



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

*Waste Licence Number W0140-03*

*Annual Environmental Report*

*01<sup>st</sup> January 2015 – 31<sup>st</sup> December 2015*

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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 t/a Panda

Address: Rathdrinagh  
Beauparc  
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. Noel 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 being considered by the Agency prior to implementation.

#### 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. In 2015 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.

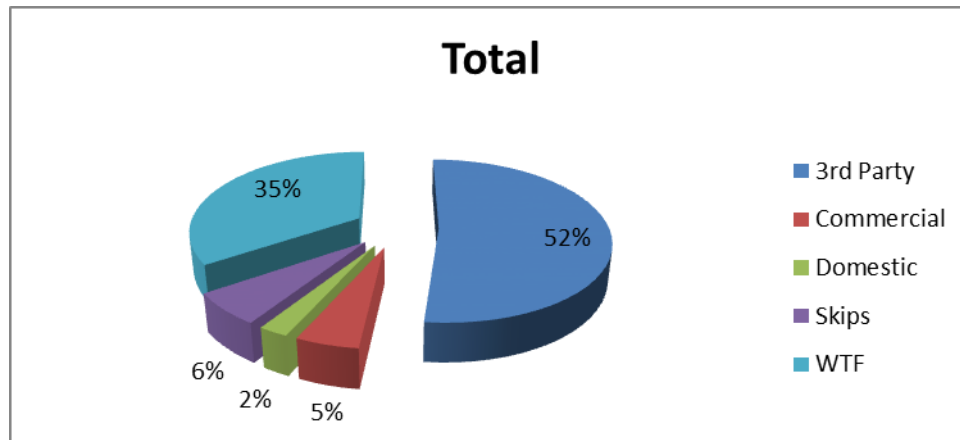
- Dust suppression sprayers at doorways into shed one and on the eastern boundary fence between the back-up weighbridge and the retail outlet to the north.
- One mobile rotary atomiser unit
- Dust suppression systems
- Hoses on site for dust suppression.
- Sprinkler system on biofilter and in-vessel compost tunnels.
- Truck wash.
- Fire Fighting Equipment.

## 2.0 Summary Information

### 2.1 Waste Received

The waste received at the facility for 2015 was 164,076 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.



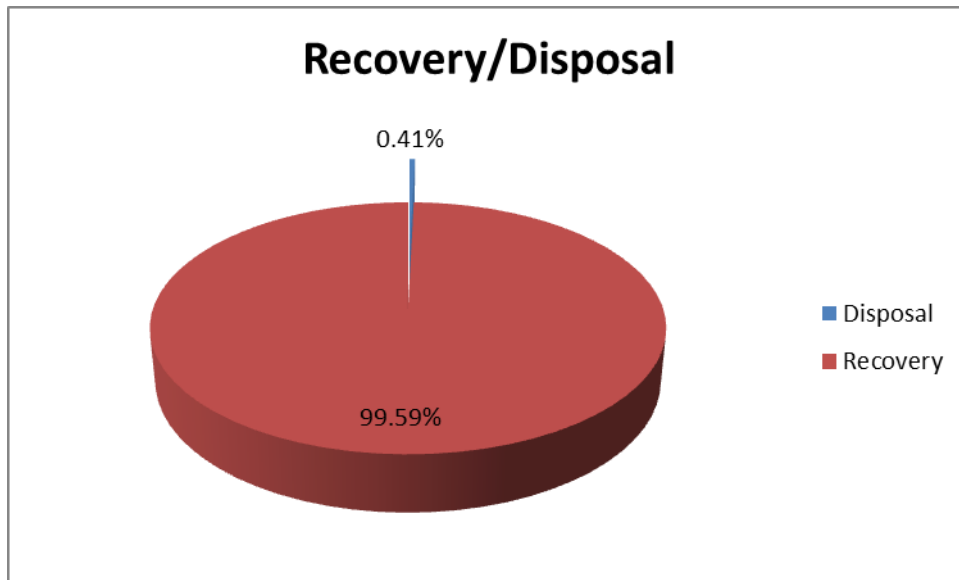
### 2.3 Waste Recovery Reports

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 W0140-03, 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*

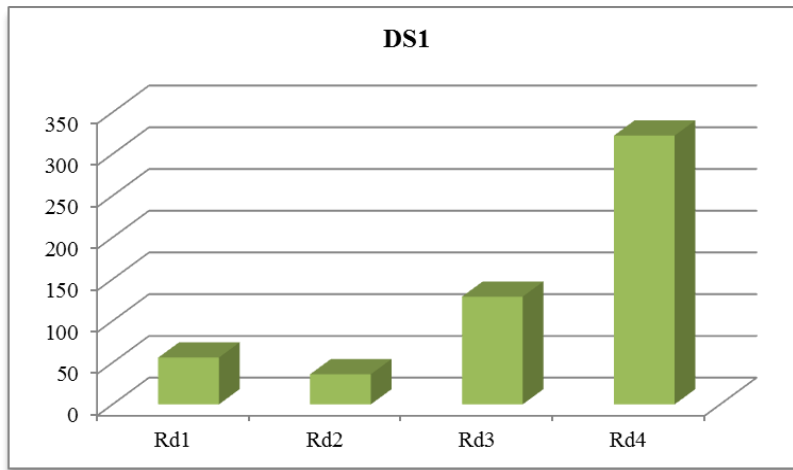
Surface water passes through a silt trap and oil interceptor prior to being discharged into a holding tank. The surface water monitoring point is located at the co-ordinates X/E 297456.080 Y/N 269143.030. Monitoring conducted during 2015 demonstrated that there is no contamination to the surface water 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. The proposal was submitted to the Agency for approval.

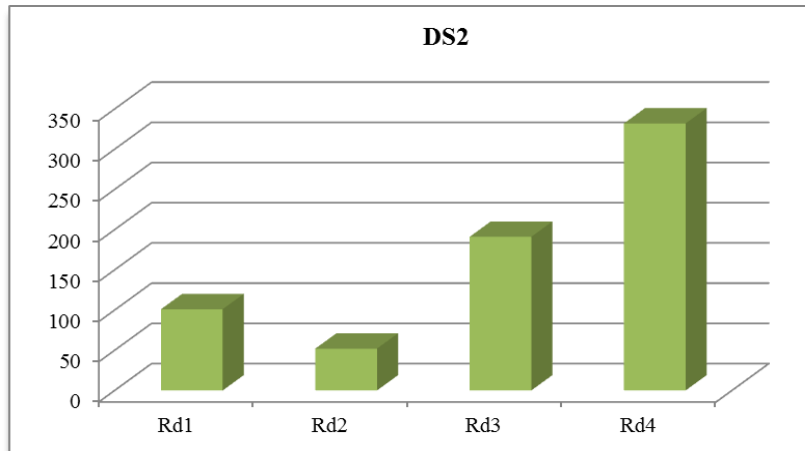
### *2.4.2 Dust Emissions*

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 2015.

