

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

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

*Waste Licence Number W0140-04*

*Annual Environmental Report*

*01<sup>st</sup> January 2016 – 31<sup>st</sup> December 2016*

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## 1.0 Introduction

Panda were granted their third EPA Waste Licence W0140-04 on the 8<sup>th</sup> September 2016. This replaces the previous Licence W0140-03. 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: W0140-04

Name: Nurendale

Address: Rathdrinagh  
Beauparc  
Navan  
Co. Meath

Telephone Number: 1890 626262

Fax Number: 046 9024189

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

### 1.2 Management Structure

Eamon Waters is the Managing Director of Panda. Robert Waters and Brian McCabe are the company's directors. David Naughton is the Environmental Manager. There are approximately 160 employees either working directly or indirectly at the facility. Appendix B illustrates the organisational structure of the facility.

### 1.3 Financial Provision

Costing's for both CRAMP and ELRA has been agreed with the Agency and the surety for financial provision is approved by the Agency.

## 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 W0140-04, Panda are licenced to conduct the following activities:

- Class 11.4
  - (b) Recover, or mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities, (other than activities to which the Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001) apply):
    - I. Biological treatment;

- II. Pre-treatment of waste for incineration or co-incineration;
  - III. Treatment of slags and ashes
  - IV. Treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.
- Class 11.1  
The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this Schedule in respect of which a licence or revised licence under part IV is in force or in respect of which a licence under the said Part is or will be required.

Panda provide a waste collection service for the domestic, commercial and industrial sectors throughout Ireland. In 2016 Panda were awarded “The Waste Collection Operator of the year (Large)” in the Repak Pakman Awards.

The facility normal operating hours are 8am-6pm (Monday-Friday) & 9am-1pm (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 “IWS6”. Panda operate three different sheds for processing the different waste streams. Waste accepted into Building 1 includes Dry waste for SRF production and DMR storage for bulking.

Building 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 lights fraction is sent to Building 3 for SRF production. 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. A timber shredder is also in operation in Building 2. A grab is used to load the material. The shredded timber is then recovered for example in blocks for pallets.

Panda produce SRF in building 3. The process involves the use of Ballistics, Magnets, Eddy Currents, Single Drum Separators, Optical Sorters and Shredders to produce a SRF 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 over ground water storage tank with ring mains.

Water from the storage tank used on site consists of:

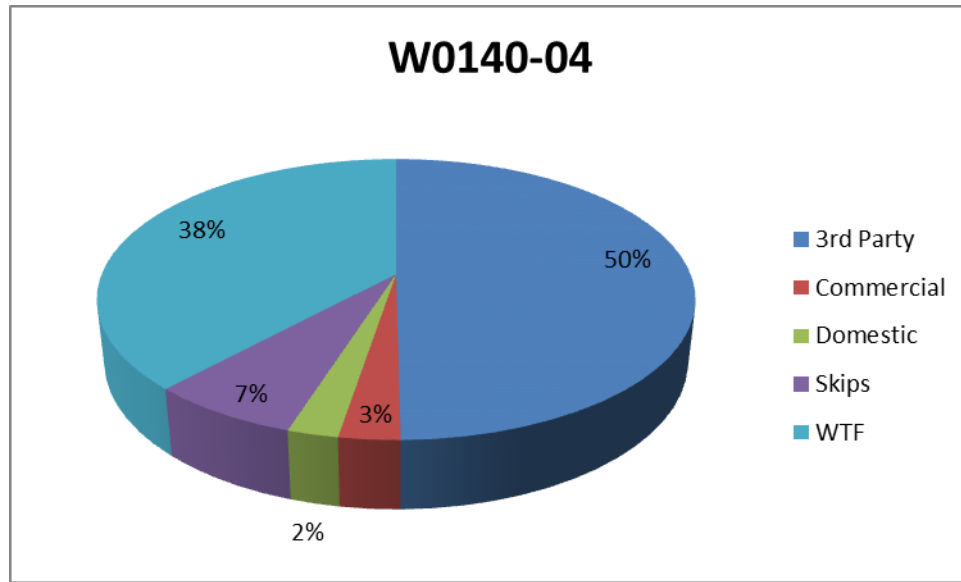
- In-house road sweeper.
- Dust suppression sprayers at doorways into shed one and on the eastern boundary fence between the back-up weighbridge and the retail outlet to the north.
- One mobile rotary atomiser unit
- Dust suppression systems
- Hoses on site for dust suppression.
- Sprinkler system on 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 2016 was 178,088.66 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 C for the breakdown of the different destinations used for the waste accepted at the facility and waste removed off site by EWC Code.

### 2.3 Waste Recovery Reports

To contribute to the Landfill Directive, Panda operates a shredder, trommel, magnet and an in-vessel composting system.

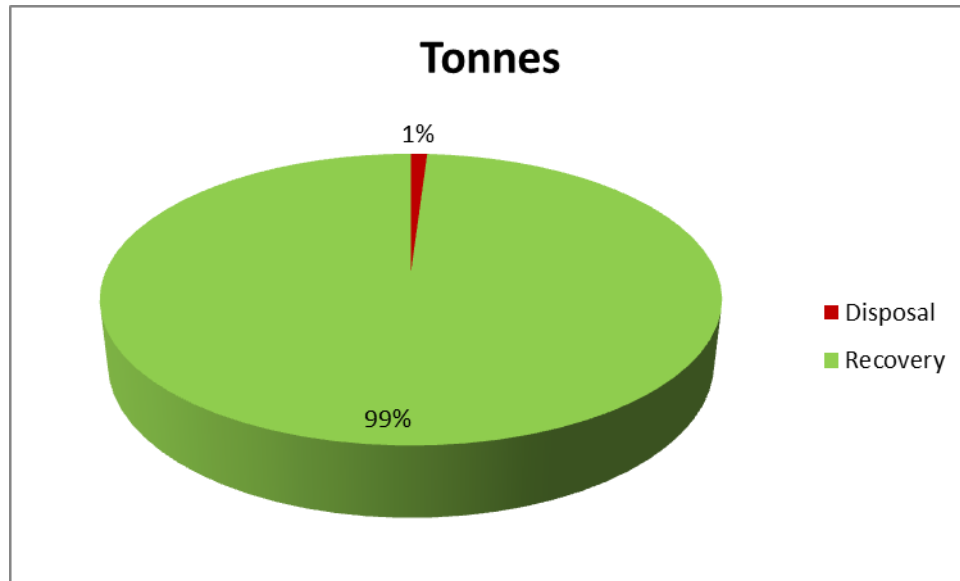
Panda applied to the Agency for a review to our current Waste Licence (W0140-03) in September 2009. This review was submitted to the Agency, so that Panda can produce a SRF/RDF product from the residual waste previously sent to Landfill. Panda also reviewed the licence for the purpose of constructing an Anaerobic Digestion/Composting plant. Panda have rolled out a source segregated collection service for biodegradable waste for both household and commercial customers.

Panda process mixed C&D waste in building 2, this includes a shredder, trommel, magnet, wind shifter and a picking line so as to divert as much C&D waste away from landfill as possible in order to comply with “A Resource Opportunity, 2012” for landfill



diversion. To date the processing of C&D Waste has been extremely successful with the majority of the residual being processed into Solid Recovered Fuel.

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



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

Under Schedule C of the Waste Licence W0140-04, Panda monitor water, groundwater, compost, trade effluent, noise and 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

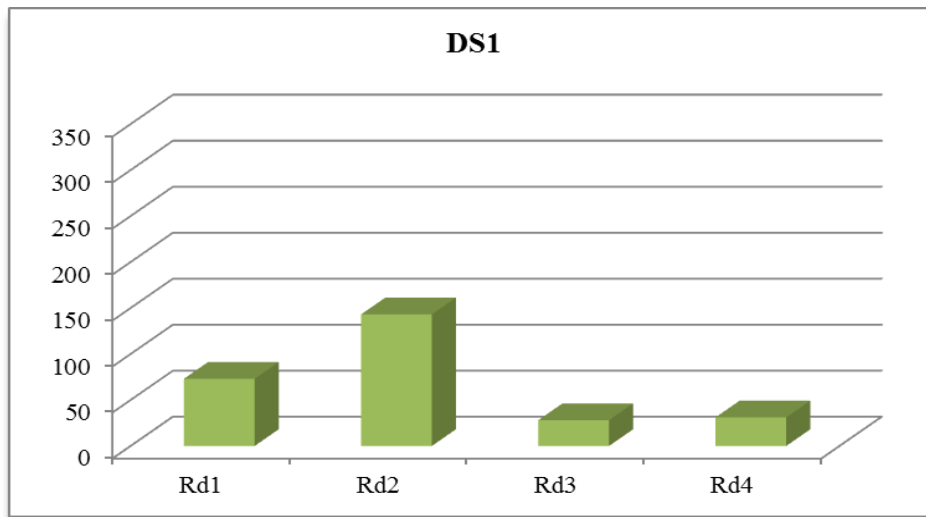
Surface water passes through a silt trap and oil interceptor prior to being discharged into a holding tank. The surface water monitoring point is located at the co-ordinates X/E 297456.080 Y/N 269143.030. Monitoring conducted during 2016 demonstrated that there is no contamination to the surface water from the facility.

