

 **Panda**  
**An Animal for Recycling**

*Head office: Beauparc Business Park, Navan, Co. Meath*

*Waste Licence Number W0140-03*

*Annual Environmental Report*

*01<sup>st</sup> January 2010 – 31<sup>st</sup> December 2010*

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## **1.0 Introduction**

Panda were granted their third EPA Waste Licence W0140-03 on the 26<sup>th</sup> March 2009. This replaces the old Licence W0140-02. Under this licence, Panda are permitted to process 250,000 tonnes per annum. Appendix A illustrates the current site layout.

### 1.1 Company details

Licence No: W0140-03

Name: Nurendale Limited t/a Panda

Address: Rathdrinagh  
Beauparc  
Co. Meath

Telephone Number: 1850 65 65 65

Fax Number: 046 9024189

Website: [www.panda.ie](http://www.panda.ie)

## 1.2 Management Structure

Eamon Waters is the Managing Director of Panda. Noel Waters is a company director, with Brian McCabe having been recently added as a Director. David Naughton is the Environmental Manager. There are 150 employees either working directly or indirectly at the facility. Appendix B illustrates the organisational structure of the facility.

## 1.3 Financial Provision

A statement from our accountants is provided in Appendix C. At the present time the annual turnover and company assets are sufficient to offset environmental liabilities incurred during the course of operations and in the event that the company is closed.

## 1.4 Environmental Policy

In carrying out our function, Panda acknowledge that our activities impact upon the environment both through routine internal operations and the actions of our staff.

It is Panda's policy to protect the environment during all activities, both on and off-site.

This is achieved by:

- Strategic preparation and implementation of operating procedures (including an emergency response procedure).
- Utilizing BAT (Best Available Technology).
- Actively promoting environmental awareness amongst staff and clients through appropriate training and communication programs.
- Reduce energy use through effective education and awareness and the installation of energy efficient technology where appropriate.
- Implementing a policy of continuous improvement, by means of targeted objectives. All objectives and targets are monitored and up-dated accordingly.

Panda are committed to complying with all relevant environmental regulations and aim to supply a safe competitive and sustainable service with specific regards to the surrounding environment.

### 1.5 Activities

Under the waste licence W0140-03, Panda are licenced to conduct the following activities:

#### **Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts, 1996 to 2003**

##### **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 submission 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 is produced.

#### ***Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts, 1996 to 2003***

##### **Class 2.**

Recycling or reclamation of organic substances, which are not used as solvents (including composting and other biological transformation processes).

##### **Class 3.**

Recycling or reclamation of metals and metal compounds.

**Class 4.**

Recycling or reclamation of other inorganic materials.

**Class 11.**

Use of waste obtained from 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.

Panda provide a waste collection service for the domestic, commercial and industrial sectors throughout Ireland and was awarded the Repak “Large Operator of the Year award 2007” and “Runner up” in 2008, 2009 and 2010. Panda also won the inaugural Meath Innovator of the year 2010 and Meath Overall Business of the year 2010.

The facility operates 8am-6.30pm (Monday-Friday) & 9am-2pm (Saturdays). The facility is licensed to accept non-hazardous wastes only and to operate a civic amenity facility.

#### 1.6 Waste Activities carried out at the Facility

Waste accepted and dispatched at the facility is weighed using P&L’s weighbridge software “IWS5”. Panda operate two different sheds for processing the different waste streams. Up until September 2010 all domestic, commercial and industrial collections of mixed municipal waste and dry recyclables are tipped in their respective sections in shed one. Cardboard and plastic were recovered which is already segregated at source, whilst the mixed municipal waste was processed by using a shredder, magnet and trommel for separating the organic fraction. The Residual fraction was sent to Landfill and the organic fraction was treated in the in-vessel composting system. Shovels were used to load the articulated trailers going to landfill and load the in-vessel composting system. From September on, the Household & Commercial Dry Mixed Recyclables, source segregated

cardboard and plastic were tipped in the newly developed building 3 for storage prior to onward movement.

Shed 2 is used to segregate the C&D waste entering the site using a shredder, trommel, wind blower, magnet, ballistic separator and a picking line to recover ferrous and non ferrous metals, rubble, timber and C&D fines. The residuals are sent to landfill. Shovels are used to load the shredder, and a grab is used to pick out large pieces of steel, wood etc and load the waste sent to Landfill.

Panda invested in a rock crusher to further process the C&D rubble to suitable size material for use as builders fill.

Panda invested in a flip-flop unit to further process the C&D trommelled fines. This system removes stones, wood, metal and residual material from the fines. This material is then sent as landfill cover. Panda are actively researching methods to further clean the stone and separating the wood from the residual material.

Panda process wood on-site using a wood shredder. A grab is used to load the material. The shredded timber is then sent to various outlets for different uses such as the manufacturing of chipboard. The Timber shredder has been relocated to inside shed 2.

The dual weighbridge has been operational since October 2006. The second weighbridge was retained as back up for the dual weighbridge and is fully operational.

Panda were approved by the Agency to trial/commission the RDF process in shed 3 in July 2010. Following this very successful trial period, Panda were able to determine what modifications are required so that the process runs as efficiently as possible. The process involves the use of Ballistics, Magnets, Eddy Currents, Single Drum Separators, Optical Sorters and Shredder to produce a RDF material suitable as a fuel substitute in Cement Manufacturing Plants.



## 1.7 Water Usage:

Water is extracted from 2 wells on site and stored in a water storage tank. Water for office and amenities use is taken from public supply and is metered by the council. All other water used on site is taken from the water storage tank. For emergency purposes there is an overground storage tank with capacity of 660 m<sup>3</sup>.

Water from the storage tank used on site consists of:

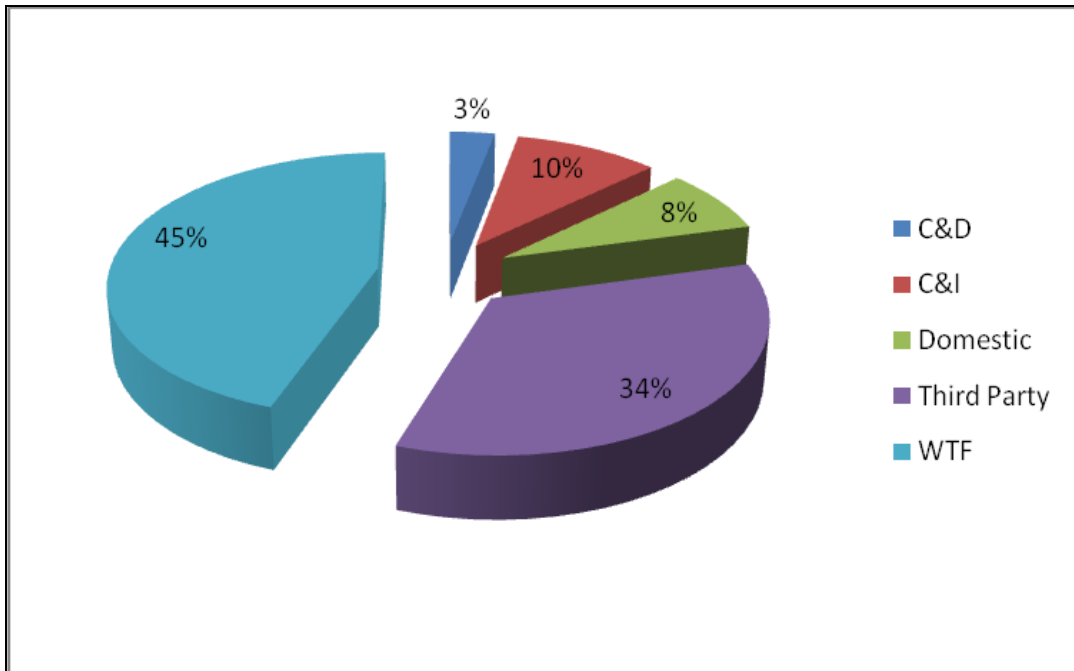
- In-house road sweeper.
- Dust suppression sprayers at doorways into shed one and on the eastern boundary fence between the back-up weighbridge and the retail outlet to the north.
- One atomiser unit (Shed 1).
- Dust suppression sprayers (Shed 2).
- Dust suppression sprayers at C&D fines extraction point from trommel.
- Hoses on site for dust suppression.
- Sprinkler system on biofilter and in-vessel compost tunnels.
- Truck wash.
- Fire Fighting Equipment.

## 2.0 Summary Information

### 2.1 Waste Received

The waste received at the facility for 2010 was 204,070.57 tonnes. From the pie chart (Fig 1) it is evident that waste from a Waste Transfer Station is the largest source of waste accepted.

**Fig. 1:** Waste accepted at the facility by Customer profile



## 2.2 Waste Transferred Off-Site for Disposal or Recovery

See Appendix D for the breakdown of the different destinations used for the waste accepted at the facility and waste removed off site by EWC Code. The installation of the in-vessel composting tunnels reduces the weight of the organic material by c25%, therefore, decreasing the weight of the organic material sent to landfill.

## 2.3 Waste Recovery Reports

To contribute to the Landfill Directive, Panda invested in a shredder, trommel, magnet and an in-vessel composting system. All municipal waste was put through the shredder and trommel and the organic fraction of the waste will then be put through the in-vessel composting system until September 2010. The material taken from the tunnels was then sent to landfill for disposal.

Other materials recovered from these processes are ferrous metals collected by the magnet. The residuals are sent to landfill.

Panda have applied to the Agency for a review to our current Waste Licence (W0140-03). This review was submitted to the Agency, so that Panda can produce an RDF product from the residual waste previously sent to Landfill. Panda also reviewed the licence for the purpose of constructing an Anaerobic Digestion/Composting plant. Panda have rolled out a source segregated collection service for biodegradable waste for both household and commercial customers.

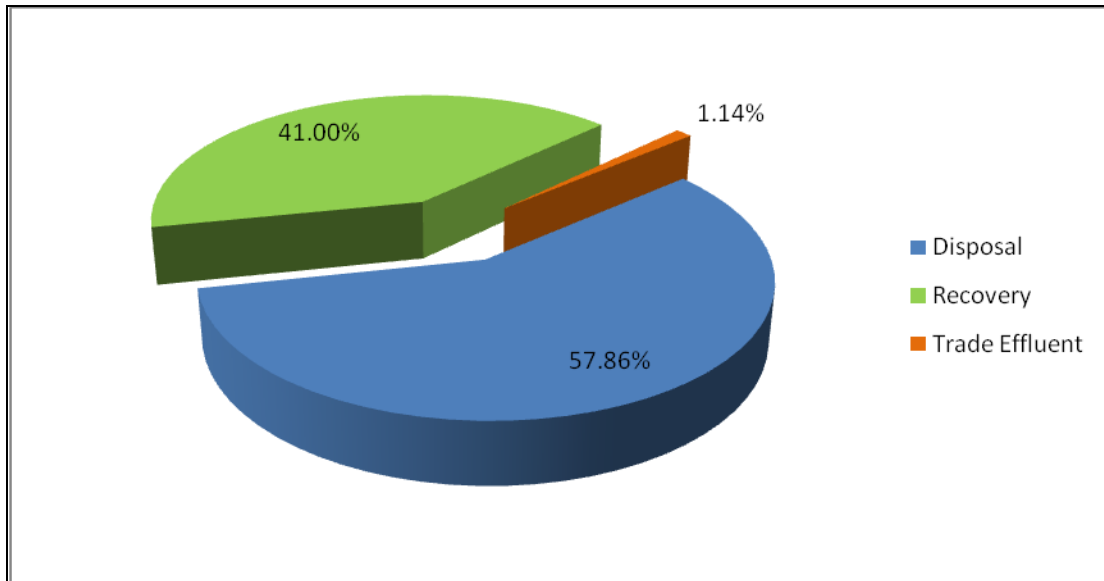
Panda invested in a C&D shed in 2005. A shredder, trommel, magnet, wind shifter and a picking line were purchased so as to divert as much C&D waste away from landfill as possible in order to reach the “Changing Our Ways 1998” target of diverting 85% away from Landfill by 2013. To date the processing of C&D Waste has been extremely successful. Panda are using the rubble segregated at the facility as a raw material in the use of landfill road construction and as back fill on construction works. The timber that is segregated in the shed is then shredded and sent for recycling.