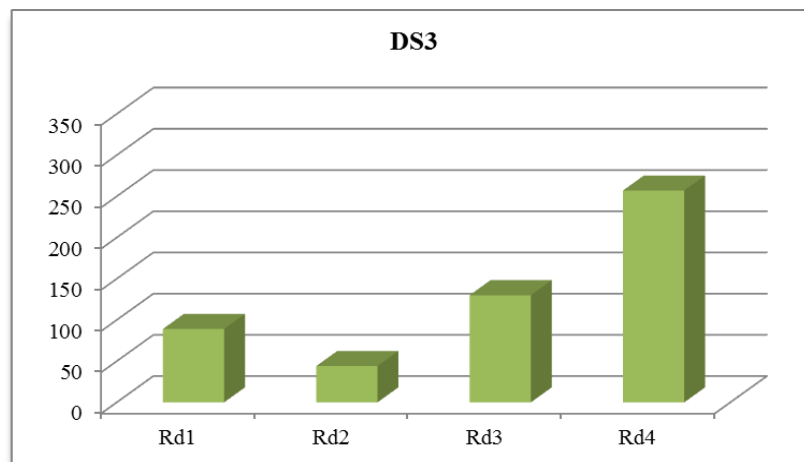
**Fig. 3:** Dust emission results for DS1



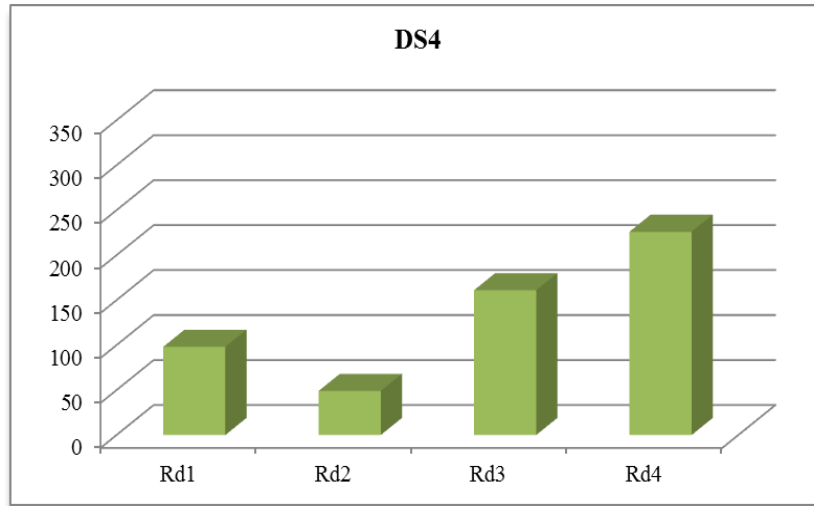
**Fig. 4:** Dust emission results for DS2



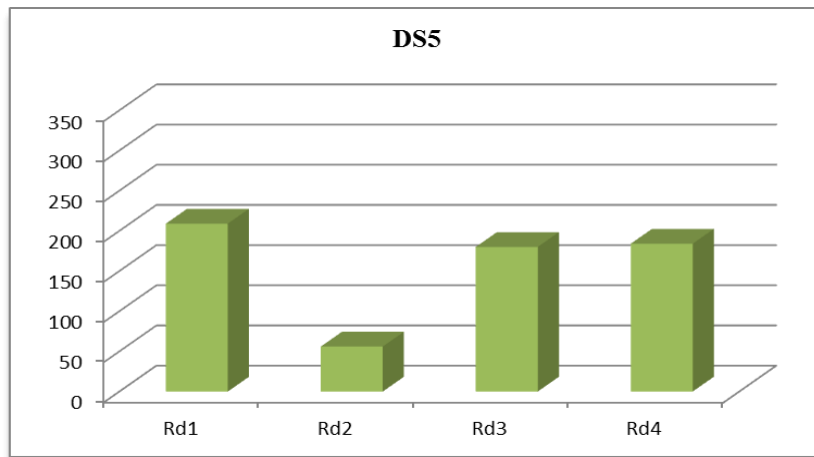
**Fig. 5:** Dust emission results for DS3



**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>. Dust emissions were within licenced ELV's for 2015.

### 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 16<sup>th</sup> February 2015– Intervals 30 minutes

| Location | Time  | Leq  | L10  | L90  | Comments  |
|----------|-------|------|------|------|---|
| NSL1     | 10.31 | 51.2 | 53.4 | 46.5 | N2 and slip road traffic. Panda noise source from site less than 46 dBA                           |
| NSI2     | 10.46 | 49.5 | 50.2 | 44.7 | N2 & slip road traffic. Panda waste site noise less than 45 dBA                                   |
| NSL3     | 11.53 | 76.2 | 78.1 | 56.8 | N2 road traffic with Panda site noise just audible at less than 49 dBA which was L <sub>min</sub> |
| NSL4     | 12.02 | 77.4 | 81.1 | 55.2 | N2 road traffic with Panda site noise inaudible at less than 50 dBA which was L <sub>min</sub> .  |

**Table 2:** Recorded Noise Levels dB(A) on 22<sup>nd</sup> July 2015– Intervals 30 minutes

| Location | Time  | Leq  | L10  | L90  | Comments  |
|----------|-------|------|------|------|---|
| NSL1     | 15.23 | 52.4 | 54.2 | 45.3 | N2 and slip road traffic. Panda noise source from site less than 45.3 dBA                         |
| NSL2     | 15.38 | 52.6 | 53.3 | 45.0 | N2 & slip road traffic. Panda waste site noise less than 45 dBA                                   |
| NSL3     | 16.46 | 74.8 | 79.4 | 55.2 | N2 road traffic with Panda site noise just audible at less than 48 dBA which was L <sub>min</sub> |
| NSL4     | 17.10 | 76.2 | 83.4 | 54.8 | N2 road traffic with Panda site noise inaudible at less than 49 dBA which was L <sub>min</sub>    |

**Table 3:** Recorded Noise Levels dB(A) on 22<sup>nd</sup> October 2015– Intervals 30 minutes

| Location | Time  | Leq  | L10  | L90  | Comments  |
|----------|-------|------|------|------|---|
| NSL1     | 14.00 | 55.0 | 57.2 | 50.3 | N2 and slip road traffic. Panda noise source from site less than 50 dBA |
| NSL2     | 14.35 | 53.8 | 56.5 | 47.9 | N2 & slip road traffic. Panda waste site noise less than 48 dBA         |

|      |       |      |      |      |  |
|------|-------|------|------|------|--|
| NSL3 | 16.00 | 75.1 | 79.9 | 54.7 | N2 road traffic with Panda site noise just audible at less than 48.6 dBA which was $L_{min}$ |
| NSL4 | 17.00 | 74.9 | 79.6 | 54.3 | N2 road traffic with Panda site noise inaudible at less than 48.1 dBA which was $L_{min}$    |