Panda constructed a wetland system for surface water drainage as set out in the Environmental Targets and Objectives and received planning permission for its construction.

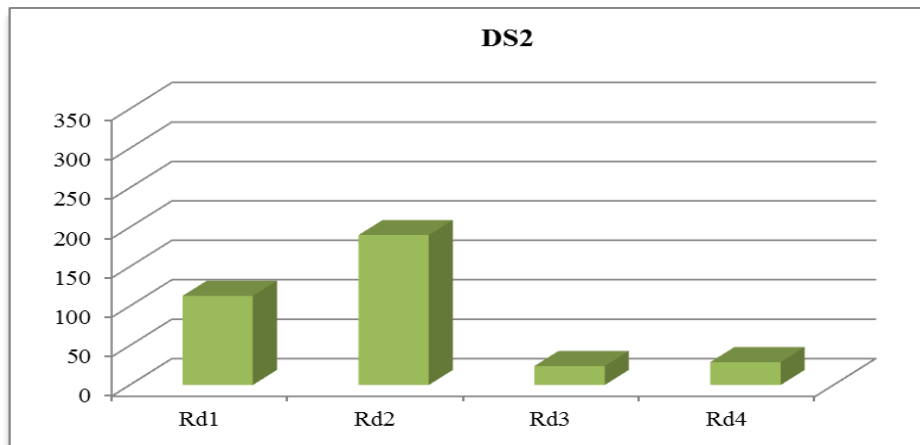
### 2.4.2 Dust Emissions

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 2016.

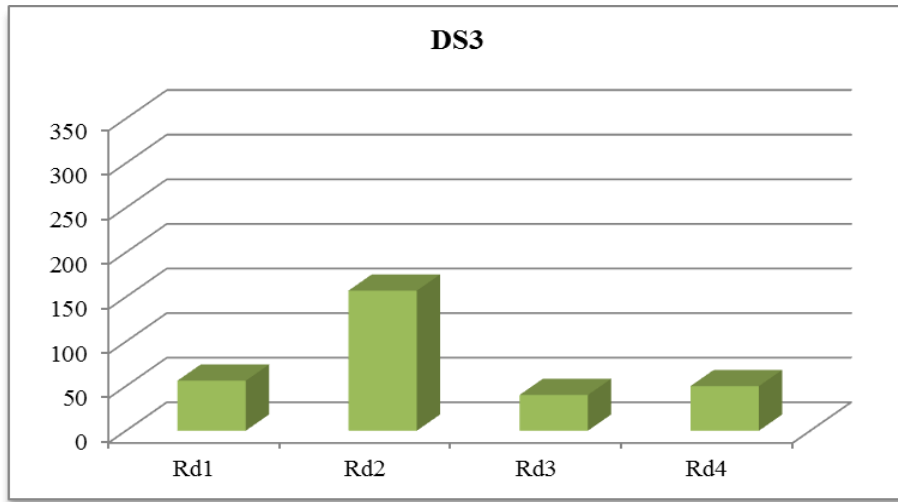
**Fig. 3:** Dust emission results for DS1



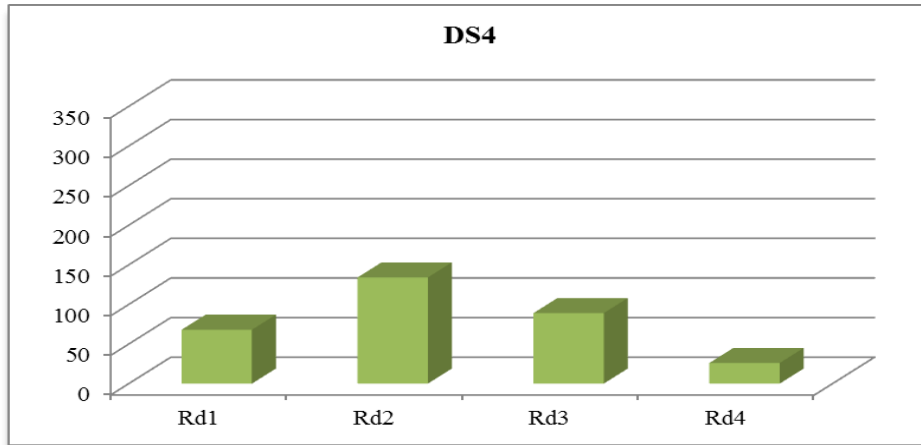
**Fig. 4:** Dust emission results for DS2



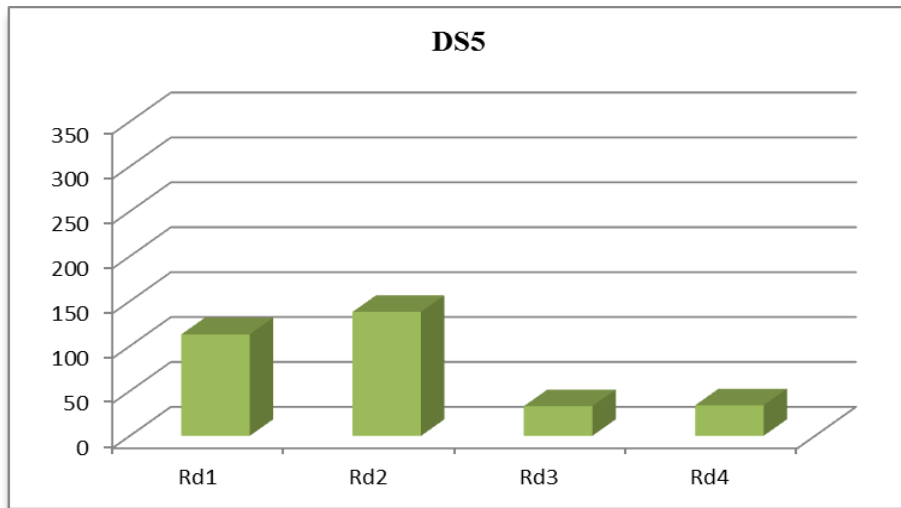
**Fig. 5:** Dust emission results for DS3



**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  $350 \text{ mg m}^{-2} \text{ d}^{-1}$ . Dust emissions were within licenced ELV's for 2016.

### 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 1-4.

**Table 1:** Recorded Noise Levels dB(A) on 19<sup>th</sup> April 2016– Intervals 30 minutes

Location	Time	Leq	L10	L90	Comments
NSL1	14.00	50.2	52.3	39.1	N2 and slip road traffic. Panda noise source from site less than 45 dBA
NSI2	14.30	50.6	52.6	39.5	N2 & slip road traffic. Panda waste site noise less than 45 dBA
NSL3	15.00	70.1	74.41	48.5	N2 road traffic with Panda site noise just audible at less than 48.5 dBA which was $L_{\min}$
NSL4	15.30	72.2	77	51.2	N2 road traffic with Panda site noise inaudible at $L_{\min}$ of less than 45 dBA.