Table 1 and Fig. 2 details the recovery rates of waste leaving Panda’s facility.

**Table 1:** Outgoing destination and recovery rate.

<b>Destination</b>	<b>Tonnage</b>	<b>%</b>
Disposal	117874.54	57.86
Recovery	83520.06	41.00
Trade Effluent	2320.78	1.14

**Fig. 2:** Outgoing destination recovery rate.



## 2.4 Summary report on emissions and interpretation of environmental monitoring

Under Schedule C of the Waste Licence W0140-03, Panda monitor compost, trade effluent, noise and ambient air monitoring. The following sub-headings detail the results from independent laboratories of the different parameters and the emission limit values ELV's set by the EPA and any complaints and incident that may have occurred during the year.

### 2.4.1 Surface Water

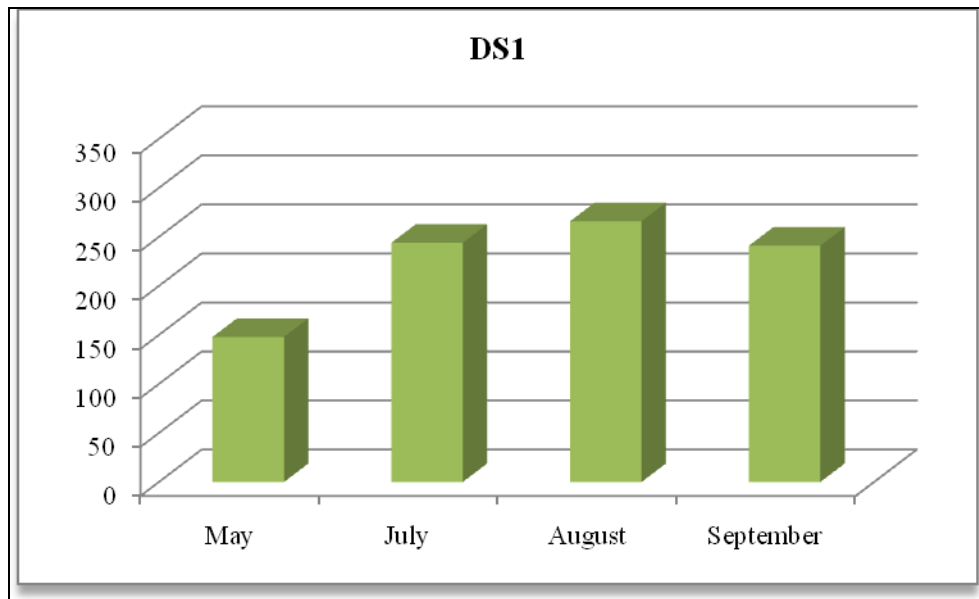
Surface water passes through a silt trap and oil interceptor prior to being discharged into holding tanks. The surface water monitoring point is located at the co-ordinates X/E 297456.080 Y/N 269143.030.

Panda propose to install a wetland system for surface water drainage as set out in the Environmental Targets and Objectives and received planning permission for its construction. A review of our waste licence was submitted to the Agency.

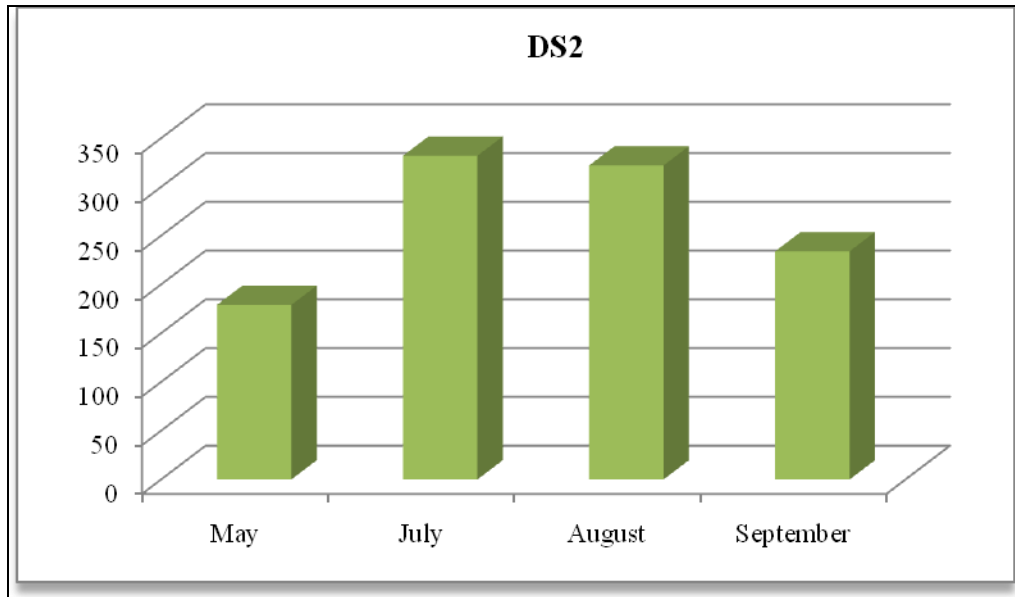
### 2.4.2 Dust Emissions

As per schedule B4 for dust deposition limits, there are currently five sampling locations. As per condition 6.13.1, all waste for disposal, stored overnight at the facility was placed in suitably covered and enclosed containers within the waste transfer buildings and were removed within 48 hours or 72 hours on a bank holiday weekend. In dry weather, the site roads and any other areas used by vehicles were sprayed with water. A dust suppression unit was installed in Shed (2) to ensure dust emissions from the bottom shed are kept to a minimum. Figs 3-7 illustrate dust recordings for 2010.

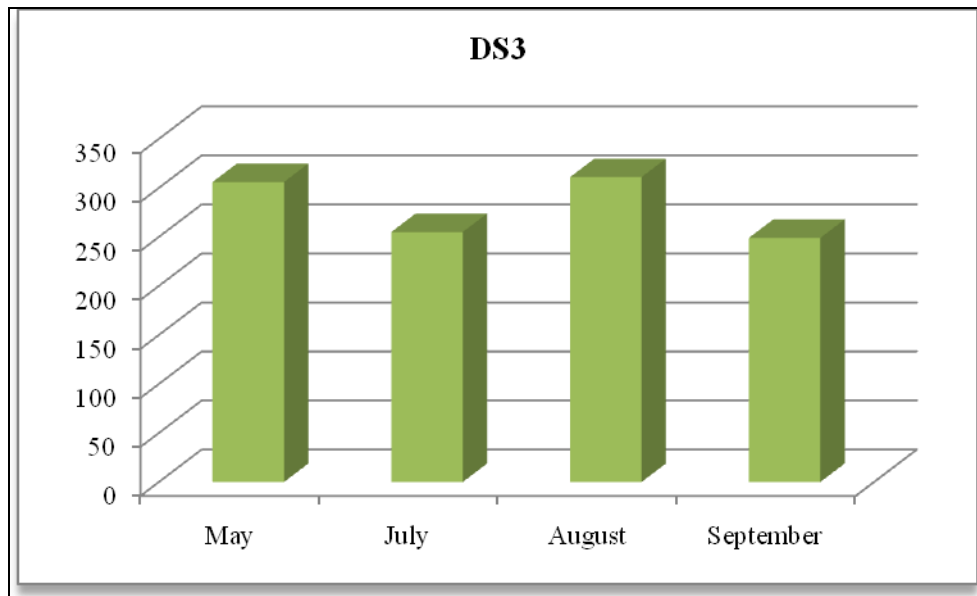
**Fig. 3:** Dust emission results for DS1



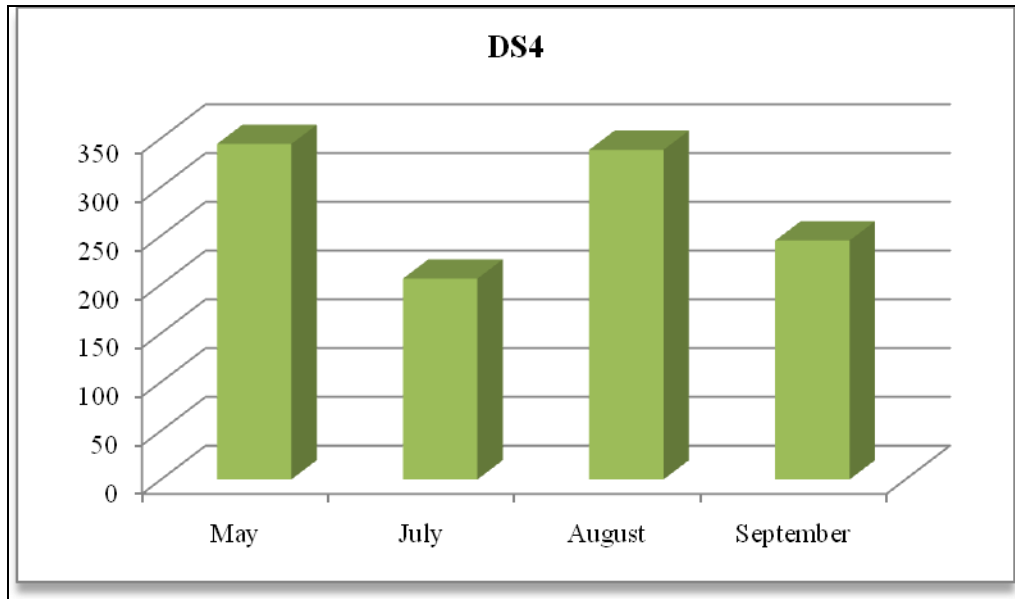
**Fig. 4:** Dust emission results for DS2



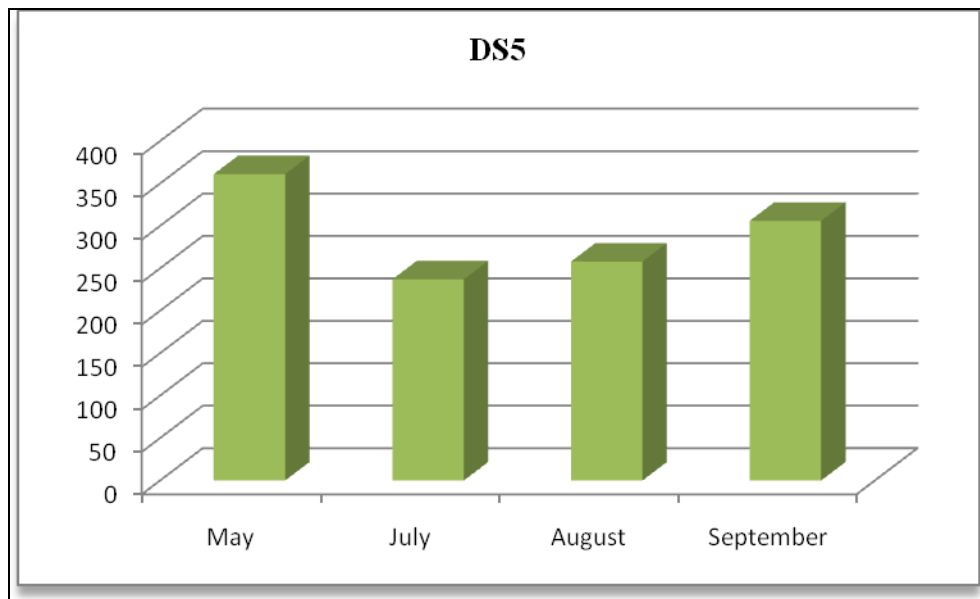
**Fig. 5:** Dust emission results for DS3



**Fig. 6:** Dust emission results for DS4



**Fig. 7:** Dust emission results for DS5



As per Schedule B.4, the dust deposition limit for the site is 350 mg m<sup>-2</sup> d<sup>-1</sup>. DS5 in May 2010 exceeded the ELV of 350 mg m<sup>-2</sup> d<sup>-1</sup>. This was attributed to cutting of concrete in

the yard so that induction loops could be installed for the fast acting doors installed at the Southern entrance of building 3.

