne) |
 Filename : W0106_2017 PRTR Final.xls | Return Year : 2017 |

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017
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1. FACILITY IDENTIFICATION

Parent Company Name	Bruscar Bhearna Teoranta
Facility Name	Bruscar Bhearna Teoranta (Carrowbrowne)
PRTR Identification Number	W0106
Licence Number	W0106-02

Classes of Activity

No.	class name
-	Refer to PRTR class activities below

Address 1	Carrowbrowne
Address 2	Headford Road
Address 3	Galway
Address 4	
	Galway
Country	Ireland
Coordinates of Location	-9.01825 53.3301
River Basin District	IEWE
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Campbell Finnie
AER Returns Contact Email Address	cfinnie@barnawaste.com
AER Returns Contact Position	Facility Manager
AER Returns Contact Telephone Number	091 771619
AER Returns Contact Mobile Phone Number	087-7408568
AER Returns Contact Fax Number	091-771735
Production Volume	105000.0
Production Volume Units	Tonnes
Number of Installations	1
Number of Operating Hours in Year	4180
Number of Employees	280
User Feedback/Comments	No issues with reporting 2017 data. Only difference more than 50% were with water monitoring results and all results were within specification so no issues.
Web Address	www.barnarecycling.com

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(c)	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)

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

Guidance on waste imported/accepted onto site

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	
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4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR#: W0106 | Facility Name : Bruscar Bhearna Teoranta (Carrowbrownne) | Filename : W0106_2017 PRTR Final.xls | Return Year : 2017 |

27/03/2018 07:40

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

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

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

Additional Data Requested from Landfill operators

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

Landfill:

Bruscar Bhearna Teoranta (Carrowbrownne)

Please enter summary data on the quantities of methane flared and / or utilised

	T (Total) kg/Year	M/C/E	Method Used		Facility Total Capacity m3 per hour
			Method Code	Designation or Description	
Total estimated methane generation (as per site model)	0.0				N/A
Methane flared	0.0				0.0 (Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

| PRTR# : W0106 | Facility Name : Bruscar Bhearna Teoranta (Carrowbrowne) | Filename : W0106_2017 PRTR Final.xls | Return Year : 2017 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

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

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

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0106 | Facility Name : Bruscar Bhearna Teoranta (Carrowbrowne) | Filename : W0106_

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SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER						Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY				
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
					0.0	0.0	0.0	0.0	

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

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

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER						Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY				
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
306	COD	M	ALT	ISO - 17025 - Based pn USEPA approved Hach Method 8000	106.438	106.438	0.0	0.0	
303	BOD	M	ALT	ISO - 17025 - Standard Methods for the Examination of Water and Wastewater, 21ed, 2005	26.235	26.235	0.0	0.0	
314	Fats, Oils and Greases	M	ALT	ISO - 17025 - Standard Methods for the Examination of Water and Wastewater, 21ed, 2005	4.05	4.05	0.0	0.0	
240	Suspended Solids	M	ALT	ISO - 17025 - Standard Methods for the Examination of Water and Wastewater, 21ed, 2005	54.042	54.042	0.0	0.0	
343	Sulphate	M	ALT	Based on Sulphate in Waters Effluents and Soils, 2nd Edition (1988), Method E.	3.649	3.649	0.0	0.0	
238	Ammonia (as N)	M	ALT	Salicylate method based on Methods for the examination of water and associated materials, Ammonia in waters, 1981	0.065	0.065	0.0	0.0	

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

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : W0106 | Facility Name : Bruscar Bhearna Teoranta (Carrowbrowne) | Filename : W0106_2017 PRTR Final.xls | Return Year : 2017 |

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SECTION A : PRTR POLLUTANTS

POLLUTANT		METHOD			QUANTITY		
No. Annex II	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

* 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)

POLLUTANT		METHOD			QUANTITY		
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

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : W0106 | Facility Name : Bruscar Bhearna Teoranta (Carrowbrowne) | Filename : W0106_2017 PRTR Final.xls | Return Year : 2017 |

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Please enter all quantities on this sheet in Tonnes

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Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recycler / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Non	Non Haz Waste: Address of Recover/Disposer			
Within the Country	16 01 03	No	12.6	end-of-life tyres mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17	R12	M	Weighed	Offsite in Ireland	Combesgate Ireland,WFP-LH-15-0002-01		Donore Industrial Estate,Drogheda,County Louth ,Ireland,Ireland		
Within the Country	17 01 07	No	4261.38	01 06	R12	M	Weighed	Offsite in Ireland	Barna Waste ,PI Ref 10/1472		Carrowbrowne,Headford Road,Galway,..Ireland		
Within the Country	16 01 03	No	140.08	end-of-life tyres non-composted fraction of municipal and similar wastes	R12	M	Weighed	Offsite in Ireland	MSM Recycling,WFP-TN-11-0003-02		Birr,..Co Offaly,..Ireland		
Within the Country	17 08 02	No	453.04		D5	M	Weighed	Offsite in Ireland	Drehid Waste Management Facility,W0201-01		Drehid,..,Co. Kildare,Ireland		
To Other Countries	19 12 01	No	3257.16	paper and cardboard	R12	M	Weighed	Abroad	Peute Papier Recycling ,DO 02.2017 MDO Recycling UK Ltd (Broker),NSO/544843/B - Broker Number & IRE/G069/08 TFS Registration No Northwood Recycling Ltd,Broker licence: IRE/G282/12		,Dordrecht ,Rotherdam,Netherlands		
To Other Countries	19 12 01	No	2090.62	Mixed Paper	R12	M	Weighed	Abroad			11 Alvaston Business Park , Middlewich Road ,Nantwich ,Cheshire CW5 6PF ,United Kingdom		
To Other Countries	19 12 01	No	249.48	Multigrade paper	R12	M	Weighed	Abroad			Grant House,Stafford Park 12,Telford,Shropshire TF3 3BJ,United Kingdom		
To Other Countries	19 12 01	No	2365.9	Cardboard - OCC	R12	M	Weighed	Abroad	Agnail Ltd,Broker		Ballmacken Industrial Estate,Ballmacken,Portlaois e,Laois,Ireland		
To Other Countries	19 12 01	No	20.86	Cardboard - OCC	R12	M	Weighed	Abroad	Boost Recycling Ltd,IRE/G082/15		47 Swaffham Rd UK,Burwell,Cambridge ,CB25 0AN,United Kingdom		
To Other Countries	19 12 01	No	464.4	Shredded Office Paper	R12	M	Weighed	Abroad	Northwood Recycling Ltd,Broker licence: IRE/G282/12		Grant House,Stafford Park 12,Telford,Shropshire TF3 3BJ,United Kingdom		
To Other Countries	19 12 01	No	449.3	Cardboard - OCC	R12	M	Weighed	Abroad	Peute Papier Recycling ,DO 02.2017 MDO Recycling UK Ltd (Broker),NSO/544843/B - Broker Number & IRE/G069/08 TFS Registration No Cellmark (Broker),Irish TFS Broker Licence - IRE/G181/11 and IRE/G180/12		,Dordrecht ,Rotherdam,Netherlands		
To Other Countries	19 12 01	No	815.76	Cardboard - OCC	R12	M	Weighed	Abroad			11 Alvaston Business Park , Middlewich Road ,Nantwich ,Cheshire CW5 6PF ,United Kingdom		
To Other Countries	19 12 01	No	496.96	Cardboard - OCC	R12	M	Weighed	Abroad		Ireland		
Within the Country	19 12 02	No	1423.82	ferrous metal	R12	M	Weighed	Offsite in Ireland	Galway Metal Recycling,WR/05		Oranmore ,Co.Galway ,Ireland		
Within the Country	19 12 02	No	14.3	Steel cans (alu)	R12	M	Weighed	Offsite in Ireland	Green Dragon Recycling Ltd,IRE/G074/15		Caherlag,Glanmire,Co Cork,..,Ireland		
To Other Countries	19 12 02	No	18.36	Steel Cans (alu)	R12	M	Weighed	Abroad	Tandom Recycling,EPR/QP/3634KX		Radnor Park Industrial Estate,Congleton,Cheshire, Cheshire,United Kingdom		
To Other Countries	19 12 02	No	29.8	Steel cans (alu)	R12	M	Weighed	Abroad	WRC Recycling ,IRE/G068/08		Auchans Road ,Houston ,Johnstone Renfrewshire ,PA6 7EE ,United Kingdom		