**Table 2:** Recorded Noise Levels dB(A) on 18<sup>th</sup> June 2016– Intervals 30 minutes

Location	Time	Leq	L10	L90	Comments
NSL1	13.30	49.5	51.5	43.8	N2 and slip road traffic. Panda noise source from site less than 44 dBA
NSL2	14.00	48.0	51.0	42.1	N2 & slip road traffic. Panda waste site noise less than 43 dBA
NSL3	15.00	73.9	78.3	53.4	N2 road traffic with Panda site noise inaudible at less than 49.9 dBA which was $L_{\min}$

NSL4	15.30	72.2	76.7	52.5	N2 road traffic with Panda site noise just audible at less than 48.7 dBA which was $L_{min}$
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**Table 3:** Recorded Noise Levels dB(A) on 6<sup>th</sup> September 2016– Intervals 30 minutes

Location	Time	Leq	L10	L90	Comments
NSL1	12.00	51.4	53.8	43.9	N2 and slip road traffic. Panda noise source from site less than 44 dBA
NSL2	13.00	48.9	51.1	43.1	N2 & slip road traffic. Panda waste site noise less than 43 dBA
NSL3	13.30	73.0	74.8	54.8	N2 road traffic with Panda site noise inaudible at less than 49.4 dBA which was $L_{min}$
NSL4	14.30	73.8	75.3	55.7	N2 road traffic with Panda site noise just audible at less than 50.2 dBA which was $L_{min}$

**Table 4:** Recorded Noise Levels dB(A) on 29<sup>th</sup> December 2016– Intervals 30 minutes

Location	Time	Leq	L10	L90	Comments
NSL1	09.28	52.1	54.3	46.6	N2 and slip road traffic. Panda noise source from site less than 47 dBA
NSL2	09.36	50.9	52.7	46.5	N2 & slip road traffic. Panda waste site noise less than 47 dBA
NSL3	10.27	69.4	74.0	51.8	N2 road traffic with Panda site noise inaudible at less than 48.1 dBA which was $L_{min}$
NSL4	12.12	72.1	76.8	53.7	N2 road traffic with Panda site noise just audible at less than 49.7 dBA which was $L_{min}$

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 5 shows the results for the trade effluent tested for 2016. The parameters are within acceptable levels for waste water treatment plants to be able to treat.

**Table 5:** Results from sampling of Trade effluent

<b>Parameter</b>	<b>Units</b>	<b>Result 27/07/16</b>	<b>Result 22/12/2016</b>
Aluminium	ug/L	2952	502.3
Ammonia	mg/L as N	78.609	6.21
Antimony	ug/L	2.941	<2.06
Arsenic	ug/L	23.22	2.437
Barium	ug/L	166.6	89.1
Beryllium	ug/L	0.117	<0.03
BOD	mg/L	250	12
Boron	ug/L	152	132.8
Cadmium	ug/L	0.21	0.113
Cesium	ug/L	0.46	<0.09
Chloride	mg/L	91.96	28.35
Chromium	ug/L	16.63	3.215
Cobalt	ug/L	6.247	7.268
COD	mg/L	360	94
Copper	ug/L	74.05	13.45
Gallium	ug/L	1.09	<0.21
Iron	ug/L	8265	6159
Lead	ug/L	13.32	11.14
Lithium	ug/L	55.89	22.42
Manganese	ug/L	1029	873.6
Mineral Oil	ug/L	1007.87	2960.98
Nickel	ug/L	27.45	20.57
pH	pH units	7.6	7
Rubidium	ug/L	42.53	9.021
Selenium	ug/L	<2.12	<2.12

Silver	ug/L	<0.33	<0.33
Solids (Total Suspended)	mg/L	176	74
Strontium	ug/L	793.3	580.8
Sulphate	mg/L as SO <sub>4</sub>	31.245	188.48
Thallium	ug/L	<0.04	<0.04
Tin	ug/L	<2.8	5.432
Uranium	ug/L	2.571	1.166
Vanadium	ug/L	13.62	2.959
Zinc	ug/L	95.54	88.97

#### 2.4.5 Compost Analysis

As part of the monitoring programme Panda must test Compost bi-annually. No analysis was carried out in 2016 as the In-Vessel Wright System was suspended from September 2010, therefore no output was produced to be analysed.

#### 2.4.6 Biofilter Monitoring

Panda are required to conduct ambient air monitoring from the biofilter unit on site. No analysis was carried out in 2016 as there were no emissions from the biofilter since 2010.

#### 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 2014. 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 Table 6 below shows a summary of the energy consumption.

**Table 6:** Summary of Energy Consumption 2016.

Resource	
Gas Oil	248,167.54 Litres
Electricity	4,438,375 MWhr

#### 2.4.8.1 Water

Panda extract water from the surface water tank for re-use on site. The two wells on site are used as back up for water storage in the overground storage tank.

#### 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 construct building three at the southern end of the facility. Building three is complete. Panda have been granted planning permission to construct an anaerobic digestion/composting plant to the East of the facility.

##### 2.5.1 *In-place*

The current site infrastructure is outlined below in List 1. Table 7 details the waste processing equipment used on site, together with the associated duty capacities

#### **List 1:** 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 (164 m<sup>3</sup>) capacity
11. Fencing around the site



**Table 7: Waste processing equipment**

<b>Description</b>	<b>Duty Capacity</b>
2 x Composting Tunnels	130 Tonnes per hour (not in use)
1 x Doppstadt Wood Shredder	30 Tonnes per hour
1 x M&J 4000 Shredder	40 Tonnes per hour
1 x Trommel	40 Tonnes per hour
1 x Magnet	5 Tonnes per hour
1 x Nihot Density Separator	50 tonnes per hour
1 x Ballistic Separator	50 Tonnes per hour
1 x Flip Flop	70 tonnes per hour
1 x Magnet	20 Tonnes per hour
1 x Wind Shifter	20 Tonnes per hour
2 x Ballistic Separator	50 tonnes per hour combined
6 x Overband Magnets	15 tonnes per hour combined
1 x Eddy Currents	3 tonnes per hour
2 x Untha shredder	20 tonnes per hour combined
1 x Single Drum Separator	25 tonnes per hour
1 x M&J 6000 Shredder	35 tonnes per hour
1 x trommel	60 tonnes per hour
<b>Mobile</b>	
1 x Volvo L110	2 x Kobelco Track
1 x Teleporter	1 x Hoists
1 x Volvo L60	1 x Forklift
1 x Fuchs Grab	1 x Shunter
1 x Volvo L220	1 x Multisweep

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 a significant piece of plant (i.e. if it can't be fixed within 48 hrs), unprocessed waste will be transferred to other authorised waste processing facilities.

### *2.5.2 Planned Infra-structure*

The Anaerobic Digestion Building is the only current proposed infrastructure. A review of the current waste licence is required before works commence. It is unknown at the time of preparing this report when the review is likely to be issued.

### 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.

### 2.7 PRTR Emission.

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

### 3.0 Environmental objectives and targets – 2016 and 2017.

No	Objective & Target	Method of Achievement	Responsibility	2016 Programme	Complete in 2016	2017 Programme
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	Continuous	Complete	Aug '16
		Ensure yards are cleaned at the end of each working day	Operatives	Continuous	Continuous	Continuous
2	<b>Prevent Water Pollution from Run-Off</b>	Ensure all gullies are maintained and regularly cleaned	Environmental Manager/ Operatives	Continuous	Continuous	Continuous
		Ensure that levels in trade effluent tanks are maintained at an appropriate height	Environmental Manager/Operatives	Continuous	Continuous	Continuous
3	<b>Maintain and Develop the Environmental Management System</b>	Maintain EMS Documentation on site	Environmental Manager	Continuous	Continuous	Continuous
		Up date procedures to reflect operational and control changes				
4	<b>Assess Waste Acceptance Procedures for Casual delivers</b>	Have all casuals sign waste collection permit exemption indemnity letters	Weighbridge Management			Commence Q1 '17
5	<b>Environmental Monitoring</b>	Implement the Environmental Monitoring Programme specified in the Waste Licence	Environmental Manager	Continuous	Continuous	Continuous
		Investigate any accidents of emission limit values	Environmental Manager	Continuous	Continuous	Continuous
6	<b>Ensure and implement a training programme</b>	Identify staff training requirements and provide relevant training	Environmental Dept	Aug '16	Completed in '16	Sept '17
7	<b>To control any emergencies that may arise at the facility</b>	Review and implement an Emergency Response Procedure	Environmental Manager	Aug '16	Completed in '16	Sept '17

No	Objective & Target	Method of Achievement	Responsibility	2016 Programme	Complete in 2016	2017 programme
8	<b>Prepare a Standard Operating Procedures Manual</b>	Review the SOP manual relevant to site operations	Environmental Dept			June '17
9	<b>Ensure lighting in waste handling buildings provide sufficient lighting so as to assess incoming waste</b>	Clean all light bulbs and covers in waste handling buildings	Environmental Manager/ Yard Supervisor	Sept '16	Completed in '16	Sept '17
10	<b>Reduce dependence on using wastewater treatment plants for surface water</b>	Complete design of constructed wetland and seek Agency approval for its construction	Alan Friel	Mar '16	Completed in '16	
11	<b>Complete shed 3 for RDF/SRF</b>	Awaiting Agency waste licence review	Environmental Manager	Lodged 2009	Completed in '16	
12	<b>Office Recycling</b>	Continuation of office recycling	Office Manager/ Environmental Department	Continuous	Continuous	Continuous
13	<b>Pipe and USB Integrity Test</b>	Carry out a Pipe and Underground Storage Tank Integrity Test	Environmental Manager/Tanker Dept.	Aug '14	Dec '14	Aug '17
14	<b>Solar Panels</b>	Install solar panels on office roof, so as to ascertain feasibility of installing a larger solar farm	Panda Power			Q1 '17

15	<b>Energy Audit</b>	Carry out energy audit for the site	Environmental Manager			Q1 '17
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### 3.1 Completion of Environmental Targets & Objectives 2016

All targets and objectives for 2016 were achieved.