**Table 4:** Recorded Noise Levels dB(A) on 17<sup>th</sup> December 2015– Intervals 30 minutes

| Location | Time  | Leq  | L10  | L90  | Comments   |
|----------|-------|------|------|------|--|
| NSL1     | 09.28 | 53.8 | 55.2 | 49.3 | N2 and slip road traffic. Panda noise source from site less than 48 dBA                      |
| NSL2     | 09.36 | 52.6 | 55.7 | 48.4 | N2 & slip road traffic. Panda waste site noise less than 47 dBA                              |
| NSL3     | 10.27 | 76.5 | 79.2 | 53.8 | N2 road traffic with Panda site noise just audible at less than 48.1 dBA which was $L_{min}$ |
| NSL4     | 12.12 | 75.4 | 80.4 | 53.6 | N2 road traffic with Panda site noise inaudible at less than 47.4 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 2015. 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<br/>27/03/15</b> | <b>Result<br/>26/06/15</b> |
|--------------------------|-------------------------|----------------------------|----------------------------|
| Ammonia                  | mg/L as N               | 41.15                      | 75.23                      |
| Arsenic                  | ug/L                    | 13.76                      | 10.51                      |
| BOD                      | mg/L                    | 425                        | 125                        |
| Boron                    | ug/L                    | 286.6                      | <3.96                      |
| Cadmium                  | ug/L                    | 1.865                      | 0.445                      |
| Chloride                 | mg/L                    | 214.3                      | 126.47                     |
| Chromium                 | ug/L                    | 42.26                      | 9.692                      |
| COD                      | mg/L                    | 2040                       | 514                        |
| Copper                   | ug/L                    | 516.8                      | 119.3                      |
| Lead                     | ug/L                    | 116.4                      | 28.83                      |
| Mercury                  | ug/L                    | 0.337                      | 1.505                      |
| Mineral Oil              | ug/L                    | 882.51                     | <2.5                       |
| Nickel                   | ug/L                    | 68.85                      | 33.86                      |
| pH                       | pH units                | 6.5                        | 7.8                        |
| Selenium                 | ug/L                    | 3.721                      | <2.12                      |
| Solids (Total Suspended) | mg/L                    | 1252                       | 251                        |
| Sulphate                 | mg/L as SO <sub>4</sub> | 586.86                     | 253.47                     |
| Zinc                     | ug/L                    | 917.3                      | 229.4                      |

#### *2.4.5 Compost Analysis*

As part of the monitoring programme Panda must test Compost bi-annually. No analysis was carried out in 2015 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 2015 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 2015.

| Resource    |                  |
|-------------|------------------|
| Gas Oil     | 244,147.5 Litres |
| Electricity | 4,053.66 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. Panda applied to the Agency to review our current Waste Licence W0140-03 in 2009 for this development.

##### 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**

| Description                 | Duty Capacity                    |
|-----------------------------|----------------------------------|
| 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 Volve 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 D.

### 3.0 Environmental objectives and targets – 2015 and 2016.

| No | Objective & Target   | Method of Achievement  | Responsibility                    | 2015 Programme | Complete in 2015 | 2016 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 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            | Continuous     | Continuous       | Continuous     |
| 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 '15        | Completed in '15 | Aug '16        |
| 7  | <b>To control any emergencies that may arise at the facility</b>               | Review and implement an Emergency Response Procedure   | Environmental Manager             | Aug '15        | Completed in '15 | Aug '16        |

| No | Objective & Target  | Method of Achievement  | Responsibility                           | 2015 Programme | Complete in 2015    | 2016 programme                    |
|----|---|--|--|----------------|---------------------|-----------------------------------|
| 8  | <b>Prepare a Standard Operating Procedures Manual</b>   | Review the SOP manual relevant to site operations                                    | Environmental Dept                       | Aug '15        | Completed in '15    |                                   |
| 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   | July '15       | Completed in '15    | Sept '16                          |
| 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                               | Dec '14        | Completed in Q4 '15 | Carry out test programme March 16 |
| 11 | <b>Complete shed 3 for RDF/SRF</b>  | Awaiting Agency waste licence review   | Environmental Manager                    | Lodged 2009    | Ongoing             | Expected 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>Yard Sweeper</b>   | Purchase Permanent yard sweeper for yard   | Maintenance Dept                         | Q1 '15         | '15                 |                                   |

### 3.1 Completion of Environmental Targets & Objectives 2015

Panda will endeavour to complete the targets not already completed in 2016. The targets not met in 2015, were due to the continued expansion of Panda’s waste recovery activities, such as reviewing the licence.

### 3.2 Summary of reported incidents and complaints

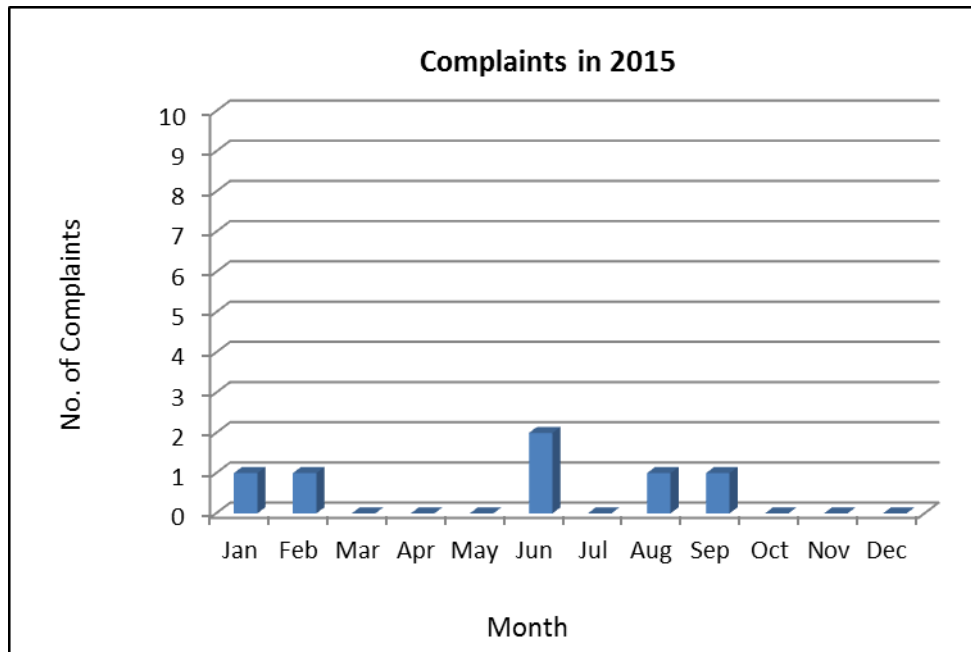
#### 3.2.1. Reported Incidents Summary

There was no incident in 2015.

#### 3.2.2 Complaints:

Fig. 8 illustrates complaints either made directly to the Agency or to Panda’s facility for each month during 2015. There were a total of 6 complaints made in 2015 as opposed to 45 in 2014. 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 2015. 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 2015 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; SOP No 22 (Daily Clean Down) was developed in 2015.