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Non	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						Haz Waste : Name and Licence/Permit No of Recoverer/Disposer	Non Haz Waste : Address of Recoverer/Disposer						
						MC/E	Method Used						
To Other Countries	19 12 02	No	61.1	steel cans	R12	M	Weighed	Abroad	WRC Recycling ,IRE/G068/08		Auchans Road ,Houston ,Johnstone Renfrewshire ,PA6 7EE ,United Kingdom		
To Other Countries	19 12 01	No	228.44	Mixed Paper	R12	M	Weighed	Abroad	Boost Recycling Ltd,IRE/G082/15		47 Swaffham Rd UK,Burwell,Cambridge ,CB25 0AN,United Kingdom		
To Other Countries	19 12 01	No	227.2	paper and cardboard	R12	M	Weighed	Abroad	Agnail Ltd,Broker		Ballmacken Industrial Estate,Ballmacken,Portlaois e,Laois,Ireland		
To Other Countries	19 12 02	No	174.38	steel cans	R12	M	Weighed	Abroad	Boost Recycling Ltd,IRE/G082/15		47 Swaffham Rd UK,Burwell,Cambridge ,CB25 0AN,United Kingdom		
Within the Country	19 12 04	No	144.28	Hard Plastic	R12	M	Weighed	Offsite in Ireland	Leinster Environmental,WP 2008/06		Clermont Business Park ,Haggardstown ,Dundalk ,Co.Louth,Ireland		
Within the Country	19 12 04	No	24.06	Clear plastic film	R12	M	Weighed	Offsite in Ireland	Leinster Environmental,WP 2008/06		Clermont Business Park ,Haggardstown ,Dundalk ,Co.Louth,Ireland		
To Other Countries	19 12 04	No	174.04	Clear plastic film	R12	M	Weighed	Abroad	WRC Recycling ,IRE/G068/08		Auchans Road ,Houston ,Johnstone Renfrewshire ,PA6 7EE ,United Kingdom		
Within the Country	19 12 04	No	25.0	mixed plastic film	R12	M	Weighed	Offsite in Ireland	Leinster Environmental,WP 2008/06		Clermont Business Park ,Haggardstown ,Dundalk ,Co.Louth,Ireland		
To Other Countries	19 12 04	No	316.94	mixed plastic film	R12	M	Weighed	Abroad	WRC Recycling ,IRE/G068/08		Auchans Road ,Houston ,Johnstone Renfrewshire ,PA6 7EE ,United Kingdom		
To Other Countries	19 12 04	No	58.34	Mixed plastics	R12	M	Weighed	Abroad	WRC Recycling ,IRE/G068/08		Auchans Road ,Houston ,Johnstone Renfrewshire ,PA6 7EE ,United Kingdom		
To Other Countries	19 12 04	No	480.84	Plastic Bottles - PET	R12	M	Weighed	Abroad	WRC Recycling ,IRE/G068/08		Auchans Road ,Houston ,Johnstone Renfrewshire ,PA6 7EE ,United Kingdom		
To Other Countries	19 12 04	No	38.18	Hard Plastic	R12	M	Weighed	Abroad	WRC Recycling ,IRE/G068/08		Auchans Road ,Houston ,Johnstone Renfrewshire ,PA6 7EE ,United Kingdom		
To Other Countries	19 12 04	No	176.12	HDPE Plastic Bottles	R12	M	Weighed	Abroad	WRC Recycling ,IRE/G068/08		Auchans Road ,Houston ,Johnstone Renfrewshire ,PA6 7EE ,United Kingdom		
To Other Countries	19 12 04	No	162.02	Plastic trays	R12	M	Weighed	Abroad	WRC Recycling ,IRE/G068/08		Auchans Road ,Houston ,Johnstone Renfrewshire ,PA6 7EE ,United Kingdom		
Within the Country	19 12 04	No	61.12	Hard Plastic	R12	M	Weighed	Offsite in Ireland	Cloughwater Plastics,WFP/FG/08/0002/04		Rosemount Road,8A,Ballycoolin,Dublin 15,Ireland		