### 3.2 Summary of reported incidents and complaints

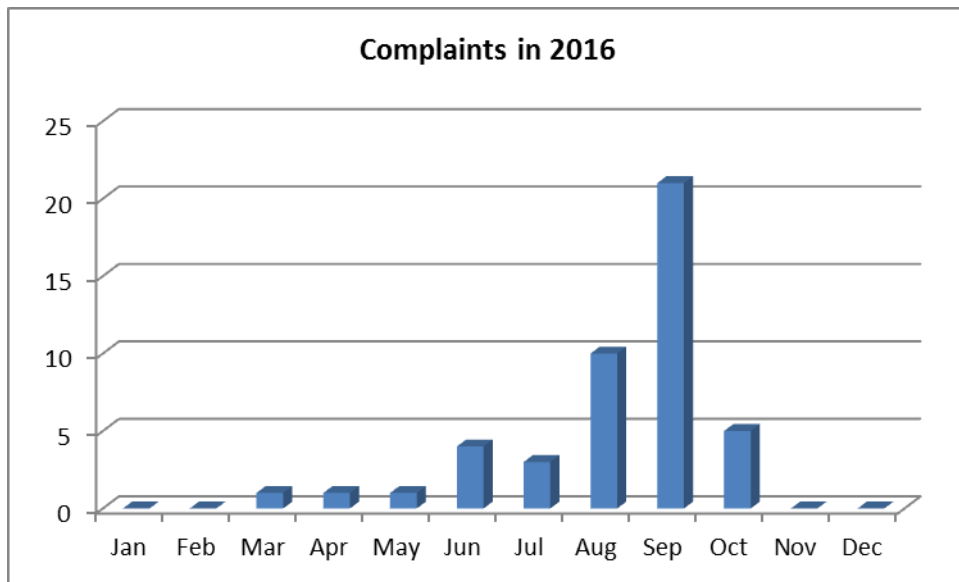
#### 3.2.1. Reported Incidents Summary

There was no incident in 2016.

#### 3.2.2 Complaints:

Fig. 8 illustrates complaints either made directly to the Agency or to Panda’s facility for each month during 2016. There were a total of 46 complaints made in 2016. All of these were thoroughly investigated and closed out in a timely fashion.

**Fig. 8: Complaints**



### 3.3 Review of nuisance controls

#### *3.3.1 Odour*

There is a dust spraying system installed in the roof of building 2. 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 yard foreman is responsible for controlling the odour-suppressing units. This involves controlling the concentration of odour neutraliser 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 2016. 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 forklift mounted 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 2016 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.

A review of all site procedures was carried out;

## **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 in 2015; one of the features is an Environmental page where the following can be downloaded,

- Facility licences ([W0140-04](#), W0261-02, W0263-01, W0039-02, W0238-01 and W0003-03)
- Multi-regional Waste collection permit (NWCPO-14-11326-03),
- TFS Broker licences,
- Customer Charter,



- Environmental Policy,

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.

Over the Christmas period 2016 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. Panda are also encouraging customers to receive email invoicing, thereby reducing dependence on paper invoices and envelopes.

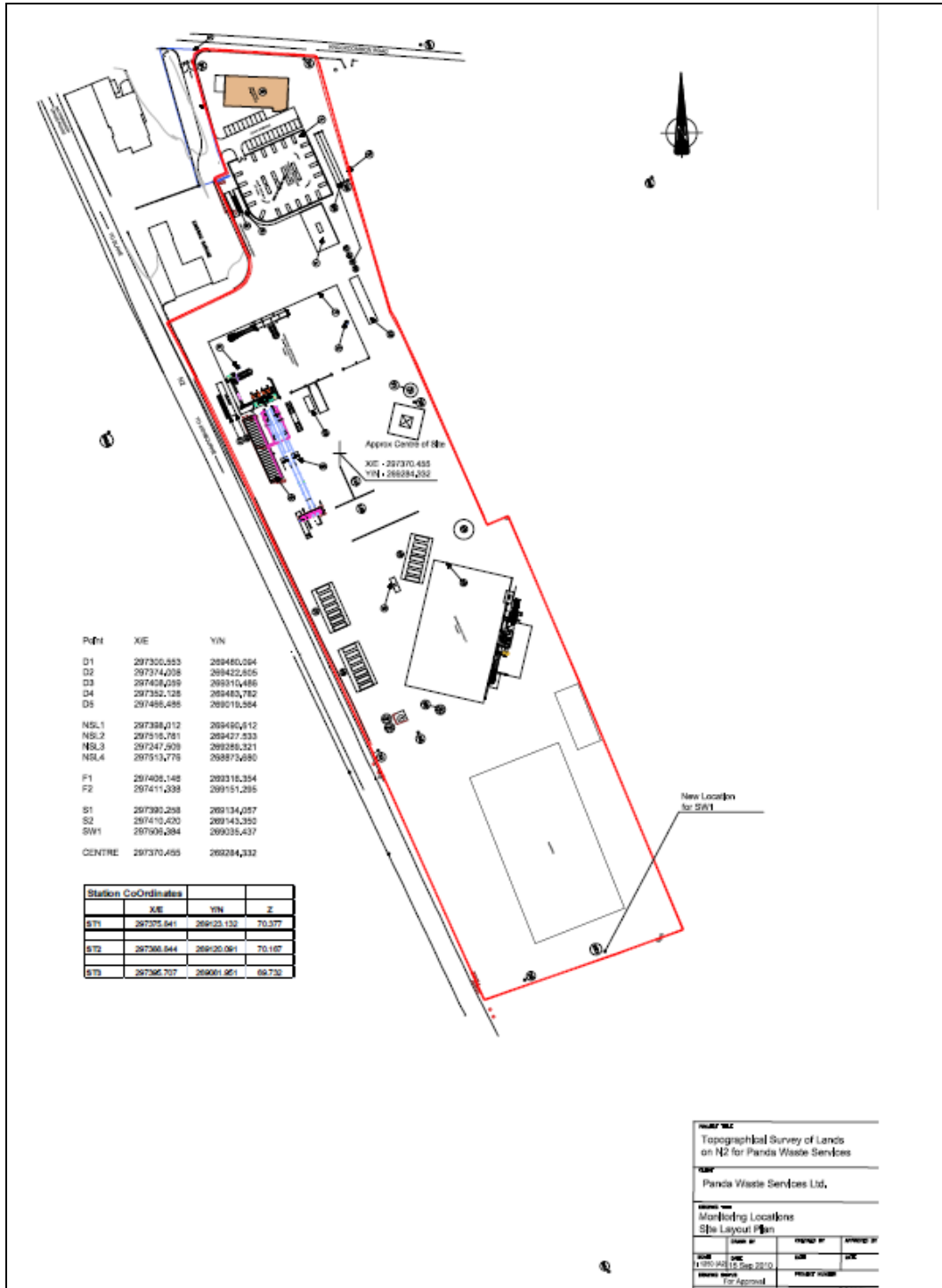
Recycling certificates are issued to customers, on request, so that they can determine their recycling on a weekly/monthly or annual basis.

Advertisements are taken out regularly in the local newspapers informing customers of the services that Panda offer.. Tours of the facilities 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.