## **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 ([W0140-03](#), W0261-01, W0263-01, W0039-02, W0238-01 and W0003-03)
- Multi-regional Waste collection permit (NWCPO-14-11326-02),
- 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 2015 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.

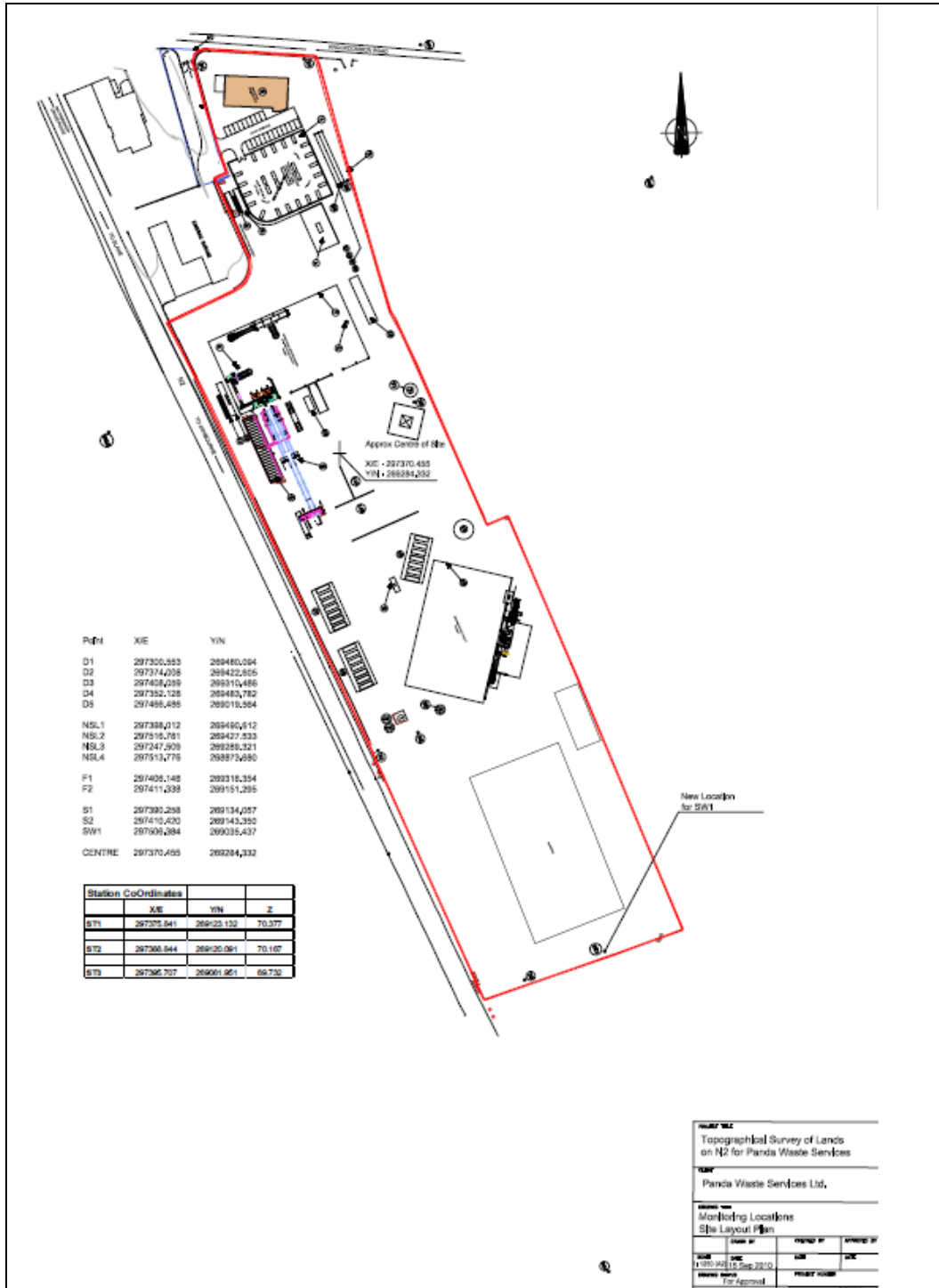
Advertisements are taken out regularly in the local newspapers informing customers of the services that Panda offer.. Tours of the facilities are given to schools and to members of the public upon request. During the reporting period there were no requests from members of the public to inspect any Environmental Records.

The information in the Annual Environmental Report is true and accurate representation of the activities conducted by Panda in 2015.