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Non-Haz Waste : Name and Licence/Permit No of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Haz Waste : Address of Next Destination Facility	Non-Haz Waste : Address of Recover/Disposer		
Within the Country	19 12 04	No	43.88	Plastic Bottles PET	R12	M	Weighed	Offsite in Ireland	Leinster Environmental,WP 2008/06		Clermont Business Park ,Haggardstown ,Dundalk ,Co.Louth,Ireland	
Within the Country	15 01 07	No	2566.76	glass packaging	R12	M	Weighed	Offsite in Ireland	Rehab Glassco Ltd,Waste Permit No. WFP-KE-08-0357-01		Unit 4 Osberstown Industrial Park,Caragh Road,Naas,County Kildare,Ireland	
Within the Country	19 12 07	No	2028.3	wood other than that mentioned in 19 12 06	R3	M	Volume Calculation	Offsite in Ireland	Barna Waste (Composting Facility),EPA Licence 106/2		Carrowbrowne,Headford Road,Galway,..Ireland	
Within the Country	19 12 05	No	73.38	glass	R5	M	Weighed	Offsite in Ireland	John Gannon Concrete Ltd,Permit Number WFP-WM-2009-0007-01		Split Hill Quarry,Hazelwood ,Kilbeggan,County Westmeath,Ireland	
Within the Country	20 03 07	No	3.14	bulky waste Mattresses	R12	M	Weighed	Offsite in Ireland	First Class Recycling,WFP/GC/17/001/01		Ballybane Industrial Estate,Ballybane ,Galway,Galway,Ireland	
Within the Country	19 12 07	No	1067.3	wood other than that mentioned in 19 12 06	D5	M	Weighed	Offsite in Ireland	Rathroeen Landfill,W0067-02		Ballina,....County Mayo,Ireland	
Within the Country	19 12 07	No	289.86	wood other than that mentioned in 19 12 06	D5	M	Weighed	Offsite in Ireland	Drehid Waste Management Facility,W0201-01		Drehid,....Co. Kildare,Ireland	
Within the Country	19 12 07	No	828.19	wood other than that mentioned in 19 12 06	D5	M	Weighed	Offsite in Ireland	East Galway Landfill,W0178-02		Kilconnell,....County Galway,Ireland	
Within the Country	19 12 07	No	1186.53	wood other than that mentioned in 19 12 06	R12	M	Weighed	Offsite in Ireland	OCR Waste Management,WFP-RN-10-0001-01		Roxboro,..Co Roscommon,..Ireland	
Within the Country	20 03 01	No	11728.48	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	East Galway Landfill,W0178-02		Kilconnell,....County Galway,Ireland	
Within the Country	19 12 10	No	1007.86	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Wilton Waste Recycling Ltd,WFP-CN-10-0005-01		Kiffagh,Crosserfough,Ballyja mesduff,County Cavan,Ireland	
Within the Country	19 12 10	No	466.38	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Pacon Waste & Recycling Ltd,Not applicable		4F Fingal Bay Business Park,Balbriggan,Co Dublin,..Ireland	
Within the Country	19 12 12	No	6458.48	Mechanically Treated Municipal Waste	R12	M	Weighed	Offsite in Ireland	Clean Ireland Refuse and Recycling Co Ltd,W0253/01		Quinn Road Business Park,Quinn Road Business Park,Ennis,Co Clare,Ireland	
Within the Country	19 12 10	No	52.88	combustible waste (refuse derived fuel)	R3	M	Weighed	Offsite in Ireland	Pacon Waste & Recycling Ltd,Not applicable		4F Fingal Bay Business Park,Balbriggan,Co Dublin,..Ireland	
Within the Country	20 03 01	No	241.86	Mixed Municipal Waste for Landfill	D1	M	Weighed	Offsite in Ireland	Drehid Waste Management Facility,W0201-01		Drehid,....Co. Kildare,Ireland	
Within the Country	19 12 12	No	24.5	General Waste (baled)	R12	M	Weighed	Offsite in Ireland	Indaver Ireland,EPA Licence W0167-02		Carranstown ,Duleek,County Meath,..Ireland	
Within the Country	19 12 12	No	28.84	Mechanically Treated Municipal Waste	R12	M	Weighed	Offsite in Ireland	Indaver Ireland,EPA Licence W0167-02		Carranstown ,Duleek,County Meath,..Ireland	
Within the Country	19 12 12	No	27.72	mixed municipal waste (fines)	R3	M	Weighed	Offsite in Ireland	Enrich Environmental,P1013-01		Hill,Kilcock,Meath,County Meath,Ireland	
Within the Country	20 03 01	No	74.52	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	East Galway Landfill,W0178-02		Kilconnell,....County Galway,Ireland	
Within the Country	19 12 12	No	221.0	Mechanically Treated Municipal Waste	R12	M	Weighed	Offsite in Ireland	Greenstar Limerick,W0082-03		Ballykeefe Townland,Dock Road,Limerick,..Ireland	
Within the Country	20 01 08	No	31.86	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Envirogrind Ltd,WP4		Donegal Road,Pettigo,Co. Donegal,..Ireland	