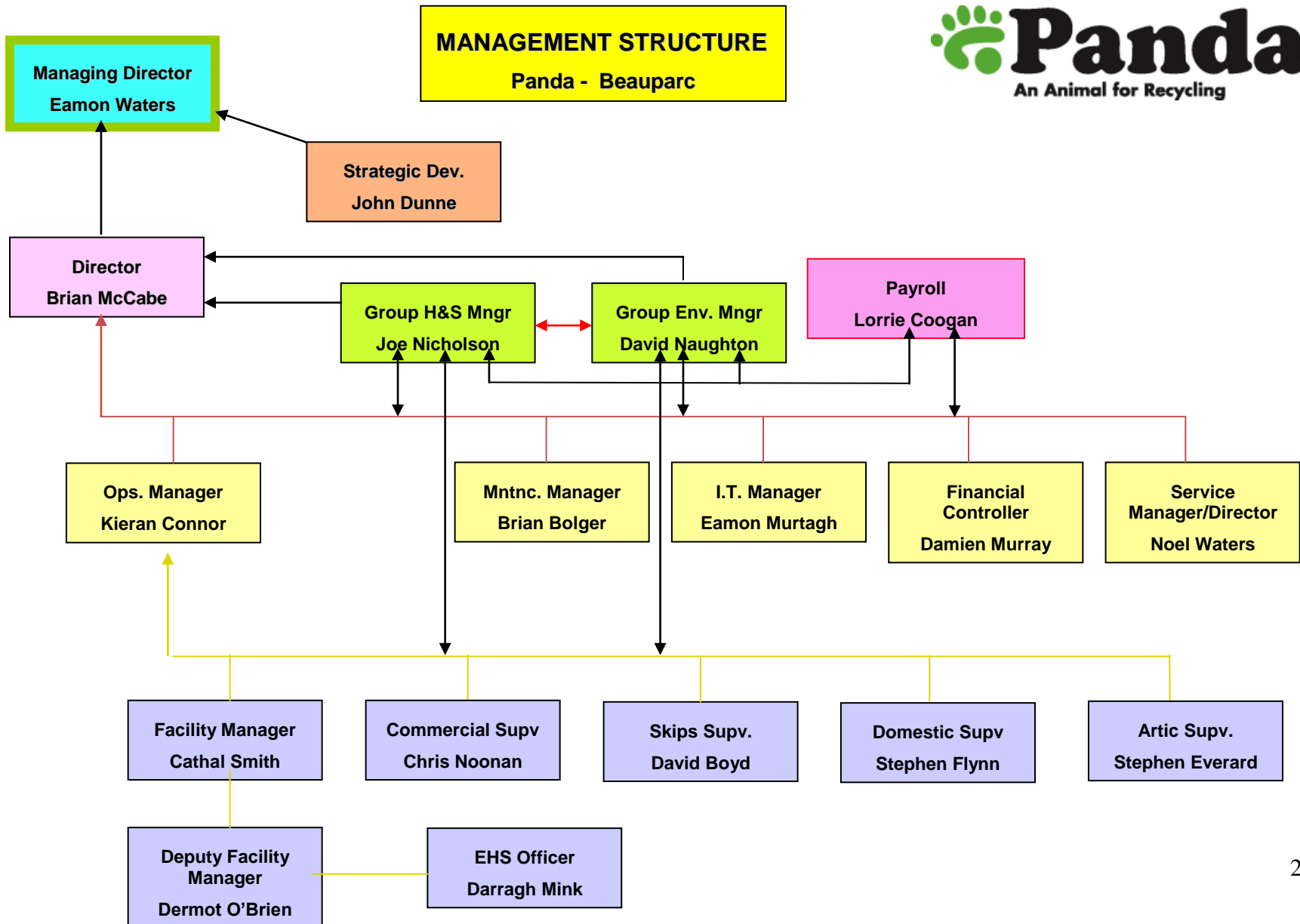
The information in the Annual Environmental Report is true and accurate representation of the activities conducted by Panda in 2016.

# Appendix A

## Site Layout



## Appendix B



# Appendix C

## PRTR Emissions



| PRTR#: W0140 | Facility Name : Nurendale (Rathdrinagh) | Filename : PRTR W0140\_2016.xls | Return Year : 2016 |

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[Guidance to completing the PRTR workbook](#)

### PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2016
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#### 1. FACILITY IDENTIFICATION

Parent Company Name	Nurendale
Facility Name	Nurendale (Rathdrinagh)
PRTR Identification Number	W0140
Licence Number	W0140-04

Classes of Activity	
No.	class name
-	Refer to PRTR class activities below

Address 1	Rathdrinagh
Address 2	Beauparc
Address 3	Navan
Address 4	
	Meath
Country	Ireland
Coordinates of Location	-8.13924 52.5351
River Basin District	IEEA
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	David Naughton
AER Returns Contact Email Address	david.naughton@nurendale.ie
AER Returns Contact Position	Environmental Manager
AER Returns Contact Telephone Number	1890626262
AER Returns Contact Mobile Phone Number	1890626262
AER Returns Contact Fax Number	0469024189
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	160
User Feedback/Comments	Wastewater variance due to wash down water in waste processing buildings and inconsistency of the waste accepted into the facility.
Web Address	www.panda.ie

#### 2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General
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)?	No
---	----

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

[PRTR# : W0140 | Facility Name : Nurendale (Rathdrinagh) | Filename : PRTR W0140\_2016.xls | Return Year : 2016 |

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**SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS**

RELEASES TO AIR					Please enter all quantities in this section in KGs				
No. Annex II	POLLUTANT Name	M/C/E	METHOD Method Used		ADD EMISSION POINT			QUANTITY	
			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

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	M/C/E	METHOD Method Used		ADD EMISSION POINT			QUANTITY	
			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

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	M/C/E	METHOD Method Used		ADD EMISSION POINT					QUANTITY				
			Method Code	Designation or Description	DS1	DS2	DS3	DS4	DS5	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5
210	Dust	M	ALT	Graffmetry	0.03	0.03	0.03	0.03	0.03	0.03	0.15	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 to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/y for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Nurendale (Rathdrinagh)					
Please enter summary data on the quantities of methane flared and / or utilised					
	T (Total) kg/Year	M/C/E	Method Code	Designation or Description	Facility Total Capacity m3 per hour
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# : W0140 | Facility Name : Nurendale (Rathdrinagh) | Filename : PRTR W0140\_2016.xls | Return Year : 2016 |

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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

RELEASES TO WATERS					Please enter all quantities in this section in KGs				
No. Annex II	POLLUTANT Name	M/C/E	METHOD Method Used		ADD EMISSION POINT			QUANTITY	
			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

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 WATERS					Please enter all quantities in this section in KGs				
No. Annex II	POLLUTANT Name	M/C/E	METHOD Method Used		ADD EMISSION POINT			QUANTITY	
			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

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 WATERS					Please enter all quantities in this section in KGs				
Pollutant No.	POLLUTANT Name	M/C/E	METHOD Method Used		ADD EMISSION POINT			QUANTITY	
			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

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR#: W0140 | Facility Name : Nurendale (Rathdrinagh) | Filename : PRTR W0140\_2016.xls |

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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			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
06	Ammonia (NH3)	C	ALT	Colorimetry	184.06	184.06	0.0	0.0
17	Arsenic and compounds (as As)	M	ALT	ICPMS	0.06	0.06	0.0	0.0
18	Cadmium and compounds (as Cd)	M	ALT	ICPMS	0.0	0.0	0.0	0.0
79	Chlorides (as Cl)	M	ALT	Colorimetry	261.07	261.07	0.0	0.0
19	Chromium and compounds (as Cr)	M	ALT	ICPMS	0.04	0.04	0.0	0.0
20	Copper and compounds (as Cu)	M	ALT	ICPMS	0.19	0.19	0.0	0.0
23	Lead and compounds (as Pb)	M	ALT	ICPMS	0.05	0.05	0.0	0.0
22	Nickel and compounds (as Ni)	M	ALT	ICPMS	0.1	0.1	0.0	0.0
24	Zinc and compounds (as Zn)	M	ALT	ICPMS	0.4	0.4	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 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			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
355	Aluminium	M	ALT	ICPMS	7.5	7.5	0.0	0.0
205	Antimony (as Sb)	M	ALT	ICPMS	0.01	0.01	0.0	0.0
373	Barium	M	ALT	ICPMS	0.55	0.55	0.0	0.0
303	BOD	M	ALT	Electrometry	568.24	568.24	0.0	0.0
374	Boron	M	ALT	ICPMS	0.62	0.62	0.0	0.0
356	Cobalt	M	ALT	ICPMS	0.03	0.03	0.0	0.0
306	COD	M	ALT	Colorimetry	985.18	985.18	0.0	0.0
357	Iron	M	ALT	ICPMS	31.3	31.3	0.0	0.0
321	Manganese (as Mn)	M	ALT	ICPMS	4.13	4.13	0.0	0.0
324	Mineral oils	M	SSC	QC-FID	8.61	8.61	0.0	0.0
370	Selenium	M	ALT	ICPMS	0.0	0.0	0.0	0.0
354	Silver	M	ALT	ICPMS	0.0	0.0	0.0	0.0
240	Suspended Solids	M	ALT	Filtration/Drying @104C	542.5	542.5	0.0	0.0
343	Sulphate	M	ALT	Colorimetry	476.8	476.8	0.0	0.0
358	Tin	M	ALT	ICPMS	0.01	0.01	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