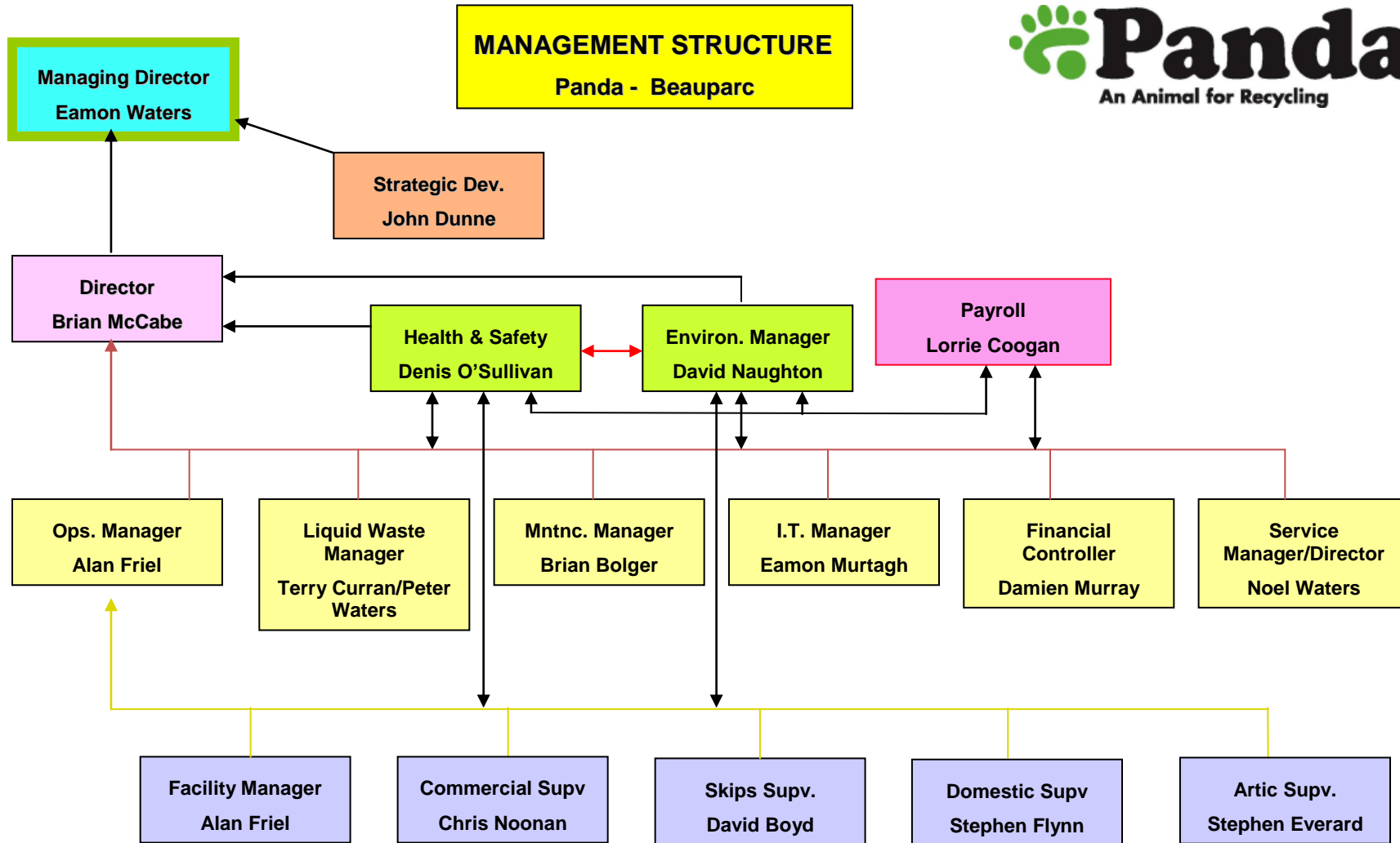
# Appendix A

## Site Layout



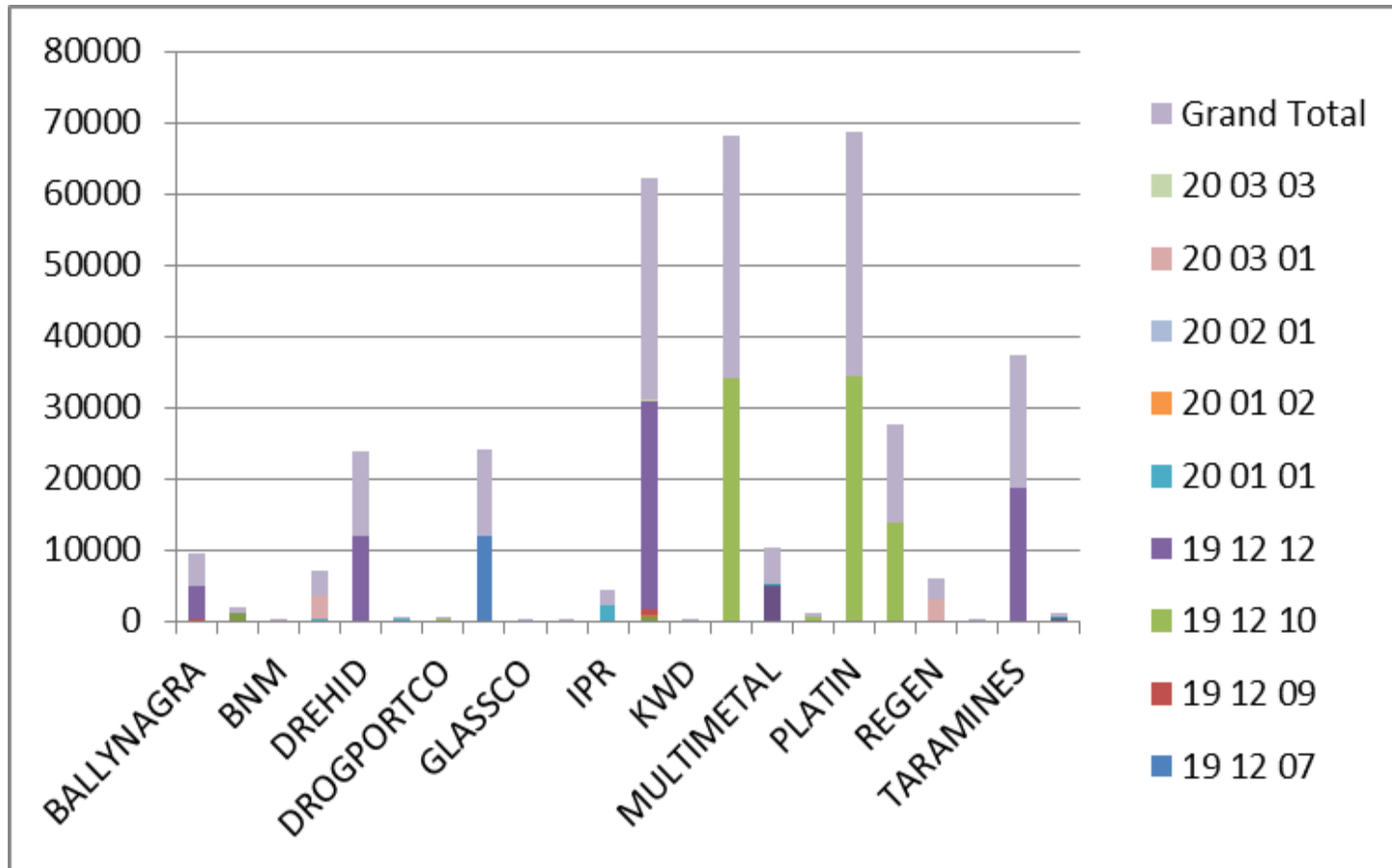
# Appendix B

## Organisation Chart




# Appendix C

## Outgoing by Destination



# Appendix D

## PRTR Emissions



W0140\_2015 PRTR.xls | Return Year : 2015 |

[Guidance to completing the PRTR workbook](#)

### PRTR Returns Workbook

Version 1.1.19

|   |   |
|---|---|
| <b>REFERENCE YEAR</b>   | 2015  |
| <b>1. FACILITY IDENTIFICATION</b>   |   |
| Parent Company Name   | Nurondale   |
| Facility Name   | Nurondale (Hathdrinagh)   |
| PRTR Identification Number  | W0140   |
| Licence Number  | W0140-03  |
| <b>Classes of Activity</b>  |   |
| <b>No.</b>  | <b>class name</b>   |
| -   | Refer to PRTR class activities below  |
|   |   |
| Address 1   | Hathdrinagh   |
| Address 2   | Beauparc  |
| Address 3   | Navan   |
| Address 4   |   |
|   | Moath   |
| 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@nurondale.ie   |
| AER Returns Contact Position  | Environmental Manager   |
| AER Returns Contact Telephone Number  | 1890626262  |
| AER Returns Contact Mobile Phone Number   | 0469024189  |
| AER Returns Contact Fax Number  |   |
| Production Volume   | 0.0   |
| Production Volume Units   |   |
| Number of Installations   | 0   |
| Number of Operating Hours in Year   | 0   |
| Number of Employees   | 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  |
| <b>2. PRTR CLASS ACTIVITIES</b>   |   |
| <b>Activity Number</b>  | <b>Activity Name</b>  |
| 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?   | 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?  |   |
| <b>4. WASTE IMPORTED/ACCEPTED ONTO SITE</b>   |   |
| 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 (Rathdringht) | Filename: W0140\_2015 PRTR.xls | Return Year: 2015 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

| POLLUTANT     |      | METHOD |             |                            | Please enter all quantities in this section in KGs |                  |                  |                  |                  |                   |                        |                      |      |      |     |     |
|---------------|------|--------|-------------|----------------------------|--|------------------|------------------|------------------|------------------|-------------------|------------------------|----------------------|------|------|-----|-----|
| Pollutant No. | Name | M/C/E  | Method Code | Designation or Description | DS1  | DS2              | DS3              | DS4              | DS5              | T (Total) KG/Year | A (Accidental) KG/Year | F (Fugitive) KG/Year |      |      |     |     |
| 210           | Dust | M      | ALT         | Grain/moist                | Emission Point 1                                   | Emission Point 2 | Emission Point 3 | Emission Point 4 | Emission Point 5 | 0.05              | 0.06                   | 0.05                 | 0.06 | 0.27 | 0.0 | 0.0 |