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination I.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	20 01 08	No	3100.53	Compost Processed no longer a waste	R10	M	Weighed	Offsite in Ireland	Local Farmers,Not Applicable	Various Addresses.....Ireland		
Within the Country	20 01 11	No	0.88	textiles	R12	M	Weighed	Offsite in Ireland	Textile Recycling Ltd,Permit Number WPR-014	Road,Tallaght,Dublin 24,Ireland		
To Other Countries	19 12 12	No	30562.83	Mechanically Treated Municipal Waste	R12	M	Weighed	Abroad	Indaver Export,Export via TFS	Dublin,Dublin,Dublin,Dublin,Ireland		
Within the Country	20 01 36	No	55.1	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R12	M	Weighed	Offsite in Ireland	WEEE Ireland,0 First Class Recycling,WFP/GC/17/001/01	South County Business Park ,Whelan House,Carmanhall and Leopardstown,Dublin 18,Ireland		
Within the Country	20 03 07	No	38.2	bulky waste	R12	M	Weighed	Offsite in Ireland	Enrich Environmental,P1013-01	Hill,Kilcock,Meath,County Meath,Ireland		
Within the Country	19 12 12	No	2683.22	mixed municipal waste (fines)	R3	M	Weighed	Offsite in Ireland	East Galway Landfill,W0178-02	Kilconnell,....County Galway,Ireland		
Within the Country	20 03 01	No	366.9	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Solutions,IRE/G443/17 Drehid Waste Management Facility,W0201-01	Ard Na Grena,65 Makenny Road,Ballinamallard,Northern Ireland,Ireland		
To Other Countries	19 12 01	No	53.0	Cardboard - OCC	R12	M	Weighed	Abroad	Drehid Waste Management Facility,W0201-01	Drehid,....Co. Kildare,Ireland		
Within the Country	20 03 03	No	52.58	street-cleaning residues	D1	M	Weighed	Offsite in Ireland	Drehid Waste Management Facility,W0201-01	Drehid,....Co. Kildare,Ireland		
Within the Country	20 03 01	No	27.2	Mixed Municipal Waste for Landfill	D1	M	Weighed	Offsite in Ireland	First Class Recycling,WFP/GC/17/001/01	Ballybane Industrial Estate,Ballybane ,Galway,Galway,Ireland		
Within the Country	20 03 07	No	2.42	bulky waste	R12	M	Weighed	Offsite in Ireland	Rathroeen Landfill,W0067-02	Ballina,....County Mayo,Ireland		
Within the Country	20 03 01	No	0.0	ROW used in error		M	Weighed	Offsite in Ireland	East Galway Landfill,W0178-02	Kilconnell,....County Galway,Ireland		
Within the Country	20 03 01	No	20.54	Mixed Municipal Waste for Landfill	D1	M	Weighed	Offsite in Ireland	East Galway Landfill,W0178-02	Kilconnell,....County Galway,Ireland		
Within the Country	20 01 11	No	0.16	textiles mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R12	M	Weighed	Offsite in Ireland	Textile Recycling Ltd,Permit Number WPR-014	Road,Tallaght,Dublin 24,Ireland		
Within the Country	17 01 07	No	20.84	01 06	D5	M	Weighed	Offsite in Ireland	East Galway Landfill,W0178-02	Kilconnell,....County Galway,Ireland		
Within the Country	17 01 07	No	0.0	ROW used in error		M	Weighed	Offsite in Ireland				
To Other Countries	19 12 04	No	38.2	Plastic Trays	R12	M	Weighed	Abroad	WRC Recycling ,IRE/G068/08	Auchans Road ,Houston ,Johnstone Renfrewshire ,PA6 7EE ,United Kingdom		
Within the Country	19 12 02	No	46.6	Mixed Scrap Metals	R12	M	Weighed	Offsite in Ireland	Wilton Waste Recycling Ltd,WFP-CN-10-0005-01	Kiffagh,Crosserlough,Ballyjamesduff,County Cavan,Ireland		
Within the Country	19 12 01	No	325.3	Mixed Paper	R12	M	Weighed	Offsite in Ireland	Leinster Environmental,WP 2008/06	Haggardstown ,Dundalk ,Co.Louth,Ireland		
Within the Country	20 03 03	No	80.7	street-cleaning residues	D1	M	Weighed	Offsite in Ireland	East Galway Landfill,W0178-02	Kilconnell,....County Galway,Ireland		

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						Non	Non Haz Waste: Address of Recover/Disposer					
Within the Country	19 12 07	No	16.76	Unshredded Timber	R12	M	Weighed	Offsite in Ireland	OCR Waste Management,WFP-RN-10-0001-01	Roxboro...Co Roscommon...Ireland		
Within the Country	15 01 03	No	28.54	wooden packaging	R12	M	Weighed	Offsite in Ireland	Chep Pallets,No permit or licence pallet collections only	Meenane,Watergrass Hill,County,Cork,Ireland		
Within the Country	19 12 07	No	18.04	wood other than that mentioned in 19 12 06	D5	M	Weighed	Offsite in Ireland	Rathroeen Landfill,W0067-02	Ballina....County Mayo,Ireland		
Within the Country	19 12 07	No	12.96	wood other than that mentioned in 19 12 06	R12	M	Weighed	Offsite in Ireland	OCR Waste Management,WFP-RN-10-0001-01	Roxboro...Co Roscommon...Ireland		
Within the Country	19 05 01	No	17.4	similar wastes	D1	M	Weighed	Offsite in Ireland	East Galway Landfill,W0178-02	Kilconnell....County Galway,Ireland		
Within the Country	20 02 01	No	1353.69	biodegradable waste (GREENS only) gypsum-based construction materials other than those mentioned in 17 08 01	R3	M	Volume Calculation	Offsite in Ireland	Barna Waste (Composting Facility),EPA Licence 106/2	Carrowbrowne,Headford Road,Galway,..Ireland		
Within the Country	17 08 02	No	181.14	than those mentioned in 17 08 01	R3	M	Weighed	Offsite in Ireland	Envirogrind Ltd,WP4	Donegal Road,Pettigo,Co. Donegal,..Ireland		
Within the Country	19 12 04	No	20.64	Plastic Film	R12	M	Weighed	Offsite in Ireland	Wilton Waste Recycling Ltd,WFP-CN-10-0005-01	Kiffagh,Crosserlough,Ballyja mesduff,County Cavan,Ireland		

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



Appendix C:

EMP & Schedule of Targets and Objectives 2017 / 2018



Schedule of Targets and Objectives & Environmental Management Plan 2017 / 2018

Submitted March 2018

WASTE LICENCE
REGISTRATION NO: WL106-2

LICENSEE: **BRUSCAR BHEARNA TEORANTA
(BARNÁ RECYCLING)**

LOCATION OF ACTIVITY: CARROWBROWNE,
HEADFORD ROAD,
CO. GALWAY.

ATTENTION: Michelle McKim / Helen Boyce
EPA - Office of Environmental Enforcement
CASTLEBAR OFFICE

PREPARED BY: MR. CAMPBELL FINNIE
(Barna Recycling)

CONTRIBUTIONS FROM: MR. SEAN CURRAN
(Managing Director/Facility Manager)
MR. MICHAL RUDZINSKI
(Operations Supervisor)
MR DEREK BRIEN
(Health & Safety Manager)
MR. JOHNNY CURRAN
(Deputy Facility Manager)

INTRODUCTION

As a requirement of Waste Licence WL106-2 Barna Recycling requires to have available a Schedule of Targets and Objectives as stated in condition 2.3.2 of our Waste Licence which states:-

“The objectives shall be specific and measurable. The Schedule shall address a five-year period as a minimum. The schedule shall include a time scale for achieving the objectives and targets and shall comply with any other written guidance issued by the Agency.”

This report was initially submitted on 18th December 2001 and has been updated on an annual basis since then.

The submission for 2018 has been kept consistent in format with previous submissions.