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR#: W0140 | Facility Name : Nurendale (Rathdrinagh) | Filename : PRTR W0140\_2016.xls | Return Year : 2016 |

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SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			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

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 POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO LAND					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

[PRTR#: W0140 | Facility Name: Nurendale (Rathdrinagh) | Filename: PRTR W0140\_2016.xls | Return Year: 2016]

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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 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	15 01 01	No	0.0	paper and cardboard packaging	R12	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Ballymount Road,Walkinstown,Dublin 12,,Ireland		
Within the Country	15 01 04	No	80.82	metallic packaging	R12	M	Weighed	Offsite in Ireland	Multimetals,WFP-WW-09-0014-01	Conway Port Industrial Estate,Bollanney,Murrough Co. Wicklow,,Ireland		
Within the Country	15 01 04	No	0.0	metallic packaging	R12	M	Weighed	Offsite in Ireland	Wilton Waste,WFP-CN-10-0005-01(1)	Kiffagh,Crosserlough,Ballyja mesduff,Co. Cavan,Ireland		
Within the Country	16 01 03	No	31.82	end-of-life tyres	R12	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Road,Walkinstown,Dublin 12,,Ireland		
Within the Country	16 01 03	No	0.0	end-of-life tyres	R13	M	Weighed	Offsite in Ireland	Farmers,N/a	,,,,,,Ireland		
Within the Country	16 05 05	No	0.0	those mentioned in 16 05 04 mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R13	M	Weighed	Offsite in Ireland	Calor Gas,,	,,,,,,Ireland		
Within the Country	17 01 07	No	0.0	01 06 soil and stones other than those mentioned	R10	M	Weighed	Offsite in Ireland	Behan Land Restoration Ltd,W0247-01	Blackhall,Punchestown,Naa s,Co. Kildare,Ireland		
Within the Country	17 05 04	No	958.68	in 17 05 03 soil and stones other than those mentioned	R10	M	Weighed	Offsite in Ireland	Behan Land Restoration Ltd,W0247-01	Blackhall,Punchestown,Naa s,Co. Kildare,Ireland		
Within the Country	17 05 04	No	0.0	in 17 05 03 soil and stones other than those mentioned	R13	M	Weighed	Offsite in Ireland	Nurendale,W0261-01	11,,Ireland		
Within the Country	17 05 04	No	0.0	in 17 05 03 gypsum-based construction materials other than those mentioned in 17 08 01	R10	M	Weighed	Offsite in Ireland	Knockharley Landfill,W0146-02	Knockharley,Navan,Co. Meath,,Ireland		
To Other Countries	17 08 02	No	0.0	01 mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	R12	M	Weighed	Abroad	Nurendale,W0261-01	11,,Ireland		
Within the Country	17 09 04	No	0.0	02 and 17 09 03 mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	R12	M	Weighed	Offsite in Ireland	Bammore Demolition,WPT 129	21A Baldoyle Industrial Estate,Baldoyle,Dublin 13,,Ireland		
Within the Country	17 09 04	No	0.0	09 02 and 17 09 03 gypsum-based construction materials other than those mentioned in 17 08 01	R12	M	Weighed	Offsite in Ireland	AES Navan,W0131	Navan,Co. Meath,,,,Ireland		
Within the Country	19 12 02	No	9237.53	ferrous metal	R12	M	Weighed	Offsite in Ireland	Multimetals,WFP-WW-09-0014-01	Conway Port Industrial Estate,Bollanney,Murrough Co. Wicklow,,Ireland		
Within the Country	19 12 02	No	0.0	ferrous metal	R13	M	Weighed	Offsite in Ireland	Panda Cappagh,W0261-01	Road,Finglas,Dublin 11,,Ireland		
Within the Country	19 12 02	No	0.0	ferrous metal	R12	M	Weighed	Offsite in Ireland	Wilton Waste,WFP-CN-10-0005-01(1)	Kiffagh,Crosserlough,Ballyja mesduff,Co. Cavan,Ireland		
Within the Country	19 12 03	No	236.96	non-ferrous metal	R12	M	Weighed	Offsite in Ireland	Multimetals,WFP-WW-09-0014-01	Conway Port Industrial Estate,Bollanney,Murrough Co. Wicklow,,Ireland		
Within the Country	19 12 03	No	33.72	non-ferrous metal	R12	M	Weighed	Offsite in Ireland	Dublin Regional Recovery Facility,W0238-01	Merrywell Industrial Estate,Ballymount Road Lower,Ballymount Dublin 12,,Ireland		
Within the Country	19 12 03	No	0.0	non-ferrous metal	R12	M	Weighed	Offsite in Ireland	Wilton Waste,WFP-CN-10-0005-01(1)	Kiffagh,Crosserlough,Ballyja mesduff,Co. Cavan,Ireland		
Within the Country	19 12 03	No	354.06	non-ferrous metal	R12	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Road,Walkinstown,Dublin 12,,Ireland		
Within the Country	19 12 04	No	0.0	plastic	R12	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Ballymount Road,Walkinstown,Dublin 12,,Ireland		

Within the Country	12 04	No	0.0 plastic and rubber	R12	M	Weighed	Offsite in Ireland	Polymer Recovery Ltd,WFP- WW-12-0030-01	The Murrough,Wicklow,Co. Wicklow,,Ireland
Within the Country	19 12 04	No	0.0 plastic and rubber	R12	M	Weighed	Offsite in Ireland	Wheeler Environmental Refuse Services,WFP-G-09-0002-01	Weir Road Business Park,Weir Road,Tuam,Co. Galway,Ireland
Within the Country	19 12 04	No	0.0 plastic and rubber	D1	M	Weighed	Offsite in Ireland	Bord na Mona Drehid Landfill,W0201-03	Killinagh Upper,Carbury,Co. Kildare,,Ireland
Within the Country	19 12 04	No	0.0 plastic and rubber	R1	M	Weighed	Offsite in Ireland	Indaver,W0167-02	Carranstown,Duleek,Co. Meath,,Ireland
Within the Country	19 12 04	No	550.34 plastic and rubber	D1	M	Weighed	Offsite in Ireland	Knockharley Landfill,W0146-02	Knockharley,Navan,Co. Meath,,Ireland
Within the Country	19 12 07	No	14124.22 wood other than that mentioned in 19 12 06	R12	M	Weighed	Offsite in Ireland	Eirebloc,Ck(S) 503/07 O'Toole Composting,WFP- CW-10-0003-01	Lissarda,Co. Cork,,,,,Ireland Ballinrane,Co. Carlow,,,,,Ireland
Within the Country	19 12 07	No	0.0 wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	Knockharley Landfill,W0146-02	Knockharley,Navan,Co. Meath,,Ireland
Within the Country	19 12 07	No	19.0 wood other than that mentioned in 19 12 06	R10	M	Weighed	Offsite in Ireland	Thornton's Recycling,WFP- KE-10-0061-01	Oldmilltown ,Kill,Co. Kildare,,Ireland
Within the Country	19 12 07	No	0.0 wood other than that mentioned in 19 12 06	R12	M	Weighed	Offsite in Ireland	Whiteriver Landfill,W0060-02 Clonmel Waste Disposal,WFP-TS-11-0001-01	Dunleer,Co. Louth,,,,,Ireland Lawlesstown,Clonmel,Co. Tipperary,,Ireland
Within the Country	19 12 07	No	0.0 wood other than that mentioned in 19 12 06	R3	M	Weighed	Offsite in Ireland	Acorn Recycling Ltd,W0249-01	Ballybeg,Littleton,Co. Tipperary,,Ireland
Within the Country	19 12 07	No	0.0 wood other than that mentioned in 19 12 06	R12	M	Weighed	Offsite in Ireland	Monaghan County Council,W0020-01	Scotchcorner Landfill,Letterbane,Annyalla, Castleblayney Co. Monaghan,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R10	M	Weighed	Offsite in Ireland	Knockharley Landfill,W0146-02	Knockharley,Navan,Co. Meath,,Ireland
Within the Country	19 12 09	No	0.0 Rubble	R10	M	Weighed	Offsite in Ireland	Whiteriver Landfill,W0060-02	Dunleer,Co. Louth,,,,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R13	M	Weighed	Offsite in Ireland	Arthurstown Landfill,W0004-04	Arthurstown ,Kill,Co. Kildare,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R13	M	Weighed	Offsite in Ireland	Bord na Mona Drehid Landfill,W0201-03	Killinagh Upper,Carbury,Co. Kildare,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R13	M	Weighed	Offsite in Ireland	AES Navan,W0131	Navan,Co. Meath,,,,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R12	M	Weighed	Offsite in Ireland	Bammore Demolition,WPT 129	21A Baldoyle Industrial Estate,Baldoyle,Dublin 13,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R13	M	Weighed	Offsite in Ireland	Panda Ballymount,W0039-02	Ballymount Cross,Tallaght,Dublin 24,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R13	M	Weighed	Offsite in Ireland	Whiteriver Landfill,W0060-02	Dunleer,Co. Louth,,,,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R12	M	Weighed	Offsite in Ireland	Enrich ,WFP-MH-08-0004-02	Newtownrathganley,Kilcock, Co. Meath,,Ireland
Within the Country	19 12 09	No	0.0 End of Waste rubble	R13	M	Weighed	Offsite in Ireland	Farmers,N/a	,,,,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R13	M	Weighed	Offsite in Ireland	Nurendale,W0261-01	Cappagh Road,Finglas,Dublin 11,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R13	M	Weighed	Offsite in Ireland	Limerick County Council,W0017-04	Gortadroma Landfill,Ballyhahill,Co. Limerick,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R13	M	Weighed	Offsite in Ireland	Monaghan County Council,W0020-01	Scotchcorner Landfill,Letterbane,Annyalla, Castleblayney Co. Monaghan,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R13	M	Weighed	Offsite in Ireland	Nurendale,W0039-02	Ballymount Cross,Tallaght,Dublin 24,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R10	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Ballymount Road,Walkinstown,Dublin 12,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R10	M	Weighed	Offsite in Ireland	Corranure Landfill,W0077-04	Corranure,Cootehill RD,Cavan,Co. Cavan,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R10	M	Weighed	Offsite in Ireland	Tara Mines,P0516-03	Knockumber,Navan,Co. Meath,,Ireland
Within the Country	19 12 09	No	0.0 minerals (for example sand, stones)	R10	M	Weighed	Offsite in Ireland	Ballynagran Landfill,W0165	Co. Wicklow,,,,,Ireland