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

Additional Data Requested from Landfill operators

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

| Landfill:  |     | Method Used |             |                            |                                     |
|--|-----|-------------|-------------|----------------------------|-------------------------------------|
| Please enter summary data on the quantities of methane flared and/ or utilised |     | M/C/E       | Method Code | Designation or Description | Facility Total Capacity m3 per hour |
| Total estimated methane generation (as per site model)                         | 0.0 |             |             |                            | NA                                  |
| Methane flared   | 0.0 |             |             |                            | 0.0 (Total Flaring Capacity)        |
| Methane utilised in original   | 0.0 |             |             |                            | 0.0 (Total Utilising Capacity)      |
| Net methane emission (as reported in Section A above)                          | 0.0 |             |             |                            | NA                                  |

4.2 RELEASES TO WATERS [Link to previous years emissions data](#)

| PRTR#: W0140 | Facility Name: Nurendale (Rathdringht) | Filename: W0140\_2015 PRTR.xls | Return Year: 2015 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

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

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

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0140 | Facility Name : Nurendale (Rathdrinagh) | Filename : W0140\_2015 PRTR.xls | R

30/03/2016 13:30

SECTION A : PRTR POLLUTANTS

| OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER |                                |        |             |                            | Please enter all quantities in this section in KGs |                   |                        |                      |
|--|--------------------------------|--------|-------------|----------------------------|--|-------------------|------------------------|----------------------|
| POLLUTANT  |                                | METHOD |             |                            | QUANTITY   |                   |                        |                      |
| No. Annex II   | Name                           | M/C/E  | Method Code | Designation or Description | Emission Point 1                                   | T (Total) KG/Year | A (Accidental) KG/Year | F (Fugitive) KG/Year |
| 06   | Ammonia (NH3)                  | M      | ALT         | Colorimetry                | 252.54   | 252.54            | 0.0                    | 0.0                  |
| 17   | Arsenic and compounds (as As)  | M      | ALT         | ICPMS                      | 0.05   | 0.05              | 0.0                    | 0.0                  |
| 18   | Cadmium and compounds (as Cd)  | M      | ALT         | ICPMS                      | 0.01   | 0.01              | 0.0                    | 0.0                  |
| 79   | Chlorides (as Cl)              | M      | ALT         | Colorimetry                | 739.47   | 739.47            | 0.0                    | 0.0                  |
| 19   | Chromium and compounds (as Cr) | M      | ALT         | ICPMS                      | 0.11   | 0.11              | 0.0                    | 0.0                  |
| 20   | Copper and compounds (as Cu)   | M      | ALT         | ICPMS                      | 1.38   | 1.38              | 0.0                    | 0.0                  |
| 23   | Lead and compounds (as Pb)     | M      | ALT         | ICPMS                      | 0.32   | 0.32              | 0.0                    | 0.0                  |
| 21   | Mercury and compounds (as Hg)  | M      | ALT         | ICPMS                      | 0.0  | 0.0               | 0.0                    | 0.0                  |
| 22   | Nickel and compounds (as Ni)   | M      | ALT         | ICPMS                      | 0.22   | 0.22              | 0.0                    | 0.0                  |
| 24   | Zinc and compounds (as Zn)     | M      | ALT         | ICPMS                      | 2.49   | 2.49              | 0.0                    | 0.0                  |

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

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

| OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER |                  |        |             |                            | Please enter all quantities in this section in KGs |                   |                        |                      |
|--|------------------|--------|-------------|----------------------------|--|-------------------|------------------------|----------------------|
| POLLUTANT  |                  | METHOD |             |                            | QUANTITY   |                   |                        |                      |
| Pollutant No.  | Name             | M/C/E  | Method Code | Designation or Description | Emission Point 1                                   | T (Total) KG/Year | A (Accidental) KG/Year | F (Fugitive) KG/Year |
| 303  | BOD              | M      | ALT         | Electrometry               | 1193.5   | 1193.5            | 0.0                    | 0.0                  |
| 374  | Boron            | M      | ALT         | ICPMS                      | 0.62   | 0.62              | 0.0                    | 0.0                  |
| 306  | COD              | M      | ALT         | Colorimetry                | 5542.18  | 5542.18           | 0.0                    | 0.0                  |
| 324  | Mineral oils     | M      | SSC         | GC-FID                     | 1.92   | 1.92              | 0.0                    | 0.0                  |
| 370  | Selenium         | M      | ALT         | ICPMS                      | 0.01   | 0.01              | 0.0                    | 0.0                  |
| 240  | Suspended Solids | M      | ALT         | Filtration/Drying @104C    | 3261.51  | 3261.51           | 0.0                    | 0.0                  |
| 343  | Sulphate         | M      | ALT         | Colorimetry                | 1823.52  | 1823.52           | 0.0                    | 0.0                  |

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

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : W0140 | Facility Name : Nurendale (Rathdrinagh) | Filename : W0140\_2015 PRTR.xls | Return Year : 2015 |

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SECTION A : PRTR POLLUTANTS

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

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

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

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

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

(PRTR) - W0140 | Facility Name - Nuravale (Rathfringht) | Filenames - W0140\_2015 PRTR.xls | Return Year - 2015 |