#### 2.4.3 Noise Emissions

Noise emissions are monitored according to Schedule B.3 and the emission limit values (ELV) set out in Schedule C5 of the licence. An independent competent consultant was commissioned to conduct the noise sampling throughout the year. A summary of the recorded noise levels for this reporting period is provided in Tables 2-5.

**Table 2:** Recorded Noise Levels dB(A) on 12<sup>th</sup> March 2010– Intervals 30 minutes

Location	Time	Leq	L10	L90	Comments
N1	16.20	53.6	55.1	50.3	N2 road traffic and traffic entering Panda site – non Panda noise source
N2	16.25	51.7	52.5	50.2	N2 & slip road road traffic. Panda waste inaudible at background of 50 dBA
N3	15.30	54.5	56.4	51.9	Slip road N2 traffic and site activity
N4	17.05	54.3	55.6	53.1	Trucks on site going past
N2 (B)	17.10	53.6	54.7	51.9	Operation inaudible, road traffic dominant from N2 and slip road
N3 (B) <sup>+</sup>	17.15	52.2	54.8	52.7	N2 road traffic and emission from Panda waste audible at background level of 52.7 dBA



**Table 3:** Recorded Noise Levels dB(A) on 24<sup>th</sup> June 2010– Intervals 30 minutes

Location	Time	Leq	L10	L90	Comments
NSL1	15.00	53.5	55.5	46.2	N2 and slip road traffic. Panda noise source from site less than 46 dBA
NSL2	15.05	51.2	52.3	45.0	N2 & slip road road traffic. Panda waste site noise less than 45 dBA
NSL3	15.10	58.7	60.8	51.2	N2 road traffic with Panda site noise inaudible at less than 51.2 dBA
NSL4	15.50	59.1	61.2	51.5	N2 road traffic with Panda site noise inaudible at less than 51.5 dBA

**Table 4:** Recorded Noise Levels dB(A) on 14<sup>th</sup> October 2010– Intervals 30 minutes

Location	Time	Leq	L10	L90	Comments
NSL1	16.10	54.7	57.3	46.6	N2 and slip road traffic. Panda noise source from site less than 47 dBA
NSL2	16.15	52.4	52.9	45.5	N2 & slip road road traffic. Panda waste site noise less than 46 dBA
NSL3	16.20	59.4	61.3	51.8	N2 road traffic with Panda site noise inaudible at less than 51.8 dBA
NSL4	17.00	60.8	62.4	52.7	N2 road traffic with Panda site noise inaudible at less than 52.7 dBA

**Table 5:** Recorded Noise Levels dB(A) on 8<sup>th</sup> December 2010– Intervals 30 minutes

Location	Time	Leq	L10	L90	Comments
NSL1	15.30	52.3	53.4	45.8	N2 and slip road traffic. Panda noise source from site less than 46 dBA
NSL2	15.35	50.8	51.7	45.3	N2 & slip road road traffic. Panda waste site noise less than 46 dBA
NSL3	15.40	55.3	57.4	47.8	N2 road traffic with Panda site noise inaudible at less than 47.8 dBA
NSL4	16.20	56.6	58.5	48.7	N2 road traffic with Panda site noise inaudible at less than 48.7 dBA

The noise emissions at all NSL's from Panda are well within the terms of their noise emissions levels. There were no tonal or impulsive noise emissions from the works audible at any of the nearest residences.

#### *2.4.4 Trade Effluent*

As part of the monitoring programme Panda must test the trade effluent sent off site for disposal. Table 6 shows the results for the trade effluent tested for 2010. The parameters are well within acceptable levels for waste water treatment plants to be able to treat.

**Table 6:** Results for Trade effluent sent off site for disposal

Parameter	Units	Result	
		22/06/2010	29/12/2010
Ammonia	mg/L as N	123.45	15.24
Ammonia as NH <sub>4</sub>	mg/L as NH <sub>4</sub>	158.72	19.594
Arsenic	ug/L	32.2	
BOD	mg/L	2200	17
Boron	ug/L	532.6	
Cadmium	ug/L	5.3	0.2
Calcium	mg/L		211.1
Chloride	mg/L	181.63	185.61
Chromium	ug/L	152.8	
Cobalt	ug/L		9.1
COD	mg/L	3230	142
Copper	ug/L	291.1	13
Iron (Total)	ug/L		6209
Lead	ug/L	584.5	34.2
Magnesium	mg/L		10.63
Manganese	ug/L		1293
Mercury	ug/L	0.97	
Mineral Oil by Calculation	ug/L	7497.49	1102.91
Nickel	ug/L	201.4	31.2
pH	pH units	6.9	7
Selenium	ug/L	3.5	
Solids (Total Suspended)	mg/L	503	107
Sulphate	mg/L as SO <sub>4</sub>	<0.82	271.65
Tin	ug/L		<2.8
Zinc	ug/L	8277	

#### 2.4.5 Compost Analysis

As part of the monitoring programme Panda must test Compost bi-annually. Table 7 shows the results for the Compost tested for 2010. One test was conducted in 2010. The second analysis had been scheduled; however, the In-Vessel Wright System was suspended from September, therefore no sample could be analysed.

**Table 7:** Results for Compost tested in 2010

Test Parameter	Units	Result
		22/06/2010
Moisture Content	%	36.75
Organic Matter	%	72.89
Cadmium (solid)	ug/Kg	<10
Calcium	mg/Kg	15107
Chloride	mg/Kg	2468
Cobalt	ug/Kg	834
Copper	ug/Kg	13275
Faecal Coliforms	No/100ml	3
Foreign matter	%	69.8
Iron (solid)	ug/Kg	1770523
Lead (solid)	ug/Kg	20966
Magnesium (solid)	mg/Kg	1418
Manganese (solids)	ug/Kg	78185
Nickel (solid)	ug/Kg	3374
Semi VOC (Solid)	mg/Kg	<0.05
Sulphate (solid)	mg/Kg as SO4	2054
Tin (solid)	ug/Kg	820
Total Coliforms	No/100ml	8
VOC (solid)	ug/Kg	258.671

#### 2.4.6 Biofilter Monitoring

Panda commissioned a consultant to conduct ambient air monitoring on site to test for Bacteria, Hydrogen Sulphide and *Aspergillus fumigatus*. The bed media of the biofilter and the air handling system were also tested as required under Condition C.1 of the licence.

January 2010 Monitoring Results.

**Table 8:** Airflow rate, temperature and differential pressure measurement results.

Measurement Location	Velocity (m/s)	Volumetric airflow rate (m <sup>3</sup> /s)	Differential Pressure (Pa)	Temperature (Kelvin)
Duct 1 -A1	13.8	1.73	1,120	309
Duct 2 - A2	16.2	2.03	1,430	311
<b>Total volume Flow (m<sup>3</sup>/hr)</b>	-	<b>3.76</b>	-	-

**Table 9:** Exhaust Ammonia, Mercaptans and Hydrogen Sulphide analysis results on emission point A1.

Compound Identity	Emission point A1 - Inlet conc (mg/m <sup>3</sup> )	Emission Point A1 Exhaust conc (mg/m <sup>3</sup> )	Emission limit value Schedule B1	Compliance
Ammonia	11.28	4.26	50 mg/Nm <sup>3</sup>	Yes
Mercaptans	0.78	0.12	5.0 mg/Nm <sup>3</sup>	Yes
Hydrogen Sulphide	0.15	0.07	5.0 mg/Nm <sup>3</sup>	Yes

**Table 10:** TVC Count, pH and % Moisture Content.

Parameter	Value
<b>TVC Count (CFU/kg)</b>	4.90 x 10 <sup>5</sup>
<b>pH</b>	5.8
<b>Moisture Content (%)</b>	62

March 2010 Monitoring Results

**Table 11:** Airflow rate, temperature and differential pressure measurement results.

Measurement Location	Velocity (m/s)	Volumetric airflow rate (m <sup>3</sup> /s)	Differential Pressure (Pa)	Temperature (Kelvin)
Duct 1 -A1	14.6	1.83	1,210	311
Duct 2 - A2	15.8	1.98	1,380	308
<b>Total volume Flow (m<sup>3</sup>/hr)</b>	-	<b>3.81</b>	-	-

**Table 12:** Exhaust Ammonia, Mercaptans and Hydrogen Sulphide analysis results on emission point A1.

Compound Identity	Emission point A1 - Inlet conc (mg/m <sup>3</sup> )	Emission Point A1 Exhaust conc (mg/m <sup>3</sup> )	Emission limit value Schedule B1	Compliance
Ammonia	35.89	13.49	50 mg/Nm <sup>3</sup>	Yes
Mercaptans	0.84	0.22	5.0 mg/Nm <sup>3</sup>	Yes
Hydrogen sulphide	0.28	0.1	5.0 mg/Nm <sup>3</sup>	Yes

**Table 13:** pH and % Moisture Content.

Parameter	Value
pH	5.4
Moisture Content (%)	38

May 2010 Monitoring Results

**Table 14:** Airflow rate, temperature and differential pressure measurement results.

Measurement Location	Velocity (m/s)	Volumetric airflow rate (m <sup>3</sup> /s)	Differential Pressure (Pa)	Temperature (Kelvin)
Duct 1 -A1	13.9	1.74	1,140	307
Duct 2 - A2	16.2	2.03	1,470	309
<b>Total volume Flow (m<sup>3</sup>/hr)</b>	-	<b>3.77</b>	-	-

**Table 15:** Exhaust Ammonia, Mercaptans and Hydrogen Sulphide analysis results on emission point A1.

Compound Identity	Emission point A1 - Inlet conc (mg/m <sup>3</sup> )	Emission Point A1 Exhaust conc (mg/m <sup>3</sup> )	Emission limit value Schedule B1	Compliance
Ammonia	41.29	14.87	50 mg/Nm <sup>3</sup>	Yes
Mercaptans	1.21	0.32	5.0 mg/Nm <sup>3</sup>	Yes
Hydrogen sulphide	0.98	0.07	5.0 mg/Nm <sup>3</sup>	Yes

**Table 16:** pH and % Moisture Content.

Parameter	Value
pH	5.2
Moisture Content (%)	32

July 2010 Monitoring Results
**Table 17:** Airflow rate, temperature and differential pressure measurement results.