SECTION 1: Update on current list of Targets and Objectives

The next few pages of the report detail the Targets and Objectives that were set out by the company for 2017 and provides updates in detail as to exactly what actual progress was made for each action during the year and whether we achieved the targets or not. A summary of the results is included at the end of this section:-

TARGET / OBJECTIVE	Owner	Completion Target	2017 Progress Update
OPERATIONS / HEALTH & SAFETY – review fire safety at the site and implement recommendations of independent report produced at the start of 2017 by Tobin Consulting Engineers	Management Team	Q4 2017	This work is progressing very well. A fire improvement team has been put in place focusing on implementing the reports recommendations and other fire related improvements. Excellent progress made, and the team will continue in 2018 and beyond to ensure focus in this area.
OPERATIONS / HEALTH & SAFETY – carry out upgrades to operations staff canteens and include shower rooms within the new set-up	Operations Manager Health & Safety Manager	Q3 2017	This work has been completed fully in 2018. Painting and other upgrades are all done.
OPERATIONS – amend air flow options in compost pasteurisation tunnels to increase efficiency of the back-end process	Compost Manager	Q2 2017	This has been successfully implemented. The maturing time of compost batches in pasteurisation tunnels has reduced significantly during 2017 and this part of the process is working very well.
TRANSPORT – carry out a full review of all skip containers and ensure they are all brought to the new NWCPO condition requirements before being re-used	Transport Manager Weighbridge Manager	Q2 2017	This work is 90% complete. All skips in rotation have been updated as required. We just have a few older skips to finish in order that the programme is fully complete. This will be done early in 2018.
TRANSPORT – carry out training on all aspects of safety and good work practice on the roads for all vehicle drivers and helpers	Transport Manager Health & Safety Manager	Q1 2017	This training programme was completed fully during 2017.
TRANSPORT – carry out training for all drivers and helpers on the rules and regulations behind driver working hours and driving time to assist with compliance in this area	Transport Manager	Q1 2017	This training programme was fully completed during 2017.
TRANSPORT / IT – carry out training on the Use of our new handheld units for all drivers and helpers to ensure a smooth transition to our paper free docket free system when moving to pay by weight	Transport Manager IT Manager	Q1 2017	This training was fully completed during 2017.

ENVIRONMENT – find a regular and sustainable market for hard plastics which have been a problem to move over the last couple of years on a consistent basis to one buyer who will accept the quality of material that we produce	Facility Manager	Q2 2017	This process is ongoing but excellent progress has been made. We are currently working with Van Werwen plastics in relation to a long term sustainable option for this material. Five trials loads have been sent and the material approved. We are due to deliver the final trial load in April 2018 before a long-term contract is offered.
ENVIRONMENT – implement the proposed agreement with Glassco to provide a central collection point for glass collections in the Galway area and assist bulk transfer to their facility in NAAS	Facility Manager Operations Manager	Q1 2017	This process is in place and a contract in place with Glassco
HEALTH & SAFETY – carry out an assessment throughout the organisation of ergonomics and implement findings recommended for each employee before the end of 2017	Health & Safety Manager	Q3 2017	This study was completed during 2017 on all employees and the report was issued early in 2018. Recommendations to be fully implemented during 2018.
OPERATIONS - Complete implementation of integrated management systems to incorporate Quality, Environment and Health / Safety and get certification to ISO 9001, ISO 14001 and ISO 18001 standards	Facility Manager Health & Safety Manager	Q4 2018	The process of implementing these new standards is still under review by the company. No major progress in 2017.
OPERATIONS - Devise plan and tonnage model to ensure the composting facility is capable of accepting and processing 20,000 tonnes of material per annum running and tonnage increases year on year through 2018	Operations Manager Facility Manager Managing Director	Q4 2017	This work has been completed during 2017 and with quicker processing time we plan to increase tonnage towards 20,000 tonnes in 2018. In addition there were no odour complaints about the composting during 2017 and that was also part of the improvements implemented as part of this action within the compost process.
OPERATIONS - Material Sorting Facility (picking station) – integrate the recently purchased equipment including optical sorting units into the facility to further enhance picking capabilities	Operations Manager Managing Director	Q2 2017	This work was not completed during 2017 and will be rolled into 2018. This action was not ignored it was scheduled for Q4 however due to the significant downturn in the recycling markets it was decided to put the project on hold.
OPERATIONS – continue strategy / policy for phasing out older plant and machinery around the site and introducing fresh newer equipment (to include mobile plant)	Management Team (All)	Q4 2017	This programme is ongoing but good progress was made in 2018 with upgrades purchased for both forklifts and loading shovels on site (x1 of each). These improvements will continue in the new reporting year.

OPERATIONS / HEALTH & SAFETY – review the situation with temporary work staff make decision if this is best practice or not and if we maintain temporary staff we must incorporate them into the company vaccination programme as soon as possible	Operations Manager Health & Safety Manager	Q1 2017	This programme was completed during 2017 and a final decision made to cease use of agency staff on site. This was implemented from Q2 2017 onwards and no agency staff have been used since.
IT SYSTEMS – implement a self-weighting facility into the site weighbridges for specific transactions only	IT Manager	Q3 2017	This functionality is now available on site
IT SYSTEMS – review Genysys software for company reports and request update reports to be released to cover all departmental requirements	IT Manager Management Team	Q2 2017	This work has been completed and the system now includes all reports for each department within our company. This programme will continue annually as the system develops further to ensure we always have the ability to pull the data needed for reporting
TRANSPORT - Implement pay by weight capability across all fleet and implement a system that offers capability to run from the ‘back of truck’ through to ‘invoicing’. This will only be implemented when legislation that requires pay by weight as a requirement by the Government is fully implemented	Management Team (All)	Q4 2017	This project has been successfully implemented and pay by weight is now available to both commercial and domestic customers.
ENVIRONMENTAL – continue to develop the energy and power saving programmes within the waste transfer station and all areas of the site to reduce the usage during both operational and non-operating hours	Facility Manager Operations Manager	Ongoing	This programme is always under review but no major progress was made in 2017.
ENVIRONMENTAL – continue to review the Irish recycling market to identify possible recycling options for various materials within the Country to reduce our carbon footprint	Facility Manager	Ongoing	This option is always under review. The major progress to report in 2017 was the development on the local hard plastic market and also agreeing a deal with AES in relation to the management of tyres within the country.
SALES – continue to implement a plan to introduce brown bins to all our domestic customers. Training programmes for the domestic customer should be developed as part of this project.	Sales Manager	Ongoing	We are up to schedule with all brown bins to be distributed under current regulations all areas that require a brown bin service have been given the option. This will develop further in 2018.
SALES – continue programme of school visits and presentation to target the younger generation interested in recycling	Sales Manager	Ongoing	This programme continues and school visits and dialogue continued throughout 2017. The company have a presentation specifically designed for visiting schools.

<p>BUSINESS - Permitted site – once this site is in a proper condition prepare a plan for the EPA with a proposal / application to have this site integrated into the EPA licence</p>	<p>Facility Manager Operations Manager Managing Director</p>	<p>Q4 2017</p>	<p>No progress in 2017 in relation to this project.</p>
<p>TRAINING – continue to support all staff training to ensure we meet health and safety and other compliance standards as well as develop our workforce – main focus in 2016 to be on manual handling refresher courses and training for drivers and helpers on best practice on the backs of trucks with bins lifts etc</p>	<p>Management Team (All)</p>	<p>Q4 2017</p>	<p>All training scheduled for 2017 was successfully completed from driver and truck related training, machine operator training, fire safety etc.</p>

SUMMARY of 2017 PERFORMANCE

The company performed very well towards achieving its list of targets and objectives for 2017 and we achieved most of our major goals that we set ourselves or in the least made progress on them.