Within the Country	12 10	No	6673.96 combustible waste (refuse derived fuel)	R1	M	Weighted	Offsite in Ireland	Quinn Cement Ltd,P0378-08	Scotchtown,Ballyconnell...C o. Cavan,Ireland
To Other Countries	19 12 10	No	100.52 combustible waste (refuse derived fuel)	R13	M	Weighted	Abroad	Pacon,WFP-FG-14-0001-01	Stephenstown Business Park,Balbriggan,Co. Dublin ...Ireland
Within the Country	19 12 10	No	0.0 combustible waste (refuse derived fuel)	R12	M	Weighted	Offsite in Ireland	Greyhound,W0205-01	Crag Avenue,Clondalkin Industrial Estate,Condalkin Co Dublin...Ireland
Within the Country	19 12 10	No	38051.22 combustible waste (refuse derived fuel)	R1	M	Weighted	Offsite in Ireland	Lagan Cement ,P0487-05	Killaskillen,Kinnegad,Co. Meath...Ireland
Within the Country	19 12 10	No	0.0 combustible waste (refuse derived fuel)	R13	M	Weighted	Offsite in Ireland	Drogheda Port Co.,WFP-LH- 11-0006-01	Tom Roes Point Facility,Baltray Road,Drogheda,Co. Louth,Ireland
Within the Country	19 12 10	No	0.0 combustible waste (refuse derived fuel)	R1	M	Weighted	Offsite in Ireland	Indaver,W0167-02	Carranstown,Duleek,Co. Meath...Ireland
Within the Country	19 12 10	No	42142.39 combustible waste (refuse derived fuel)	R1	M	Weighted	Offsite in Ireland	Irish Cement,P0030	Platin,Drogheda,Co. Meath...Ireland
Within the Country	19 12 10	No	0.0 combustible waste (refuse derived fuel)	R12	M	Weighted	Offsite in Ireland	South Dublin Baling Station,W0003	Ballymount Baling Station,Ballymount Road,Walkinstown,Dublin 12,Ireland
Within the Country	19 12 10	No	0.0 combustible waste (refuse derived fuel)	R13	M	Weighted	Offsite in Ireland	Panda Ballymount,W0039- 02	Ballymount Cross,Tallaght,Dublin 24...Ireland
Within the Country	19 12 10	No	0.0 combustible waste (refuse derived fuel)	R1	M	Weighted	Offsite in Ireland	Nurendale,W0039-02	Ballymount Cross,Tallaght,Dublin 24...Ireland
Within the Country	19 12 12	No	0.0 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R12	M	Weighted	Offsite in Ireland	Greyhound,W0205-01	Crag Avenue,Clondalkin Industrial Estate,Condalkin Co Dublin...Ireland
Within the Country	19 12 12	No	0.0 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R1	M	Weighted	Offsite in Ireland	Regen,44110	Shepherds Drive,Carnbane Industrial Estate,Newry Co. Down,BT35 6JQ,Ireland
Within the Country	19 12 12	No	0.0 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R12	M	Weighted	Offsite in Ireland	Padraig Thornton Waste Disposal Ltd,W0044	Killeen Road,Ballyfermot,Dublin 10...Ireland
Within the Country	19 12 12	No	20.28 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R13	M	Weighted	Offsite in Ireland	Panda Ballymount,W0039- 02	Ballymount Cross,Tallaght,Dublin 24...Ireland
Within the Country	19 12 12	No	0.0 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R12	M	Weighted	Offsite in Ireland	Wiser,.	Middleton,Co. Cork...Ireland
Within the Country	19 12 12	No	0.0 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R13	M	Weighted	Offsite in Ireland	Drogheda Port Co.,WFP-LH- 11-0006-01	Tom Roes Point Facility,Baltray Road,Drogheda,Co. Louth,Ireland
Within the Country	19 12 12	No	1974.82 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R10	M	Weighted	Offsite in Ireland	Ballynagran Landfill,W0165	Co. Wicklow...Ireland Merrywell Industrial Estate,Ballymount Road Lower,Ballymount Dublin 12...Ireland
Within the Country	19 12 12	No	0.0 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R12	M	Weighted	Offsite in Ireland	Dublin Regional Recovery Facility,W0238-01	Dublin 12...Ireland
Within the Country	19 12 12	No	0.0 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R10	M	Weighted	Offsite in Ireland	Bord na Mona Drehid Landfill,W0201-03	Killinagh Upper,Carbury,Co. Kildare...Ireland
Within the Country	19 12 12	No	0.0 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R10	M	Weighted	Offsite in Ireland	Limerick County Council,W0017-04	Gortadroma Landfill,Ballynahill,Co. Limerick...Ireland
Within the Country	19 12 12	No	0.0 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R12	M	Weighted	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Ballymount Road,Walkinstown,Dublin 12...Ireland
Within the Country	19 12 12	No	6014.2 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R10	M	Weighted	Offsite in Ireland	Tara Mines,P0516-03	Knockumber,Navan,Co. Meath...Ireland
Within the Country	19 12 12	No	49816.69 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R10	M	Weighted	Offsite in Ireland	Knockharley Landfill,W0146- 02	Knockharley,Navan,Co. Meath...Ireland