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Please enter all quantities on this sheet in Tonnes

| 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 License/Permit No of Next Destination Facility |  | Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY) | Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY) |
|----------------------|---------------------|-----------|----------------------------|--|---------------------------|-------------|-------------|-----------------------|---|--|--|--|
|                      |                     |           |                            |  |                           | M/G/E       | Method Used |                       | Haz Waste - Name and License/Permit No of Recover/Disposer          | Haz Waste - Address of Next Destination Facility<br>Non-Haz Waste: Address of Recover/Disposer |  |  |
| Within the Country   | 15 01 01            | No        |                            | paper and cardboard packaging  | R12                       | M           | Weighod     | Offsite in Ireland    | Irish Packaging Recycling Ltd,W0263-01                              | Ballymount Road,Walkinstown,Dublin 12,,Ireland   | Conway Port Industrial Estate,Bollamoy,Murrough Co. Wicklow,,Ireland                           |  |
| Within the Country   | 15 01 04            | No        | 81.54                      | metallic packaging   | R12                       | M           | Weighod     | Offsite in Ireland    | Multimetals,WFP-WW-09-0014-01                                       | Wilton Waste,WFP-CN-10-0005-01(1)  | Kiffagh,Crosserlough,Ballya mesduff,Co. Cavan,Ireland  |  |
| Within the Country   | 15 01 04            | No        |                            | metallic packaging   | R12                       | M           | Weighod     | Offsite in Ireland    | Irish Packaging Recycling Ltd,W0263-01                              | Ballymount Road,Walkinstown,Dublin 12,,Ireland   |  |  |
| Within the Country   | 16 01 03            | No        | 12.96                      | end-of-life tyres  | R12                       | M           | Weighod     | Offsite in Ireland    | Farmas,N/a  | .....,Ireland  |  |  |
| Within the Country   | 16 01 03            | No        |                            | gases in pressure containers other than those mentioned in 16 05 04                                    | R13                       | M           | Weighod     | Offsite in Ireland    | Calor Gas,,   | .....,Ireland  |  |  |
| Within the Country   | 16 05 05            | No        |                            | mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06                 | R10                       | M           | Weighod     | Offsite in Ireland    | Bahan Land Restoration Ltd,W0247-01                                 | Blackhall,Punchestown,Naas Co. Kildara,Ireland   |  |  |
| Within the Country   | 17 01 07            | No        |                            | soil and stones other than those mentioned in 17 05 03   | R10                       | M           | Weighod     | Offsite in Ireland    | Bahan Land Restoration Ltd,W0247-01                                 | Blackhall,Punchestown,Naas Co. Kildara,Ireland   |  |  |
| Within the Country   | 17 05 04            | No        | 1001.0                     | soil and stones other than those mentioned in 17 05 03   | R10                       | M           | Weighod     | Offsite in Ireland    | Nurandala,W0261-01  | Cappagh Road,Finglas,Dublin 11,,Ireland  |  |  |
| Within the Country   | 17 05 04            | No        |                            | soil and stones other than those mentioned in 17 05 03   | R13                       | M           | Weighod     | Offsite in Ireland    | Nurandala,W0261-01  | Cappagh Road,Finglas,Dublin 11,,Ireland  |  |  |
| To Other Countries   | 17 08 02            | No        |                            | gypsum-based construction materials other than those mentioned in 17 08 01                             | R12                       | M           | Weighod     | Abroad                | Nurandala,W0261-01  | 21A Baldoyle Industrial Estate,Baldoyle,Dublin 13,,Ireland                                     |  |  |
| Within the Country   | 17 09 04            | No        |                            | mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03 | R12                       | M           | Weighod     | Offsite in Ireland    | Bammore Demolition,WPT 129  |  |  |  |
| Within the Country   | 17 09 04            | No        |                            | mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03 | R12                       | M           | Weighod     | Offsite in Ireland    | AES Navan,W0131   | Navan,Co. Meath,,Ireland   |  |  |
| Within the Country   | 19 12 02            | No        | 4754.2                     | ferrous metal  | R12                       | M           | Weighod     | Offsite in Ireland    | Multimetals,WFP-WW-09-0014-01                                       | Conway Port Industrial Estate,Bollamoy,Murrough Co. Wicklow,,Ireland                           |  |  |
| Within the Country   | 19 12 02            | No        |                            | ferrous metal  | R13                       | M           | Weighod     | Offsite in Ireland    | Panda Cappagh,W0261-01  | Cappagh Road,Finglas,Dublin 11,,Ireland  |  |  |
| Within the Country   | 19 12 02            | No        | 187.42                     | ferrous metal  | R12                       | M           | Weighod     | Offsite in Ireland    | Wilton Waste,WFP-CN-10-0005-01(1)                                   | Kiffagh,Crosserlough,Ballya mesduff,Co. Cavan,Ireland  |  |  |
| Within the Country   | 19 12 03            | No        | 236.96                     | non-ferrous metal  | R12                       | M           | Weighod     | Offsite in Ireland    | Multimetals,WFP-WW-09-0014-01                                       | Conway Port Industrial Estate,Bollamoy,Murrough Co. Wicklow,,Ireland                           |  |  |
| Within the Country   | 19 12 03            | No        | 75.6                       | non-ferrous metal  | R12                       | M           | Weighod     | Offsite in Ireland    | Dublin Regional Recovery Facility,W0238-01                          | Lower,Ballymount Dublin 12,,Ireland  |  |  |
| Within the Country   | 19 12 03            | No        | 346.37                     | non-ferrous metal  | R12                       | M           | Weighod     | Offsite in Ireland    | Wilton Waste,WFP-CN-10-0005-01(1)                                   | Kiffagh,Crosserlough,Ballya mesduff,Co. Cavan,Ireland  |  |  |
| Within the Country   | 19 12 03            | No        | 8.36                       | non-ferrous metal  | R12                       | M           | Weighod     | Offsite in Ireland    | Irish Packaging Recycling Ltd,W0263-01                              | Ballymount Road,Walkinstown,Dublin 12,,Ireland   |  |  |
| Within the Country   | 19 12 04            | No        |                            | plastic  | R12                       | M           | Weighod     | Offsite in Ireland    | Irish Packaging Recycling Ltd,W0263-01                              | Ballymount Road,Walkinstown,Dublin 12,,Ireland   |  |  |
| Within the Country   | 19 12 04            | No        |                            | plastic and rubber   | R12                       | M           | Weighod     | Offsite in Ireland    | Polymer Recovery Ltd,WFP-WW-12-0030-01                              | The Murrough,Wicklow,Co. Wicklow,,Ireland  |  |  |