Measurement Location	Velocity (m/s)	Volumetric airflow rate (m <sup>3</sup> /s)	Differential Pressure (Pa)	Temperature (Kelvin)
Duct 1 -A1	14.4	1.8	1,110	306
Duct 2 - A2	14.7	1.83	1,320	306
<b>Total volume Flow (m<sup>3</sup>/hr)</b>	-	<b>3.63</b>	-	-

**Table 18:** Exhaust Ammonia, Mercaptans and Hydrogen Sulphide analysis results on emission point A1.

Compound Identity	Emission point A1 - Inlet conc (mg/m <sup>3</sup> )	Emission Point A1 Exhaust conc (mg/m <sup>3</sup> )	Emission limit value Schedule B1	Compliance
Ammonia	18.45	8.26	50 mg/Nm <sup>3</sup>	Yes
Mercaptans	0.41	0.12	5.0 mg/Nm <sup>3</sup>	Yes
Hydrogen sulphide	0.51	0.06	5.0 mg/Nm <sup>3</sup>	Yes

**Table 19:** pH and % Moisture Content.

Parameter	Value
pH	5.1
Moisture Content (%)	30

Bioaerosol Impact Assessment (29<sup>th</sup> October 2010).

**Table 20:** Ambient bioaerosol concentrations at monitoring locations DS1, DS2 and DS3.

Location ID.	Average Mesophillic Bacteria conc. (CFU/m <sup>3</sup> )	Average Aspergillus <i>fumigatus</i> conc. (CFU/m <sup>3</sup> )	Sample Count
DS1	<7	54	3
DS2	44	452	3
DS3	61	784	3

*2.4.7 Bund, pipe and underground storage tanks integrity*

The integrity and water tightness of all underground pipes, all tanks, bunding structures and containers and their resistance to penetration by water and other materials is required to be carried out every three years and thereafter and reported to the Agency. A bund, pipeline and UST integrity testing was conducted in 2010. The reports show that all under UST, pipes and bund were in accordance with Condition 3.17.

*2.4.8 Summary of resource and energy consumption*

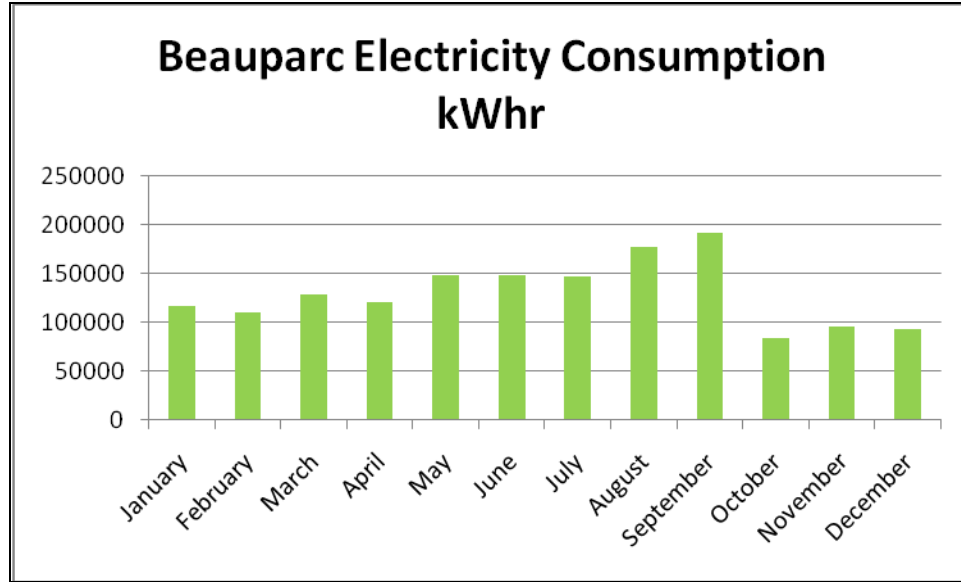
The following discusses resources used in 2010 i.e. Fuel, Electricity and Water.

*2.4.8.1 Electricity*

Fig. 8. Shows the electrical energy consumption for the period January 2010 – December 2010. It is evident that the energy consumption increased during August and September when trial commissioning of the RDF commenced and reduced substantially when Panda reduced the volume of tonnage accepted into the plant and including the discontinuation of the Wright In-vessel Composting Tunnels.



**Fig. 8:** Bar chart of electrical energy consumption for the year 2010



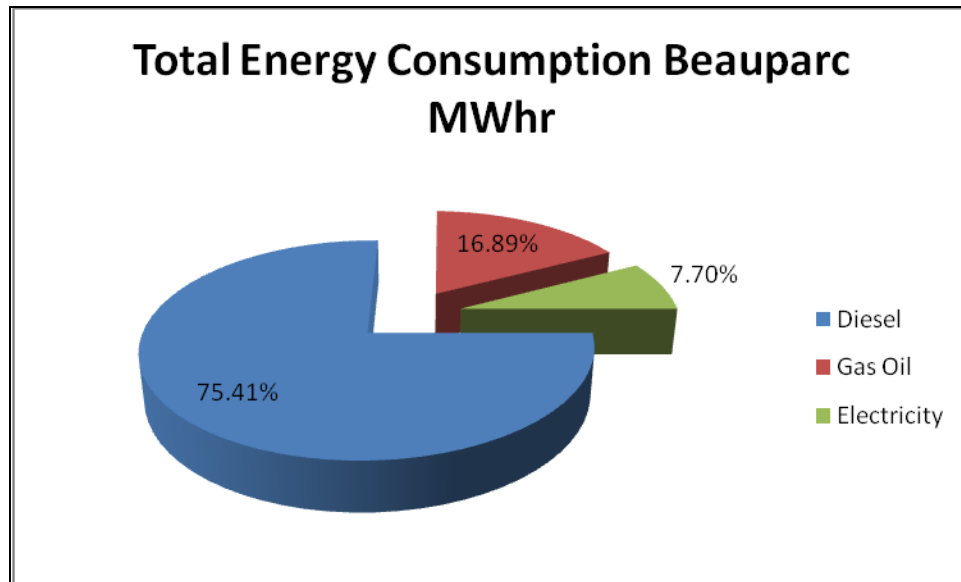
2.4.8.2 Fuel

The Table 21 and Fig. 9. below shows a summary of the energy consumption,.

**Table 21:** Summary of Energy Consumption 2010.

Resource	Litres	MWhr
Diesel	1440415.74	15268.41
Gas Oil	322557.26	3419.11
Electricity		1558.63
<b>Total</b>	<b>1,762,973.00</b>	<b>20,246.15</b>

**Fig. 9:** Total Energy Consumption.



#### 2.4.8.3 Water

Panda extract water from two wells for use on site. These wells are not metered to determine water usage. For emergency purposes there is an overground storage tank with capacity of 660 m<sup>3</sup>.

#### 2.5 Site infrastructure

Panda acquired land at the southern and Eastern boundary of the site so as to complete the surface water run off drainage on site and to add building three at the southern end of the facility. Building three is nearing completion. Panda have been granted planning permission to construct an anaerobic digestion/composting plant to the East of the facility. Panda have applied to the Agency to review our current Waste Licence W0140-03.

##### 2.5.1 In-place

The current site infrastructure is outlined below (List 1). Table 22 details the waste processing equipment used on site, together with the associated duty capacities

**List 1:** Current site infrastructure

1. Office block
2. Truck wash
3. Two x Weighbridge and associated office.
4. One x Waste processing building (2800 m<sup>2</sup>)
5. One x Waste processing building (2600 m<sup>2</sup>)
6. One x Waste processing building (4,248 m<sup>2</sup>)
7. Two x Dust suppression system
8. Two x In-vessel Composting Tunnels
9. Ancillary ESB building
10. Canteen & toilets and associated waste water treatment system.
11. Water reservoir (660 m<sup>3</sup>) capacity
11. Fencing around the site
12. Tyre Bay

**Table 22:** Waste processing equipment

Description	Duty Capacity
<b>Shed 1</b>	
1 x M&J 2000 Shredder	70 Tonnes per hour
1 x Trommel	70 Tonnes per hour
1 x Magnet	20 Tonnes per hour
2 x Composting Tunnels	130 Tonnes per hour
<b>Shed 2</b>	
1 x M&J 4000 Shredder	100 Tonnes per hour
1 x Trommel	100 Tonnes per hour
1 x Magnet	20 Tonnes per hour
1 x Nihot Density Separator	50 tonnes per hour
1 x Ballistic Separator	15 Tonnes per hour
<b>Outside</b>	
1 x Flip Flop (Not in use)	70 tonnes per hour
1 x Magnet	20 Tonnes per hour

1 x Wind Shifter (Not in use)	20 Tonnes per hour
1 x Rubble Crusher	50 Tonnes per day
1 x Flip Flop (Not in use)	50 tonnes per hour
1 x Single Drum Separator, relocated to shed 3 July 2010	40 tonnes per hour

**Mobile**

3 x Volvo L120	1 x Kobelco Track
1 x Teleporter	2 x Hoists
1 x Volvo L60	2 x Forklift
1 x Fuchs Grab	1 x Shunter
1 x Dopstadt Shredder	30 tonnes per hour
1 x Scarab Roadsweeper	

**Shed 3 –Trial Period**

2 x Ballistic Separator	25 tonnes per hour
4 x Overband Magnets	25 tonnes per hour
2 x Eddy Currents	10 tonnes per hour
1 x Optical Sorter	10 tonnes per hour
1 x RDF shredder	10 tonnes per hour
1 x Single Drum Separator	40 tonnes per hour
1 x Baler	40 tonnes per hour

There is sufficient back up if the shredder; a loading shovel or an excavator breaks down. The stone crusher is only used intermittently and therefore back up is not required. In the event that there is a major problem with the trommel or composting tunnels (i.e. if it can't be fixed within 48 hrs), unprocessed waste will be transferred to other approved waste processing facilities.

### *2.5.2 Planned Infra-structure*

Proposed infrastructure is outlined in List 2. It is anticipated that the majority of the proposed infrastructure will be in-place by late 2011, with the bring centre being built at a later date.

**List 2:** Proposed infrastructure:

1. Wetland for surface water run off

### 2.6 Progress Report on Proposals Developed to Minimise Water Demand & Trade Effluent Discharge

To minimise the water demand on site, Panda are investigating collecting the rainwater from the roof and using this in the road sweeper to clean the yard. This would constitute a significant reduction in usage on site as the road sweeper is running ten hours per day.

### 2.7 PRTR Emission.

Panda's PRTR emission return is provided in Appendix E.