Within the Country	20 01 01	No	17.38 paper and cardboard	R12	M	Weighed	Offsite in Ireland	Nurendale,W0261-02	Cappagh Road,Finglas,Dublin 11,,Ireland Ballymount
Within the Country	20 01 01	No	809.3 paper and cardboard	R12	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Road,Walkinstown,Dublin 12,,Ireland Merrywell Industrial Estate,Ballymount Road Lower,Ballymount Dublin 12,,Ireland
Within the Country	20 01 01	No	0.0 paper and cardboard	R12	M	Weighed	Offsite in Ireland	Dublin Regional Recovery Facility,W0238-01	Unit 9 Rossfield,50 Rosemount Business Park,Ballycoolin ,Dublin 11,Ireland
Within the Country	20 01 02	No	0.0 glass	R12	M	Weighed	Offsite in Ireland	Agnail,Ire/Ag117/12	Unit 4 Osberstown Business Park,Carragh Rd,Naas,Co. Kildare,Ireland
Within the Country	20 01 02	No	0.0 glass	R12	M	Weighed	Offsite in Ireland	Glassco Recycling Ltd,WFP-KE-08-0357-01	Ballymount Cross,Tallaght,Dublin 24,,Ireland
Within the Country	20 01 08	No	0.0 biodegradable kitchen and canteen waste	R13	M	Weighed	Offsite in Ireland	Nurendale,W0039-02	Slane Fam Oils,WFP-MH-10-0005-01
Within the Country	20 01 25	No	0.0 edible oil and fat	R3	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Slane,Co. Meath,,Ireland Ballymount
Within the Country	20 01 39	No	0.0 plastics	R12	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Road,Walkinstown,Dublin 12,,Ireland
Within the Country	20 01 39	No	0.0 plastics	R12	M	Weighed	Offsite in Ireland	Nurendale,W0261-01	Cappagh Road,Finglas,Dublin 11,,Ireland Ballymount
Within the Country	20 02 01	No	0.0 biodegradable waste	R13	M	Weighed	Offsite in Ireland	Nurendale,W0039-02	Cross,Tallaght,Dublin 24,,Ireland
Within the Country	20 02 01	No	41.66 biodegradable waste	R3	M	Weighed	Offsite in Ireland	Bord Na Mona Kilberry,W0198-01	Kilberry,Athy,Co. Kildare,,Ireland Ballymount Baling Station,Ballymount
Within the Country	20 03 01	No	29.72 mixed municipal waste	R12	M	Weighed	Offsite in Ireland	South Dublin Baling Station,W0003	Road,Walkinstown,Dublin 12,Ireland
To Other Countries	20 03 01	No	4593.91 Dry Recyclables	R12	M	Weighed	Abroad	Regen,44110	Shepherds Drive,Cambane Industrial Estate,Newry Co. Down,BT35 6JQ,Ireland
Within the Country	20 03 01	No	0.0 mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Ballealy Landfill,W0009-03	Ballealy Landfill,Lusk,Co. Dublin,,Ireland
Within the Country	20 03 01	No	1255.18 Dry Recyclables	R12	M	Weighed	Offsite in Ireland	Dublin Regional Recovery Facility,W0238-01	Merrywell Industrial Estate,Ballymount Road Lower,Ballymount Dublin 12,,Ireland
Within the Country	20 03 01	No	0.0 Dry Recyclables	R12	M	Weighed	Offsite in Ireland	Killarney Waste Disposal,W0217-01	Aughacurreen,Killarney,Co. Kerry,,Ireland
Within the Country	20 03 01	No	0.0 mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Bord na Mona Drehid Landfill,W0201-03	Killingagh Upper,Carbury,Co. Kildare,,Ireland
Within the Country	20 03 01	No	0.0 Dry Recyclables	R12	M	Weighed	Offsite in Ireland	Greyhound,W0205-01	Crag Avenue,Clondalkin Industrial Estate,Condalkin Co Dublin,,Ireland
Within the Country	20 03 01	No	101.14 mixed municipal waste	R1	M	Weighed	Offsite in Ireland	Indaver,W0167-02	Carranstown,Duleek,Co. Meath,,Ireland
Within the Country	20 03 01	No	705.94 mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Knockharvey Landfill,W0146-02	Knockharvey,Navan,Co. Meath,,Ireland Ballymount
Within the Country	20 03 01	No	0.0 mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Panda Ballymount,W0039-02	Cross,Tallaght,Dublin 24,,Ireland
Within the Country	20 03 01	No	0.0 mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Whiteriver Landfill,W0060-02	Dunleer,Co. Louth,,Ireland
Within the Country	20 03 01	No	11.36 mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Ballynagran Landfill,W0165	Co. Wicklow,,Ireland Ballymount
Within the Country	20 03 01	No	190.36 Dry Recyclables	R12	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Road,Walkinstown,Dublin 12,,Ireland
Within the Country	20 03 01	No	0.0 Dry Recyclables	R12	M	Weighed	Offsite in Ireland	Padraig Thornton Waste Disposal Ltd,W0044	Killeen Road,Ballyfermot,Dublin 10,,Ireland
Within the Country	20 03 01	No	0.0 mixed municipal waste - levy exempt	D1	M	Weighed	Offsite in Ireland	Whiteriver Landfill,W0060-02	Dunleer,Co. Louth,,Ireland Ballymount
Within the Country	20 03 01	No	0.0 Dry Recyclables	R13	M	Weighed	Offsite in Ireland	Panda Ballymount,W0039-02	Cross,Tallaght,Dublin 24,,Ireland

Within the Country	03 01	No	0.0 Dry Recyclables	R13	M	Weighed	Offsite in Ireland	Nurendale,W0261-01	Cappagh Road,Finglas,Dublin 11,...,Ireland Ballymount Cross,Tallaght,Dublin 24,...,Ireland
Within the Country	20 03 01	No	0.0 mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Nurendale,W0039-02	Knockharley Landfill,W0146-02
Within the Country	20 03 03	No	0.0 street-cleaning residues	D1	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Knockharley,Navan,Co.Meath,...,Ireland Ballymount Road,Walkinstown,Dublin 12,...,Ireland
Within the Country	15 01 04	No	12.2 metallic packaging mixed construction and demolition wastes other than those mentioned in 17 09 01, 17	R12	M	Weighed	Offsite in Ireland	Knockharley Landfill,W0146-02	Knockharley,Navan,Co.Meath,...,Ireland
Within the Country	17 09 04	No	188.76 09 02 and 17 09 03	R10	M	Weighed	Offsite in Ireland	Electrical Waste Management Ltd,WFP-DS-11-0014-05	Unit 648 Jordanstown Drive,Greenogue Business Park,Rathcoole,...,Ireland
Within the Country	19 12 02	No	22.68 ferrous metal	R12	M	Weighed	Offsite in Ireland	Ballynagran Landfill,W0165	Co. Wicklow,...,Ireland Clermont Business Park,Haynestown
Within the Country	19 12 04	No	113.26 plastic and rubber	D1	M	Weighed	Offsite in Ireland	Leinster Environmental,WFP-LH-11-0002-02	Td,Haggardstown Dundalk,Co. Louth,Ireland Cappagh Road,Finglas,Dublin 11,...,Ireland
Within the Country	19 12 04	No	50.72 plastic and rubber	R12	M	Weighed	Offsite in Ireland	Nurendale,W0261-02	Fassaroe,Bray,Co.
Within the Country	19 12 10	No	25.74 combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Greenstar Bray,W0053-03	Wicklow,...,Ireland Sarsfieldcourt Industrial Estate,Sarfields,Glanmire,C
Within the Country	19 12 10	No	29.3 combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Greenstar Cork,W0136-03	o. Cork,Ireland Millennium Business Park,Cappagh Road,Finglas,Dublin 11,Ireland
Within the Country	19 12 10	No	52.9 combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Greenstar Millennium,W0183-01	29 Sandholes Road,Cookstown,Co. Tyrone,BT80 9AR,United Kingdom
To Other Countries	19 12 10	No	888.28 combustible waste (refuse derived fuel) other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R1	M	Weighed	Abroad	Lafarge Tarmac Cement,P0052/04A	
Within the Country	19 12 12	No	20.94 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	D1	M	Weighed	Offsite in Ireland	Ballynagran Landfill,W0165	Co. Wicklow,...,Ireland
Within the Country	19 12 12	No	45.24 12 11 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19	R1	M	Weighed	Offsite in Ireland	Indaver,W0167-02	Carranstown,Duleek,Co.Meath,...,Ireland
Within the Country	19 12 12	No	459.04 12 11	D1	M	Weighed	Offsite in Ireland	Knockharley Landfill,W0146-02	Knockharley,Navan,Co.Meath,...,Ireland
Within the Country	20 01 40	No	41.6 metals	R12	M	Weighed	Offsite in Ireland	Electrical Waste Management Ltd,WFP-DS-11-0014-05	Unit 648 Jordanstown Drive,Greenogue Business Park,Rathcoole,...,Ireland
Within the Country	20 01 40	No	6.9 metals	R12	M	Weighed	Offsite in Ireland	Irish Packaging Recycling Ltd,W0263-01	Ballymount Road,Walkinstown,Dublin 12,...,Ireland
Within the Country	20 01 40	No	500.62 metals	R12	M	Weighed	Offsite in Ireland	Multimetals,WFP-WW-09-0014-01	Conway Port Industrial Estate,Bollamey,Murrough Co. Wicklow,...,Ireland
Within the Country	20 02 01	No	49.96 biodegradable waste	R3	M	Weighed	Offsite in Ireland	Enrich Kilcock,WFP/MH/08/0004/03	Larch Hill Stud,Newtownrathganley,Kilcock,Co. Meath,Ireland
Within the Country	20 03 03	No	170.72 street-cleaning residues	R11a	M	Weighed	Offsite in Ireland	Knockharley Landfill,W0146-02	Knockharley,Navan,Co.Meath,...,Ireland
Within the Country	20 03 07	No	22.12 bulky waste	D1	M	Weighed	Offsite in Ireland	Knockharley Landfill,W0146-02	Knockharley,Navan,Co.Meath,...,Ireland