Some examples of the major goals accomplished during 2017 are below:

- The retention and re-awarding of our ISO14001 accreditation was vitally important for the company
- Significant focus and improvements in relation to fire safety management on site
- Staff canteens and facilities fully upgraded
- Major improvements to the composting facility on site in relation to the speed on the back-end processing at Pasteurisation Stage
- The skip containers on site have almost all been upgraded and repaired
- Full training programme implemented for our drivers and helpers on all collection and road related activities as well as IT systems
- Full training programme implemented for on site staff within the facility
- Local recycling markets sourced for management of hard plastic materials
- New agreement in place with Glassco for the management of glass tonnages within the region
- Ergonomics assessment carried out within the site for all staff
- Started the progress on upgrading our mobile plant on site
- Removed the requirement for having temporary agency staff on site
- Company software upgraded to improve our reporting capabilities
- Pay by Weight capability implemented successfully

The above list demonstrates that again during the reporting year the company paid attention to the specific targets it set itself and shows that the targets being set are realistic and important to the development of the company. We have improved in many areas ranging from staff training, to the improvement within the composting facility, upgrades to plant on site, pay by weight capability made available, upgrades to staff facilities on site, removal of agency staff from the facility, reporting requirements upgraded and significantly major focus and improvements made to our fire management and safety system on site.

These are all important areas as we need to develop the company in a way that makes business and financial sense as well and continuing to ensure our EPA facility, our staff and our fleet also develop at the same time.

Overall, we are very pleased to have achieved significant progress on our objectives for 2017.

Any goals not achieved or only partly achieved in 2017 will be included again for 2018 as they are still important to our future plans.

SECTION 2: New list of Targets and Objectives for 2018

New Targets & Objectives for 2018

The targets and objectives for 2018 are listed below. As advised by the EPA previously we have tried to identify actions that can be easily measured and also tried to ensure that most of the actions are related to issues out with our Waste Licence.

Any targets not achieved during 2017 have automatically been included again below. Targets / actions which are relevant on an ongoing basis but are deemed important enough to keep being included in this document are also listed. We feel it important to document them even although they will permanently be on the document to ensure focus is kept on achieving these targets.

Since 2014 and our examinership the business has gone through a period of review and is now in a position where we have defined major areas that need to be developed to ensure the business can run successfully for many years to come.

Therefore, the list of objectives is tied closely to our business goals and all are significant projects that will have a major impact on the future of the company.

The company operates based on five fundamentals which are the cornerstone of our day to day business activities. The fundamentals are:

- Safety
- Compliance
- Productivity
- Preventative Maintenance
- Housekeeping

These fundamentals are key to everything we implement or manage in our business and as a result the following new targets and objectives have been set for 2018:-

New list of Targets and Objectives for 2018:

TARGET / OBJECTIVE	Owner	Completion Target	Current Status
OPERATIONS / HEALTH & SAFETY – continue to implement fire safety improvements throughout the site during 2018	Management Team	Q4 2018	OPEN
HEALTH & SAFETY – implement the recommendations from the organisation’s ergonomics testing before the end of 2018	Health & Safety Manager	Q4 2018	OPEN
HEALTH & SAFETY – carry out a full safety review and implement improvements at all company civic amenity facilities	Health & Safety Manager	Q4 2018	OPEN
OPERATIONS / HEALTH & SAFETY – Make a final decision on the implementation of integrated management systems to incorporate Quality, Environment and Health / Safety and get certification to ISO 9001, ISO 14001 and ISO 18001 standards	Facility Manager Health & Safety Manager	Q4 2018	OPEN
TRANSPORT / HEALTH & SAFETY – implement safety camera’s systems to all vehicles to enhance monitoring of health ad safety on the road. Camera’s can also be used for operational reasons such as missed bins etc	Health & Safety Manager Transport Manager	Q2 2018	OPEN
OPERATIONS - Devise plan and prepare EPA submission for an MBT or bio drying process on site to try and produce an EWC 191210 product to increase options for the MSW material once processed. EPA approval at least should be the goal for 2018.	Managing Director Facility Manager	Q2 2018	OPEN
OPERATIONS - Devise plan and tonnage model to ensure the composting facility is capable of accepting and processing 20,000 tonnes of material per annum running and tonnage increases year on year through 2018 and for the next five years	Operations Manager Facility Manager Managing Director	Q4 2018	OPEN
OPERATIONS - Material Sorting Facility (picking station) – integrate the purchased equipment including optical sorting units into the facility to further enhance picking capabilities that will develop over the next one to five years	Operations Manager Managing Director	Q4 2018	OPEN
OPERATIONS – continue strategy / policy for phasing out older plant and machinery around the site and introducing fresh newer equipment (mainly mobile plant such as loading shovels / forklifts). The age of the fleet should be significantly reduced over the next 5 years	Management Team (All)	Q4 2018	ONGOING

ENVIRONMENTAL – continue to develop the energy and power saving programmes within the waste transfer station and all areas of the site to reduce the usage during both operational and non-operating hours over the next 5 years	Facility Manager Operations Manager	Ongoing	ONGOING
ENVIRONMENTAL – continue to review the Irish recycling market to identify possible recycling options for various materials within the Country to reduce our carbon footprint over the next 5 years	Facility Manager	Ongoing	ONGOING
SALES – continue to implement a plan to introduce brown bins to all our domestic customers. Training programmes for the domestic customer should be developed as part of this project.	Sales Manager Facility Manager	Ongoing	ONGOING
ENVIRONMENT / SALES – continue programme of school visits and presentations to target the younger generation interested in recycling	Sales Manager Facility Manager	Ongoing	ONGOING
BUSINESS - Permitted site – once this site is in a proper condition prepare a plan for the EPA with a proposal / application to have this site integrated into the EPA licence	Facility Manager Operations Manager Managing Director	Q4 2018	OPEN
TRAINING – continue to support all staff training to ensure we meet health and safety and other compliance standards as well as develop our workforce	Management Team (All)	Q4 2018	OPEN
ENVIRONMENT – investigate the possibility of working with local community groups especially in relation to gardens where compost might be able to be used this will be good for environment and connecting with local communities on the work we are doing	Compost Manager Facility Manager	Q2 2018	OPEN
ENVIRONMENT – implement a review and improvement programme to re-educate customers of contents of the recycling bin to reduce contaminations levels this year and over the next few years	Facility Manager Operations Supervisor	Q3 2018	OPEN
MARKETING – work with Galway City Council to be part of the European Green Leaf programme and specifically the visit organized for Q1 2018 to see if we can be involved to promote our business and the processes we have on site	Managing Director Facility Manager	Q1 2018	OPEN
MARKETING – work with Galway City and County Council in relation to a possible site visit by local councilors to promote our recycling initiatives and processes	Managing Director Facility Manager	Q3 2018	OPEN