### 3.0 Environmental objectives and targets – 2011.

No	Objective & Target	Method of Achievement	Responsibility	Timescale
1	<b>Assess the Effectiveness of Nuisance Control Procedures</b>	Continually review and assess all nuisance control procedures to ensure minimal impact on surrounding area	Environmental Manager	Ongoing
		Ensure yards are cleaned at the end of each working day	Operatives	Ongoing
2	<b>Prevent Water Pollution from Run-Off</b>	Ensure all gullies are maintained and regularly cleaned	Environmental Manager/ Operatives	Ongoing
		Ensure that levels in trade effluent tanks are maintained at an appropriate height	Environmental Manager/Operatives	On-going
3	<b>Assess &amp; Review Resource &amp; Energy Consumption at the site</b>	Carry out an energy audit on the site	Environmental Manager	May-11
4	<b>Maintain and Develop the Environmental Management System</b>	Maintain EMS Documentation on site	Environmental Manager	On-going
		Up date procedures to reflect operational and control changes		
5	<b>Assess Waste Acceptance Procedures so as to minimise volume of erratics</b>	Communicate with customers about the items that are not acceptable in the in-coming wastes	Call Centre/ Sales Reps	On-going
6	<b>Environmental Monitoring</b>	Implement the Environmental Monitoring Programme specified in the Waste Licence	Environmental Manager	On-going
		Investigate any accidents of emission limit values	Environmental Manager	On-going
7	<b>Ensure and implement a training programme</b>	Identify staff training requirements and provide relevant training	Environmental Dept	May-11
8	<b>To control any emergencies that may arise at the facility</b>	Review and implement an Emergency Response Procedure	Environmental Manager	May-11

9	<b>Prepare a Standard Operating Procedures Manual</b>	Prepare a comprehensive SOP manual relevant to site operations	Environmental Dept	Aug-11
10	<b>Ensure lighting in waste handling buildings provide sufficient lighting so as to assess incoming waste</b>	Clean all lightbulbs and covers in waste handling buildings	Environmental Manager/ Yard Supervisor	Jul-11
11	<b>Reduce dependence on using wastewater treatment plants for surface water</b>	Complete design of constructed wetland and seek Agency approval for its construction	Jim McGovern Project Engineer	Sep-11
12	<b>Complete shed 3 for RDF</b>	Finalise machine positions in building 3, complete negative air pressure system and all other required engineering works	Jim McGovern Project Engineer	Sep-11
		Awaiting Agency waste licence review	Environmental Manager	Expected June 11
13	<b>Office Recycling</b>	Continuation of office recycling	Office Manager/ Environmental Department	On-going
		Continuation of training regarding office recycling	Office Manager/ Environmental Department	On-going

### 3.1 Completion of Environmental Targets & Objectives 2010

Panda will endeavour to complete the targets not already completed in 2010. The targets not met in 2010, were due to the continued expansion of Panda's waste recovery activities, such as reviewing the licence. These were delayed so that Panda could best plan to incorporate these new projects into the current facility.

### 3.2 Summary of reported incidents and complaints

#### *3.2.1. Reported Incidents Summary*

##### **21<sup>st</sup> April 2010**

There were non-compliances issued by the Agency following an inspection conducted by on the 21<sup>st</sup> April 2010 (EPA reference no. W0140-03/10-ar02mor). A full non-compliance schedule was returned to the Agency on the 31<sup>st</sup> May 2010.

##### **11<sup>th</sup> November 2010**

Any incident occurred on the 11<sup>th</sup> of November 2010, whereby RDF material on site went on fire. Following our investigation, it was determined that the RDF material had spontaneously combusted.

##### **24<sup>th</sup> November 2010**

There was a non-compliance issued by the Agency on the 24<sup>th</sup> of November 2010 in relation to the fire in the facility on the 11<sup>th</sup> of November. The Agency was not notified immediately of the incident. A response was returned to the Agency on the 23<sup>rd</sup> of December 2010.

#### *3.2.2 Complaints:*

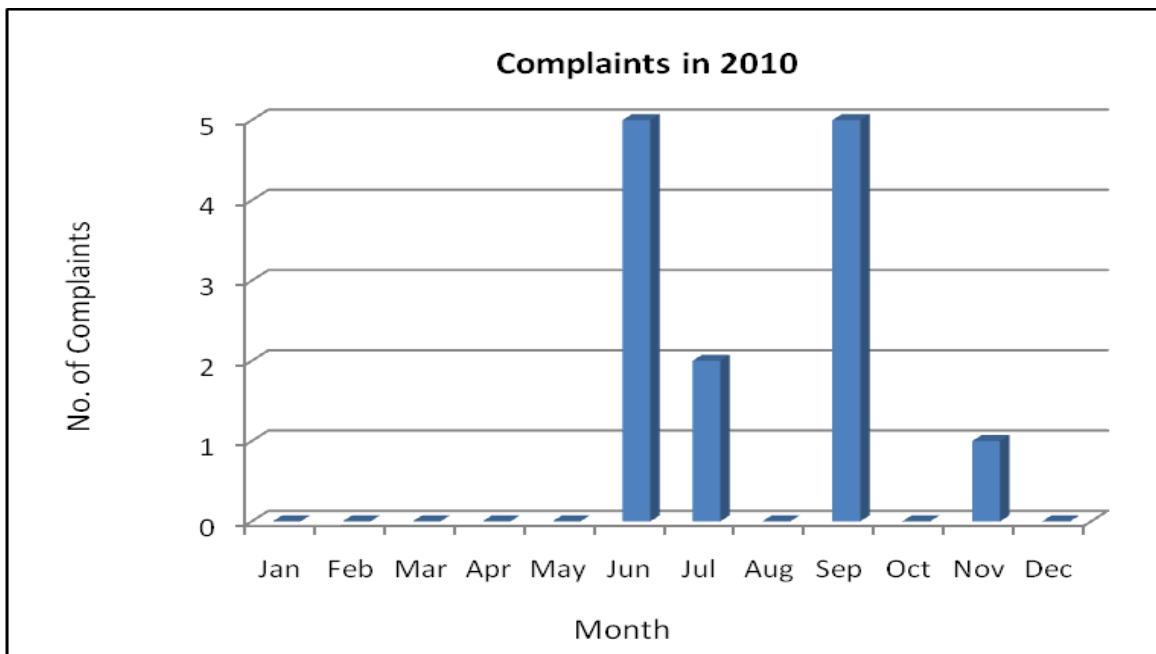
Fig. 10 illustrates complaints either made directly to the Agency or to Panda's facility for each month during 2010. There were a total of thirteen complaints made. All of these were thoroughly investigated and closed out in a timely fashion. Eight of these complaints were in relation to waste odour from the facility; two were in relation to the



fragranced odour neutraliser being used on site, one complaint in relation to litter on site boundary and two complaints in relation to noise.

Five of the complaints were made in a short period of time in the first week of September. These were attributed to a faulty piece of equipment recently installed on one of the compost tunnels, namely a heat exchanger. Once determined the faulty equipment was turned off. Mr. Dennis Osborne of Wright Environmental (commissioning supervisor when the tunnels were originally installed) assisted us in indentifying the source of the odour.

**Fig. 10: Complaints**



### 3.3 Review of nuisance controls

#### 3.3.1 Odour

There is a rotary atomiser-fogging unit on the external of shed 1. A sprinkling system is on each doorway into shed 1 and between the back-up weighbridge and commercial premise on the western boundary of the facility. The atomiser and sprinkling system are connected to the odour suppression liquid.

The yard foreman is responsible for controlling the odour-suppressing units. This involves controlling the concentration of odour suppressant in order to provide adequate odour control. There is a power washer available to wash odorous bins. All drivers are responsible for washing their own compactors or skips. Each day, the environmental officer conducts an inspection of the site. A daily odour assessment of the biofilter is carried out and a record of this is filed in the environmental office.

### *3.3.2 Noise*

There were four noise survey's done 2010. Noise levels from operations at Panda were inaudible as background noise from the N2 and the slip road to the north of the facility was the dominant source of noise. In general, the noise emissions were in the main steady, with no tonal or impulsive noise from the works audible at any of the nearest locations.

### *3.3.3. Dust*

A road sweeper with spray bars is available for controlling dust outside the waste transfer station. Dust analysis was carried out four times this year at five locations. A dust suppression system was installed in Shed 2 in 2005 and along the western boundary between the back-up weighbridge and the commercial premise in 2008.

### *3.3.4. Vermin*

A file on vermin control is maintained in the environmental office. A sub-contractor is used to control any vermin on site.

### *3.3.5. Flies*

Good housekeeping practices are used to prevent fly infestations. The yard is kept clean using a road sweeper 10 hours a day and all waste for disposal is removed from the facility within 48 hours, or 72 hours in the case of a bank holiday weekends.

### 3.3.6. *Birds*

In order to avoid having birds as a nuisance, litter control is practised at all times and no waste is stored outside.

### 3.3.7. *Litter*

A designated member of staff carries out litter inspections of the facility twice daily and gathers any litter on site.

## **4.0 Development of Procedures on Site**

The Emergency Response Procedure (ERP) was reviewed and amended to reflect the changes of the company and update useful contact telephone numbers.

There was a revision of the odour-monitoring sheet to include a map of the facility to make it easier to position possible nuisances on the facility. General weather conditions and wind direction are obtained through weather station located on site, on a daily basis.

A review of site procedures was carried out, and amendments were made to the below procedures, as necessary;

- SOP 3 Environmental Complaints
- SOP 4 Corrective Action
- SOP 5 Daily Yard Inspections
- SOP 6 Nuisance Management
- SOP 7 Emergency Response
- SOP 8 Unacceptable Waste
- SOP 9 Communication Programme
- SOP 10 Training and Awareness
- SOP 11 Storage of Fuels and Oils.

## **5.0 Pollution Emission Register**

After consulting the PERL list Panda are not using any substance that is listed at present.

## **6.0 Report on Programme for Public Information**

Panda have re-developed their website; one of the features is an Environmental page where the following can be downloaded,

- Facility licences (W0140-03, W0261-01, W0263-01)
- Multi-regional Waste collection permit (WCP-DC-09-1188-01),
- Environmental Policy,

We will also upload the current Annual Environmental Report for each facility.

Domestic wheelie bin customers can also download their relevant collection calendar and pay bills.

Panda have a news section on the website, with regular updates on collections, offers, etc. This proved extremely beneficial during the poor weather experienced in December 2010 informing customers of difficulties with collecting waste on specified days due to dangerous road conditions.

Over the Christmas period 2010 Panda put advertisements in all the local newspapers to inform customers of the schedule of bin collections over the Christmas Period. Panda also issued all domestic customers with a Christmas calendar showing collection days over that period. If there were any change to a domestic route, this would also be advertised in the local media.

In March 2009, Panda commenced SMS messaging to domestic customers regarding their collections. This was beneficial especially during December 2010 in the inclement weather conditions; this enables Panda to contact customers to inform them that

collection days may have to changes to alternative day's, from this Panda received positive feedback. Panda are also encouraging customers to receive email invoicing, thereby reducing dependence on paper invoices and envelopes.

Recycling certificates are issued to customers, on request, so that they can determine their recycling on a monthly basis.