HOUSEKEEPING – implement dust maintenance programme within site buildings to improve housekeeping and fire safety standards this should be started and developed over the next 5 years across all buildings	Health & Safety Manager Facility Manager	Q2 2018	OPEN
HOUSEKEEPING – improve site operations by finding more permanent and safer methods of dividing storage areas on site by the use of only non-combustible materials	Health & Safety Manager Facility Manager	Q2 2018	OPEN

Environmental Management Plan

Condition 2.3.2.2 of our Waste Licence (WL106-2) requires us to submit an Environmental Management Plan. The aim of this EMP is to provide a timescale for achieving the schedule of targets and objectives and the name of the people responsible for implementing these actions. As per last year's submission we are submitting this document as a joint document to cover the requirements for both the EMP and the Schedule of Targets and Objectives.

The table above outlines the company's goals and who is responsible for implementing them during 2018 and these goals cover operational, environmental, health and safety, IT and transport issues and any other related activities which we think need some improvement.

We believe the targets set out above are the key elements to the company progressing again in 2018 and beyond and completion of the targets set above will see us improve our facility and our business. Targets have been kept measurable and where possible are unrelated to conditions of our waste licence but clearly show the company's desire for continual improvement in all aspects of the business.

The targets are also written with a view to future years with some of the actions rolled year on year as part of a five-year plan as required by our licence.

In summary of the table above the targets and goals set for 2018, if achieved will see us achieve the following:

- Improve fire safety standards on site
- Enhance housekeeping at the facility by the introduction of maintenance programmes
- Improve ergonomic related issues for all our staff
- Enhance our collection operations by installation of cameras to all vehicles
- Improve our ability to monitor customer collections by installation of camera to all vehicles
- Improve community relations by working with local schools and community groups
- Improve our Management Systems by working towards ISO 9001 and 18001 approval
- Improve training levels of all our staff across all functions
- Improve the equipment on site by upgrading to a more modern set
- Enhance companies profile by working with Local Authority on the European Green Leaf Programme or through site visits
- Increase recycling rates by collecting and accepting more source segregated compost material

Barna Recycling are happy with the contents of this document and believe the targets set out above for the new reporting year are relevant to the overall goals of the company.

New targets can / will be added to this document as the year progresses or at the request of the EPA.

Management Support

Barna Recycling submit this document which as required by our EPA licence outlines progress made against all the targets set out for 2017 and redefines new targets and objectives for 2018. This document has been reviewed by the Management Team and all members of the team have given input into the areas being specifically targeted for 2018.

We believe the targets / objectives cover all aspects of our business and will ensure the company develops in all aspects during 2018. The goal of continuous improvement / development of the site and our performance are the key factors in setting these targets.

Comments from the Agency on the content of the report are welcome and new targets can be added or changes made at their request if anything within the report is insufficient or inadequate.

Progress Reports

Any queries regarding progress against the targets and objectives set out above for 2018 can be requested from our Facility Manager at all times throughout the reporting period.

Copies of this report are available on request from the Barna Recycling.

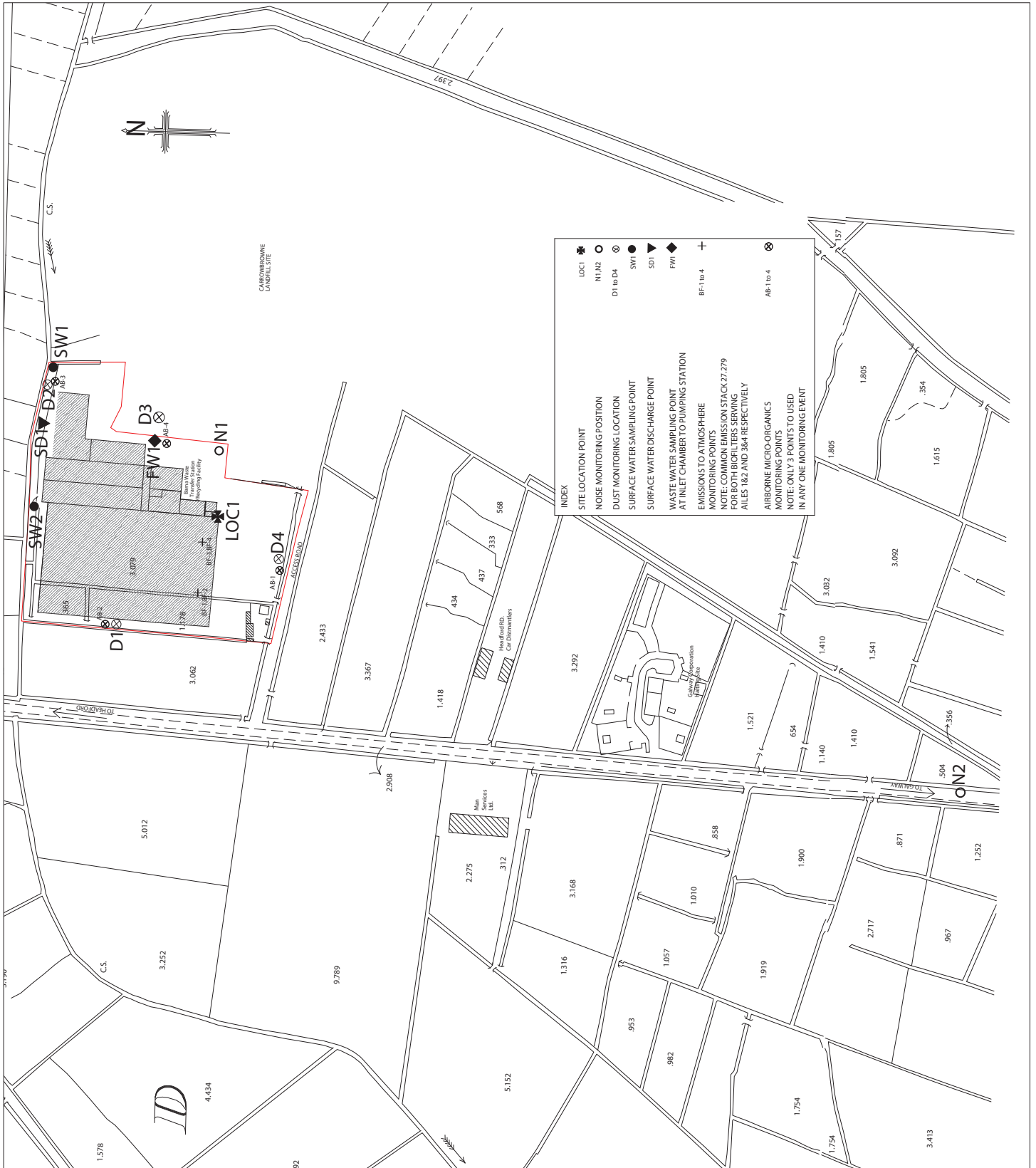
Next Submission

The next submission of this report is due to be submitted before 31st March 2019.



Appendix D:


Map of site monitoring locations



INDEX

LOC1	SITE LOCATION POINT
N1, N2	NOISE MONITORING POSITION
D1 to D4	DUST MONITORING LOCATION
SW1	SURFACE WATER SAMPLING POINT
SD1	SURFACE WATER DISCHARGE POINT
FW	WASTE WATER SAMPLING POINT AT INLET CHAMBER TO PUMPING STATION
BF-1 to 4	EMISSIONS TO ATMOSPHERE MONITORING POINTS
AB-1 to 4	MONITORING POINTS FOR BOTH BIOPILLERS SERVING AILES 1&2 AND 3&4 RESPECTIVELY
	MONITORING POINTS FOR AIRBORNE MICRO-ORGANISMS
	NOTE: ONLY 3 POINTS TO BE USED IN ANY ONE MONITORING EVENT

Issue	Date	Des	By	Chk
A	July 2005	Issued to EPA	K.G.	E.B.P.

Client: BARNA WASTE LTD.	Prepared by: K.G.	 Consulting, Civil and Structural Engineers, Fairgreen House, Fairgreen Road, Galway, Ireland. Tel: +353-(0)91-565211 Fax: +353-(0)91-565398 e-mail: info@tobin.ie www.tobin.ie	Issue: A
Project: Recycling depot & composting plant Carrowbrowne, Co. Galway	Checked: E.M.P.		
Date: JULY 2005	Project Director: J.P. KELLY	Drawing No.: 1015-6001	
Title: LOCATION OF MONITORING POINTS	Scale: @ A2: 1:2000		

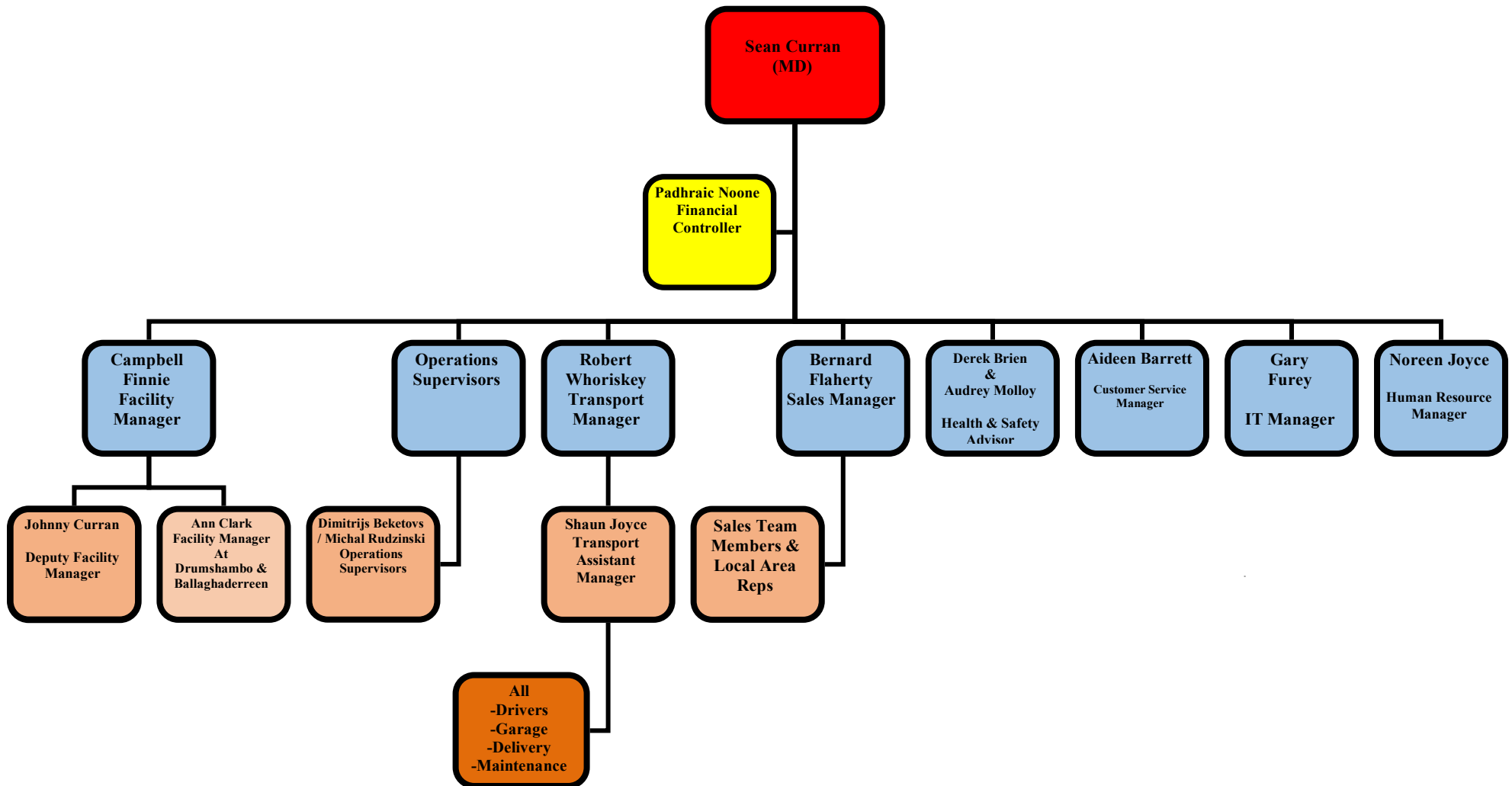


Appendix E:

Current Company Management Structure (March 2018)

BARNA WASTE

Company Management Structure



BW-OPS-001
REV 24
12/02/2018