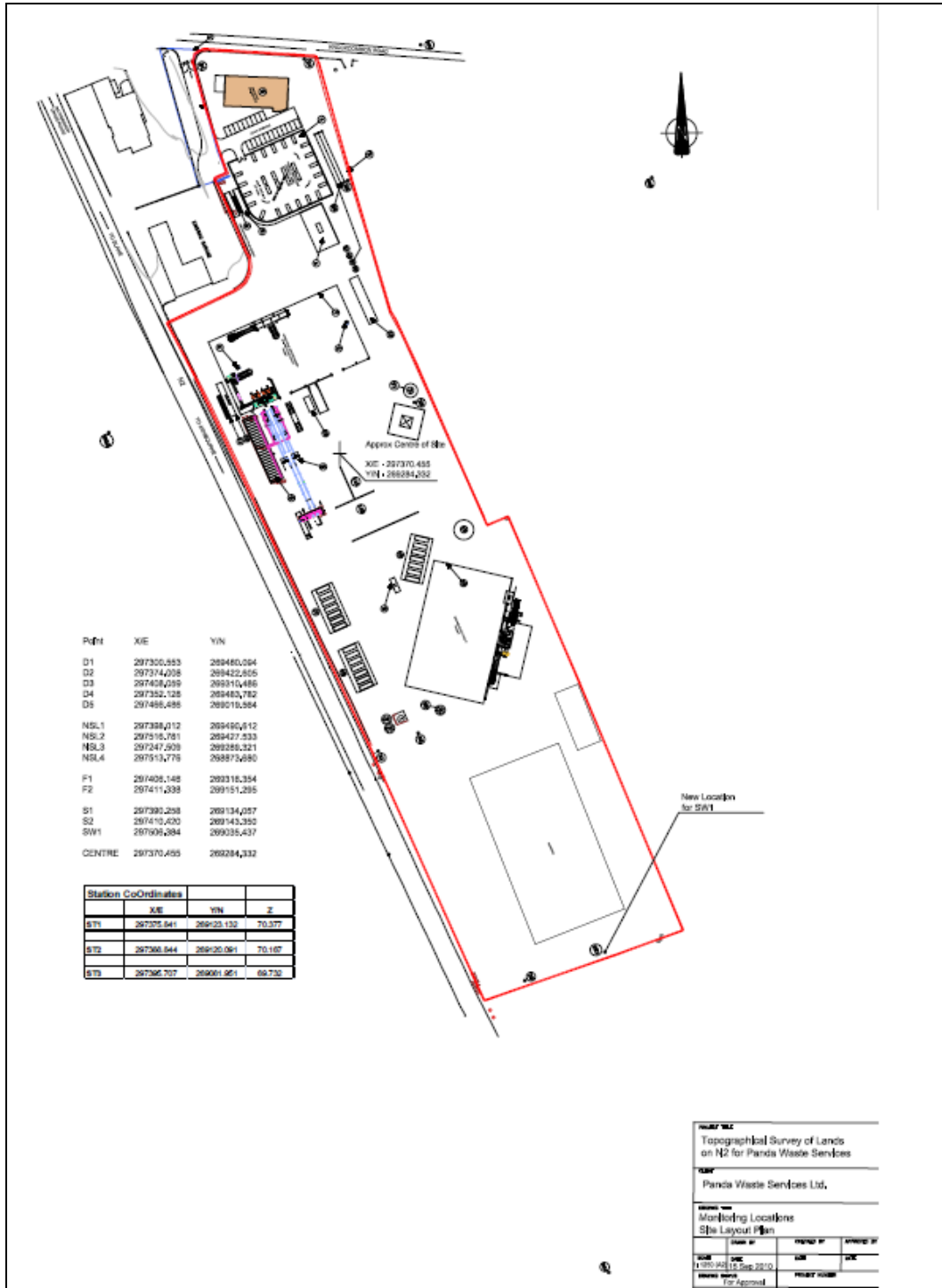
Advertisements are taken out regularly in the local newspapers informing customers of the services that Panda offer. There is also a large advertisement in the golden pages, which is available to the general public. Regular tours of the facility are given to schools and to members of the public upon request.

During the reporting period there were no requests from members of the public to inspect any Environmental Records.

The information in the Annual Environmental Report is true and accurate representation of the activities conducted by Panda in 2010.

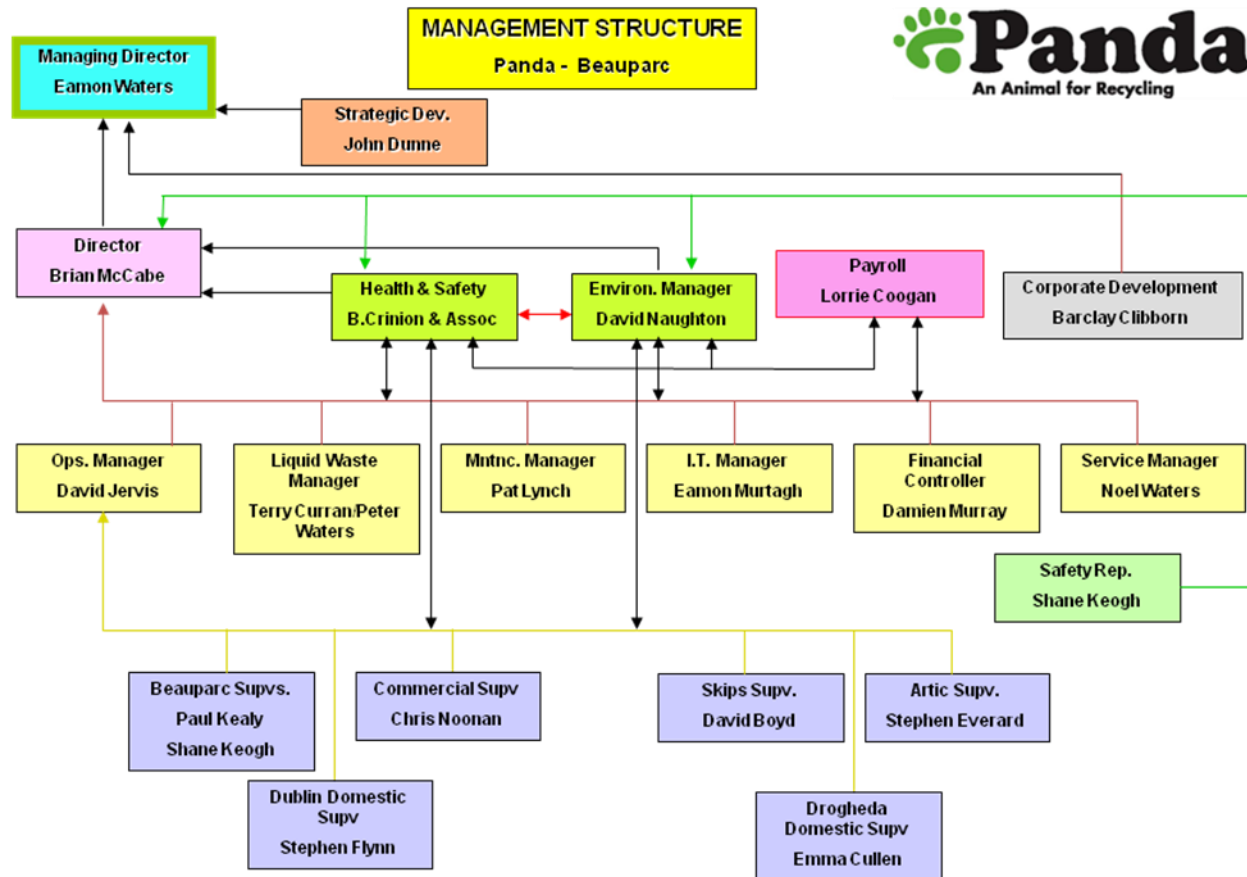
# Appendix A

## Site Layout



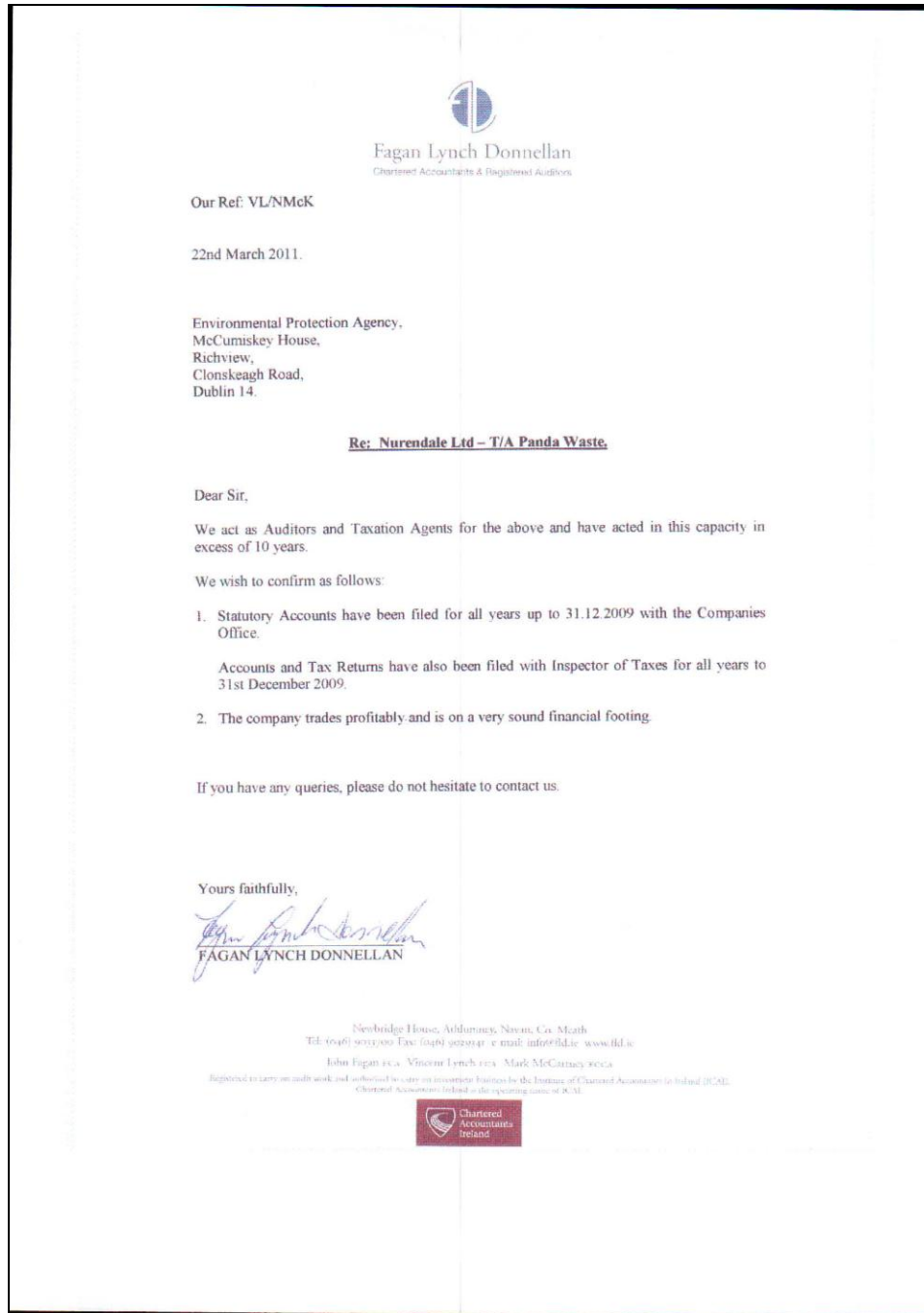
# Appendix B

## Organisation Structure



# Appendix C

## Financial Statement

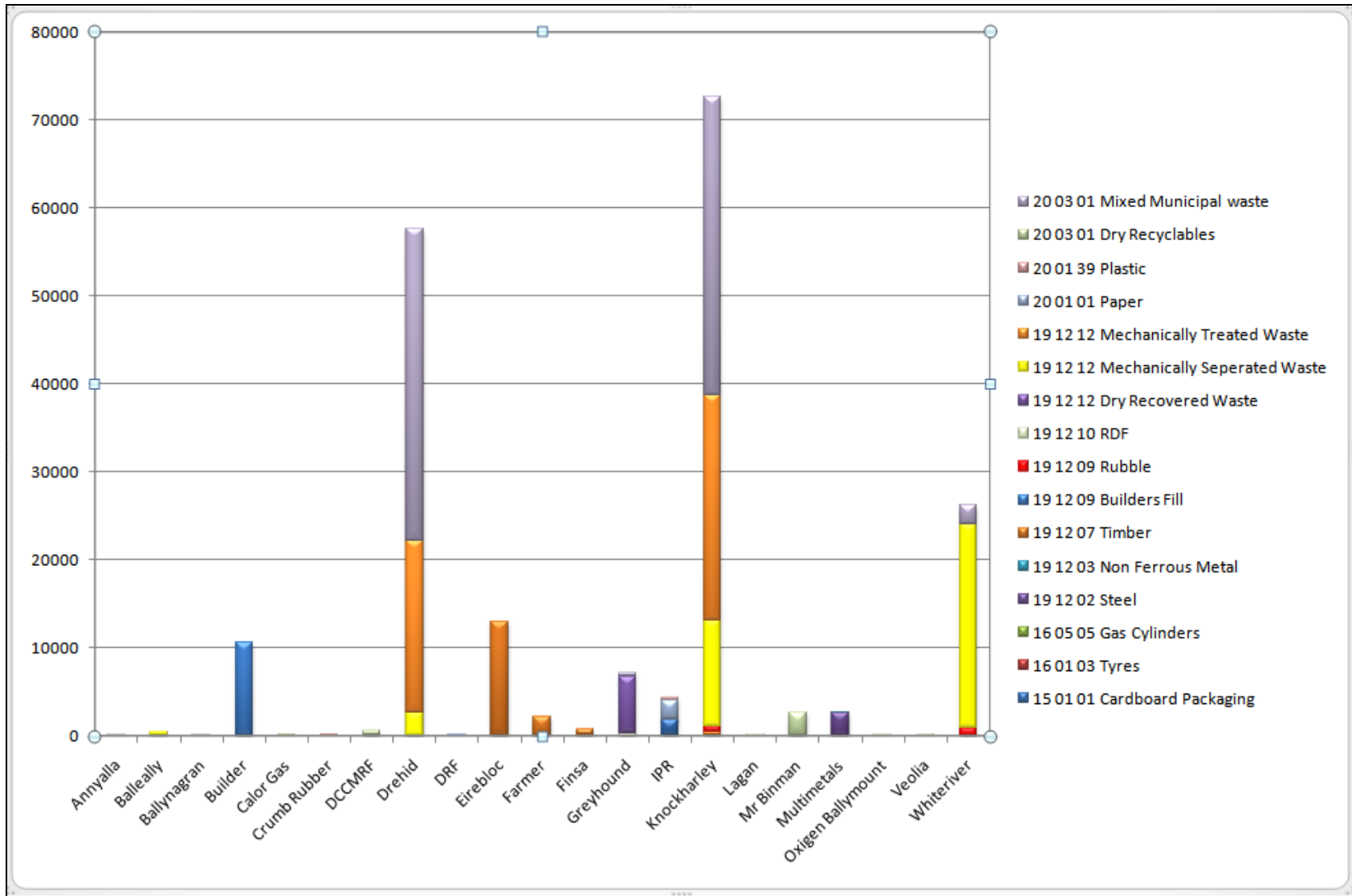




# Appendix D

## Outgoing by Destination


Destination	15 01 01 Cardboard Packaging	16 01 03 Tyres	16 05 05 Gas Cylinders	19 12 02 Ferrous	19 12 03 Non-ferrous	19 12 07 Timber	19 12 09 Builders Fill	19 12 09 Rubble	19 12 10 RDF	19 12 12 Dry Recovered Waste	19 12 12 Mechanically Separated Waste	19 12 12 Mechanically Treated Waste	20 01 01 Paper	20 01 39 Plastic	20 03 01 Dry Recyclables	20 03 01 Mixed Municipal waste
Annally																54.2
Ballyally											421.82					
Ballyasgran																93
Builder							10577.66									
Color Gas			4.56													
Crumb Rubber		72.18														
DCCMRF															552	
Drohid											2667.7	19490.14				35508.26
DRF							29.12									
Eirebloc						12924.94										
Farmer						2159.92										
Finsa						771.02										
Greyhound										331.66		6415.04				408.12
IPR	1827.25			3.84	9.62				49.96				2145.68	301.9		
Knockharley						399.14		737.38				12039.24	25555.04			33885.94
Lagan									191.66							
Mr Einman															2590.16	
Multimetals				2580.9	99.76											
Oxigen Ballymount																46.3
Veolia															169.06	
Whiteriver						24.54		926.76				23060.51				2268.72



# Appendix E

## PRTR Emissions

PRTR: W81481 Facility Name: Nurendale Limited trading as Panda Waste Services Limited  
 PRTR: W81481-03 2818.alal Release  
 Waste Services Limited File name: PRTR:W81481-03 2818.alal Release



**AER Returns Workbook**  
Version 4.1.11

<b>REFERENCE YEAR</b>		2010																		
<b>1. FACILITY IDENTIFICATION</b>																				
Parent Company Name	Nurendale Ltd trading as Panda Waste Services Ltd.																			
Facility Name	Nurendale Limited trading as Panda Waste Services																			
PRTR Identification Number	W0140																			
License Number	W0140-03																			
Waste or IPPC Class or Activity	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">No.</th> <th style="width: 95%;">class_name</th> </tr> </thead> <tbody> <tr> <td>4.4</td> <td>Recycling or reclamation of other inorganic materials.</td> </tr> <tr> <td></td> <td>Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.</td> </tr> <tr> <td>3.11</td> <td>Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.</td> </tr> <tr> <td>3.12</td> <td>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 is produced.</td> </tr> <tr> <td>3.13</td> <td>Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.</td> </tr> <tr> <td>4.11</td> <td>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.</td> </tr> <tr> <td>4.13</td> <td>Recycling or reclamation of organic substances which are not used as solvents (including compounding and other biological transformation processes).</td> </tr> <tr> <td>4.2</td> <td>Recycling or reclamation of metals and metal compounds.</td> </tr> </tbody> </table>		No.	class_name	4.4	Recycling or reclamation of other inorganic materials.		Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.	3.11	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.	3.12	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 is produced.	3.13	Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.	4.11	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.	4.13	Recycling or reclamation of organic substances which are not used as solvents (including compounding and other biological transformation processes).	4.2	Recycling or reclamation of metals and metal compounds.
No.	class_name																			
4.4	Recycling or reclamation of other inorganic materials.																			
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4.13	Recycling or reclamation of organic substances which are not used as solvents (including compounding and other biological transformation processes).																			
4.2	Recycling or reclamation of metals and metal compounds.																			
Address 1	Rathdrinagh																			
Address 2	Booyparc																			
Address 3	Navan																			
Address 4	County Meath																			
Country	Ireland																			
Coordinator of Location	+8.1392452.5351																			
River Basin District	IESE																			
NACE Code	3832																			
Main Economic Activity	Recovery of sorted materials																			
AER Return Contact Name	David Naughton																			
AER Return Contact Email Address	david.naughton@panda.ie																			
AER Return Contact Position	Environmental Manager																			
AER Return Contact Telephone Number	+353 0 65 65 65																			
AER Return Contact Mobile Phone Number																				
AER Return Contact Fax Number	046 9024189																			
Production Volume	0.0																			
Production Volume Units																				
Number of Installations	0																			
Number of Operating Hours in Year	0																			
Number of Employees	0																			
User Feedback/Comments																				
Web Address																				
<b>2. PRTR CLASS ACTIVITIES</b>																				
Activity Number	Activity Name																			
50.1	General																			
5(c)	Installations for the disposal of non-hazardous waste																			
50.1	General																			
<b>3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)</b>																				
Is it applicable?																				
Have you been granted an exemption?																				
If applicable which activity class applies (as per Schedule 2 of the regulations)?																				
Is the reduction scheme compliance route being used?																				
PRINT THIS SHEET																				
HELP																				
CREATE AER XML RETURN & UPLOAD																				

4.1 RELEASES TO AIR [Link to review your emission data](#)

Facility Name: Murrumbidgee Limited trading as Panda Waste Services Limited File name: PRTR\0140-03 2018\_Label Release Year: 2018 23/03/2019 14:28

**SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS**

**RELEASES TO AIR** Please enter all quantities in this section in KGs

No. Annex II	POLLUTANT Name	METHOD		QUANTITY			
		Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental)	F (Fugitive)
06	Ammonia (NH3)	ALT	Chromatography	1071.76	1071.76	0.0	0.0
				0.0	0.0	0.0	0.0

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

**SECTION B : REMAINING PRTR POLLUTANTS**

**RELEASES TO AIR** Please enter all quantities in this section in KGs

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

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

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

**RELEASES TO AIR** Please enter all quantities in this section in KGs

Pollutant No.	POLLUTANT Name	METHOD		ADD EMISSION POINT					QUANTITY		
		Method Code	Designation or Description	DS1	DS2	DS3	DS4	DS5	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
210	Dust	ALT	Gravimetry	244.75	266.75	280.25	283.25	290.5	1365.5	0.0	0.0
220	Mercaptan	ALT	Chromatography	20.46	0.0	0.0	0.0	0.0	20.46	0.0	0.0
215	Hydrogen sulphide	ALT	Jerome Analyzer	7.86	0.0	0.0	0.0	0.0	7.86	0.0	0.0

ADD NEW ROW DELETE ROW \* 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 in accordance with 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: Murrumbidgee Limited trading as Panda Waste Services Limited

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

T (Total) kg/Year	Method Used		Facility Total Capacity m3 per
	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 engines	0.0		0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0		N/A

PRINT THIS SHEET

HELP

<b>4.2 RELEASES TO WATERS</b> <a href="#">Link to previous years emissions data</a>		IPTR# : W01401 Facility Name : Hurondale Limited trading as Panda Waste Services Limited I File Name : PRTR W0140-03 2010.xls I Return Year : 2010 I						29/03/2011 14:20	
<b>SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS</b>		<i>Date on ambient monitoring of storm/surface water or groundwater, conducted or part of your licence requirements, should NOT be submitted under</i>							
<b>RELEASES TO WATERS</b>		<b>Please enter all quantities in this section in KGs</b>							
POLLUTANT		Method Used			ADD EMISSION POINT	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	
<input type="button" value="ADD NEW ROW"/> <input type="button" value="DELETE ROW *"/>		* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button							
<b>SECTION B : REMAINING PRTR POLLUTANTS</b>		<b>Please enter all quantities in this section in KGs</b>							
POLLUTANT		Method Used			ADD EMISSION POINT	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	
<input type="button" value="ADD NEW ROW"/> <input type="button" value="DELETE ROW *"/>		* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button							
<b>SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)</b>		<b>Please enter all quantities in this section in KGs</b>							
POLLUTANT		Method Used			ADD EMISSION POINT	QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
						0.0	0.0	0.0	
<input type="button" value="ADD NEW ROW"/> <input type="button" value="DELETE ROW *"/>		* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button							
<input type="button" value="PRINT THIS SHEET"/>									
<input type="button" value="HELP"/>									

4.3 RELEASES TO WASTEWATER OR SEWER		IPRR#: W0140   Facility Name: Nurendale Limited trading as Panda Waste Services Lir				29/03/2011 14:20
SECTION A : PRTR POLLUTANTS						
OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREAT <b>Please enter all quantities in this section in KGs</b>						
POLLUTANT		ADD EMISSION POINT	QUANTITY			
No. Annex II	Name	Emission Point 1	T (Total) KG/Year	A (Accidental)	F (Fugitive)	
06	Ammonia (NH3)	160.93	160.93	0.0	0.0	
17	Arsenic and compounds (as As)	0.07	0.07	0.0	0.0	
18	Cadmium and compounds (as Cd)	0.01	0.01	0.0	0.0	
79	Chlorides (as Cl)	426.14	426.14	0.0	0.0	
19	Chromium and compounds (as Cr)	0.35	0.35	0.0	0.0	
20	Copper and compounds (as Cu)	0.35	0.35	0.0	0.0	
23	Lead and compounds (as Pb)	0.72	0.72	0.0	0.0	
21	Mercury and compounds (as Hg)	0.0	0.0	0.0	0.0	
22	Nickel and compounds (as Ni)	0.27	0.27	0.0	0.0	
24	Zinc and compounds (as Zn)	19.21	19.21	0.0	0.0	
<input type="button" value="ADD NEW ROW"/> <input type="button" value="DELETE ROW *"/>		* 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 TREAT <b>Please enter all quantities in this section in KGs</b>						
POLLUTANT		ADD EMISSION POINT	QUANTITY			
Pollutant No.	Name	Emission Point 1	T (Total) KG/Year	A (Accidental)	F (Fugitive)	
303	BOD	2572.58	2572.58	0.0	0.0	
374	Boron	1.24	1.24	0.0	0.0	
305	Calcium	489.92	489.92	0.0	0.0	
356	Cobalt	0.02	0.02	0.0	0.0	
306	COD	3912.83	3912.83	0.0	0.0	
357	Iron	14.41	14.41	0.0	0.0	
320	Magnesium	24.67	24.67	0.0	0.0	
321	Manganese (as Mn)	3.0	3.0	0.0	0.0	
324	Mineral oils	9.98	9.98	0.0	0.0	
370	Selenium	0.01	0.01	0.0	0.0	
240	Suspended Solids	707.84	707.84	0.0	0.0	
343	Sulphate	315.22	315.22	0.0	0.0	
358	Tin	0.0	0.0	0.0	0.0	
<input type="button" value="ADD NEW ROW"/> <input type="button" value="DELETE ROW *"/>		* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button				
<input type="button" value="PRINT THIS SHEET"/>						
<input type="button" value="HELP"/>						

<b>4.4 RELEASES TO LAND</b> <a href="#">Link to previous years emissions data</a>		IPRTR#: W01401 Facility Name: Nurendale Limited trading as Panda Waste Services Limited   Filenome: PRTR W0140-03 2010.xls   Return Year: 20      29/03/2011 14:20								
<b>SECTION A : PRTR POLLUTANTS</b>										
<b>RELEASES TO LAND</b>										
<b>Please enter all quantities in this section in KGs</b>										
<b>POLLUTANT</b>		<b>METHOD</b>			<b>ADD EMISSION POINT</b>		<b>QUANTITY</b>			
No. Annex II	Name	M/C/E	Method Code	Method Used	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year		
ADD NEW ROW	DELETE ROW *	* Select a row by double-clicking on the Pollutant Name (Column 2) then click the delete button.						0.0	0.0	0.0
<b>SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)</b>										
<b>RELEASES TO LAND</b>										
<b>Please enter all quantities in this section in KGs</b>										
<b>POLLUTANT</b>		<b>METHOD</b>			<b>ADD EMISSION POINT</b>		<b>QUANTITY</b>			
Pollutant No.	Name	M/C/E	Method Code	Method Used	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year		
ADD NEW ROW	DELETE ROW *	* Select a row by double-clicking on the Pollutant Name (Column 2) then click the delete button.						0.0	0.0	0.0
<input type="button" value="PRINT THIS SHEET"/>										
<input type="button" value="HELP"/>										

Transfer Destination	European Waste Code	Hazardous	Description of Waste	Waste Treatment Operation	M/C/E	Method Used	L Treatment	Recover/Disposer	Recover/Disposer	Name and License/ Permit No. and Address of Final Recoverer/ Disposer (HAZARDOUS WASTE ONLY)	
Within the Country	15 01 01	No	1827.25 paper and cardboard packaging	R13	M	weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,w/PR 021#2	Lower Ballymount RD ,Walkinstown,Dublin 12,,Ireland		
Within the Country	16 01 03	No	72.18 end-of-life tyres gases in pressure containers other than those mentioned in 16 05 04	R13	M	weighed	Offsite in Ireland	Crumb Rubber Ireland Ltd,w/FP-LH-10-0005-01	Mooretown,Dromiskin,Co. Louth,,Ireland Long Mile Road,Dublin 12,,Ireland		
Within the Country	19 12 02	No	3.84 ferrous metal	R13	M	weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,w/PR 021#2	Lower Ballymount RD ,Walkinstown,Dublin 12,,Ireland		
Within the Country	19 12 02	No	2580.9 ferrous metal	R13	M	weighed	Offsite in Ireland	Multimetals Ltd,w/FP-w/09-0014-01	Conway Port Industrial Estate,Bollanney,Murrough, Co. Wick,low,Ireland		
Within the Country	19 12 03	No	9.62 non-ferrous metal	R13	M	weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,w/PR 021#2	Lower Ballymount RD ,Walkinstown,Dublin 12,,Ireland		
Within the Country	19 12 03	No	99.76 non-ferrous metal	R13	M	weighed	Offsite in Ireland	Multimetals Ltd,w/FP-w/09-0014-01	Conway Port Industrial Estate,Bollanney,Murrough, Co. Wick,low,Ireland		
Within the Country	19 12 07	No	12924.94 wood other than that mentioned in 19 12 06	R13	M	weighed	Offsite in Ireland	Eirebloo Ltd,CK (S) 503-07	Lissarda,Co. Cork,,,,,Ireland		
Within the Country	19 12 07	No	2159.92 wood other than that mentioned in 19 12 06	R13	M	weighed	Offsite in Ireland	Farmers,N/a Finsa Forest Products Ltd,P0022-02	Soariff,Co. Clare,,,,,Ireland Knockharley Landfill,Kentstown,Co. Meath,,Ireland		
Within the Country	19 12 07	No	771.02 wood other than that mentioned in 19 12 06	R13	M	weighed	Offsite in Ireland	Greenstar Holdings Ltd,w/0146-01	Louth County Council Whiteriver Landfill,w/0060-02	Co. Louth,,,,,Ireland	
Within the Country	19 12 09	No	10577.7 minerals (for example sand, stones)	R13	M	weighed	Offsite in Ireland	Builders Fill,N/a	Co. Louth,,,,,Ireland		
Within the Country	19 12 09	No	29.1 minerals (for example sand, stones)	R13	M	weighed	Offsite in Ireland	Nurendale Ltd,w/0261-01	Cappagh Road,Finglas,Dublin 11,,Ireland		
Within the Country	19 12 09	No	737.38 minerals (for example sand, stones)	R13	M	weighed	Offsite in Ireland	Greenstar Holdings Ltd,w/0146-01	Louth County Council Whiteriver Landfill,w/0060-02	Knockharley Landfill,Kentstown,Co. Meath,,Ireland	
Within the Country	19 12 09	No	926.76 minerals (for example sand, stones)	R13	M	weighed	Offsite in Ireland	Builders Fill,N/a	Co. Louth,,,,,Ireland		
Within the Country	19 12 10	No	331.66 combustible waste (refuse derived fuel)	R13	M	weighed	Offsite in Ireland	Greyhound Recycling & Recovery Ltd,w/0205-01	Cragg Avenue,Clondalkin Industrial Estate,Co. Dublin,,Ireland		
Within the Country	19 12 10	No	49.86 combustible waste (refuse derived fuel)	R13	M	weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,w/PR 021#2	Lower Ballymount RD ,Walkinstown,Dublin 12,,Ireland		
Within the Country	19 12 10	No	191.7 combustible waste (refuse derived fuel) other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R13	M	weighed	Offsite in Ireland	Lagan Cement Ltd,P0487-05	Landsdown,Killaskillen,Kinnegad,Co. Westmeath,Ireland		
Within the Country	19 12 12	No	6415.04 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R13	M	weighed	Offsite in Ireland	Greyhound Recycling & Recovery Ltd,w/0205-01	Cragg Avenue,Clondalkin Industrial Estate,Co. Dublin,,Ireland		
<b>Within the Count</b>	<b>19 12 12</b>	<b>No</b>	<b>421.82 11</b>	<b>R13</b>	<b>M</b>	<b>weighed</b>	<b>Offsite in Ireland</b>	<b>Balleally Landfill,w/0009-02</b>	<b>Lusk,Co. Dublin,,,,,Ireland</b>		



Within the Country	19 12 12	No	2667.7	11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12	R13	M	weighed	Offsite in Ireland	Bord Na Mona Drehid Waste Management Facility,W0201-01	Killinagh Upper,Carbury,Co. Kildare,,Ireland
Within the Country	19 12 12	No	12039.24	11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12	R13	M	weighed	Offsite in Ireland	Greenstar Holdings Ltd.,W0146-01	Knockharley Landfill,Kentstown,Co. Meath,,Ireland
Within the Country	19 12 12	No	23060.5	11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12	R13	M	weighed	Offsite in Ireland	Louth County Council W/whiteriver Landfill,W0060-02	Co. Louth,,,,,Ireland
Within the Country	19 12 12	No	19490.1	11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12	R13	M	weighed	Offsite in Ireland	Bord Na Mona Drehid Waste Management Facility,W0201-01	Killinagh Upper,Carbury,Co. Kildare,,Ireland
Within the Country	19 12 12	No	25555.04	11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12	R13	M	weighed	Offsite in Ireland	Greenstar Holdings Ltd.,W0146-01	Knockharley Landfill,Kentstown,Co. Meath,,Ireland
Within the Country	20 01 01	No	2145.7	paper and cardboard	R13	M	weighed	Offsite in Ireland	Irish Packaging Recycling Ltd.,W/PR 02/W2	Lower Ballymount RD ,Walkinstown,Dublin 12,,Ireland
Within the Country	20 01 39	No	301.9	plastics	R13	M	weighed	Offsite in Ireland	Irish Packaging Recycling Ltd.,W/PR 02/W2	Lower Ballymount RD ,Walkinstown,Dublin 12,,Ireland
Within the Country	20 03 01	No	552.0	mixed municipal waste	R13	M	weighed	Offsite in Ireland	Dublin City Council,W0238-01	Materials Recovery Facility,Merrywell,Ballymount Road Lower,Dublin 22,Ireland
Within the Country	20 03 01	No	2590.16	mixed municipal waste	R13	M	weighed	Offsite in Ireland	Clearpoing Recycling Ltd,W/M W/P12 05	Ballyllynch,Carrick-on-Suir,Co. Tipperary,,Ireland
Within the Country	20 03 01	No	46.3	mixed municipal waste	R13	M	weighed	Offsite in Ireland	Oxigen Environmental Ltd,W0208-01	Ballymount Industrial Estate,Ballymount Road Lower,Clondalkin,Dublin 22,Ireland
Within the Country	20 03 01	No	169.1	mixed municipal waste	R13	M	weighed	Offsite in Ireland	Veolia Environmental Services (NOw GREENSTAR),W0039-02	Ballymount Cross,Tallaght,Dublin 24,,Ireland
Within the Country	20 03 01	No	54.2	mixed municipal waste	R13	M	weighed	Offsite in Ireland	Scotch Corner Landfill,W0020-01	Letterbane,Anngalla,Castleblagney,Co. Monaghan,Ireland
Within the Country	20 03 01	No	93.0	mixed municipal waste	R13	M	weighed	Offsite in Ireland	Greenstar Holdings Ltd Ballnagran Landfill,W0165-02	Ballnagran,Co. Wicklow,,,Ireland
Within the Country	20 03 01	No	35508.3	mixed municipal waste	R13	M	weighed	Offsite in Ireland	Bord Na Mona Drehid Waste Management Facility,W0201-01	Killinagh Upper,Carbury,Co. Kildare,,Ireland
Within the Country	20 03 01	No	408.12	mixed municipal waste	R13	M	weighed	Offsite in Ireland	Greyhound Recycling & Recovery Ltd,W0205-01	Cragg Avenue,Clondalkin Industrial Estate,Co. Dublin,,Ireland
Within the Country	20 03 01	No	33885.94	mixed municipal waste	R13	M	weighed	Offsite in Ireland	Greenstar Holdings Ltd.,W0146-01	Knockharley Landfill,Kentstown,Co. Meath,,Ireland
Within the Country	20 03 01	No	2268.72	mixed municipal waste	R13	M	weighed	Offsite in Ireland	Louth County Council W/whiteriver Landfill,W0060-02	Co. Louth,,,,,Ireland