|                    |          |    |   |     |   |         |                    |   |  |
|--------------------|----------|----|---|-----|---|---------|--------------------|---|--|
| Within the Country | 19 12 04 | No | plastic and rubber                                  | R12 | M | Waighad | Offsite in Ireland | Whealy 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 | plastic and rubber                                  | D1  | M | Waighad | Offsite in Ireland | Bord na Mona Drahid Landfill,W0201-03                       | Kilnagh Upper,Carbury,Co. Kildara,,Ireland   |
| Within the Country | 19 12 07 | No | 11997.22 wood other than that mentioned in 19 12 06 | R12 | M | Waighad | Offsite in Ireland | Eirabloc,Ck(S) 503/07 O'Toole Composting,WFP. CW-10-0003-01 | Lissarda,Co. Cork,,Ireland Ballintrae,Co. Carlow,,Ireland                            |
| Within the Country | 19 12 07 | No | wood other than that mentioned in 19 12 06          | R13 | M | Waighad | Offsite in Ireland | Knockharley Landfill,W0146-02                               | Knockharley,Navan,Co. Meath,,Ireland   |
| Within the Country | 19 12 07 | No | wood other than that mentioned in 19 12 06          | R10 | M | Waighad | Offsite in Ireland | Thornton's Recycling,WFP-KE-10-0061-01                      | Oldmilltown ,Kil,Co. Kildara,,Ireland  |
| Within the Country | 19 12 07 | No | wood other than that mentioned in 19 12 06          | R13 | M | Waighad | Offsite in Ireland | Whiteriver Landfill,W0060-02                                | Dunleer,Co. Louth,,Ireland   |
| Within the Country | 19 12 07 | No | wood other than that mentioned in 19 12 06          | R12 | M | Waighad | Offsite in Ireland | Clonmal Waste Dispos,WFP-TS-11-0001-01                      | Lawlasstown,Clonmal,Co. Tipperary,,Ireland   |
| Within the Country | 19 12 07 | No | wood other than that mentioned in 19 12 06          | R3  | M | Waighad | Offsite in Ireland | Acom Recycling Ltd,W0249-01                                 | Ballybag,Litlston,Co. Tipperary,,Ireland   |
| Within the Country | 19 12 07 | No | wood other than that mentioned in 19 12 06          | R12 | M | Waighad | Offsite in Ireland | Monaghan County Council,W0020-01                            | Scotchcorner Landfill,Lettorbana,Annyella, Castlablainay Co. Monaghan,Ireland        |
| Within the Country | 19 12 09 | No | 576.1 minerals (for example sand, stones)           | R10 | M | Waighad | Offsite in Ireland | Knockharley Landfill,W0146-02                               | Knockharley,Navan,Co. Meath,,Ireland   |
| Within the Country | 19 12 09 | No | Rubble  | R10 | M | Waighad | Offsite in Ireland | Whiteriver Landfill,W0060-02                                | Dunleer,Co. Louth,,Ireland   |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R13 | M | Waighad | Offsite in Ireland | Arthurstown Landfill,W0004-04                               | Arthurstown ,Kil,Co. Kildara,,Ireland  |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R13 | M | Waighad | Offsite in Ireland | Bord na Mona Drahid Landfill,W0201-03                       | Kilnagh Upper,Carbury,Co. Kildara,,Ireland   |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R13 | M | Waighad | Offsite in Ireland | AES Navan,W0131   | Navan,Co. Meath,,Ireland   |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R12 | M | Waighad | Offsite in Ireland | Bammore Demolition,WPT 129                                  | 21A Baldyle Industrial Estate,Baldyle,Dublin 13,,Ireland                             |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R13 | M | Waighad | Offsite in Ireland | Panda Ballymount,W0039-02                                   | Ballymount Cross,Tallaght,Dublin 24,,Ireland   |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R13 | M | Waighad | Offsite in Ireland | Whiteriver Landfill,W0060-02                                | Dunleer,Co. Louth,,Ireland   |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R12 | M | Waighad | Offsite in Ireland | Enrich ,WFP-MH-08-0004-02                                   | Nowtownrathganley,Kilcock, Co. Meath,,Ireland  |
| Within the Country | 19 12 09 | No | End of Waste rubble                                 | R13 | M | Waighad | Offsite in Ireland | Farmers,N/a   | ,,,,,Ireland Cappagh Road,Finglas,Dublin 11,,Ireland                                 |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R13 | M | Waighad | Offsite in Ireland | Nurendale,W0261-01  | Gortadroma Landfill,Ballynahill,Co. Limerick,,Ireland                                |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R13 | M | Waighad | Offsite in Ireland | Limerick County Council,W0017-04                            | Scotchcorner Landfill,Lettorbana,Annyella, Castlablainay Co. Monaghan,Ireland        |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R13 | M | Waighad | Offsite in Ireland | Monaghan County Council,W0020-01                            | Ballymount Cross,Tallaght,Dublin 24,,Ireland   |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R13 | M | Waighad | Offsite in Ireland | Nurendale,W0039-02  | Ballymount Road,Walkinstown,Dublin 12,,Ireland                                       |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R10 | M | Waighad | Offsite in Ireland | Irish Packaging Recycling Ltd,W0263-01                      | Coranura,Cootehill RD,Cavan,Co. Cavan,Ireland  |
| Within the Country | 19 12 09 | No | minerals (for example sand, stones)                 | R10 | M | Waighad | Offsite in Ireland | Coranura Landfill,W0077-04                                  | Knockumber,Navan,Co. Meath,,Ireland  |
| Within the Country | 19 12 09 | No | 116.78 minerals (for example sand, stones)          | R10 | M | Waighad | Offsite in Ireland | Tara Mines,P0516-03   | Meath,,Ireland Crag Avenue,Clondalkin Industrial Estate,Condalkin Co Dublin,,Ireland |
| Within the Country | 19 12 10 | No | combustible waste (refuse derived fuel)             | R12 | M | Waighad | Offsite in Ireland | Greyhound,W0205-01  |  |



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| Within the Country | 19 12 10 | No | 34015.73 | combustible waste (refuse derived fuel)   | R1  | M | Waighed | Offsite in Ireland | Lagan Cement ,P0487-05                     | Kilaskillon,Kinnogad,Co. Moath, ,Ireland<br>Tom Ross Point Facility,Baltray Road,Drogheda,Co. Louth,Ireland |
| Within the Country | 19 12 10 | No | 315.24   | combustible waste (refuse derived fuel)   | R13 | M | Waighed | Offsite in Ireland | Drogheda Port Co.,WFP-LH-11-0006-01        | Carranstown,Duleek,Co. Moath, ,Ireland  |
| Within the Country | 19 12 10 | No |          | combustible waste (refuse derived fuel)   | R1  | M | Waighed | Offsite in Ireland | Indavor,W0167-02                           | Platin,Drogheda,Co. Moath, ,Ireland   |
| Within the Country | 19 12 10 | No | 34287.31 | combustible waste (refuse derived fuel)   | R1  | M | Waighed | Offsite in Ireland | Irish Cement,P0030                         | Ballymount Baling Station,Ballymount Road,Walkinstown,Dublin 12,Ireland                                     |
| Within the Country | 19 12 10 | No |          | combustible waste (refuse derived fuel)   | R12 | M | Waighed | Offsite in Ireland | South Dublin Baling Station,W0003          | Ballymount Cross,Tallaght,Dublin 24, ,Ireland   |
| Within the Country | 19 12 10 | No |          | combustible waste (refuse derived fuel)   | R13 | M | Waighed | Offsite in Ireland | Panda Ballymount,W0039-02                  | Stephanstown Business Park,Balbriggan,Co. Dublin , ,Ireland   |
| To Other Countries | 19 12 10 | No | 485.12   | combustible waste (refuse derived fuel)   | R1  | M | Waighed | Abroad             | Pacon,WFP-FG-14-0001-01                    | Ballymount Cross,Tallaght,Dublin 24, ,Ireland   |
| Within the Country | 19 12 10 | No |          | combustible waste (refuse derived fuel)   | R1  | M | Waighed | Offsite in Ireland | Nurandala,W0039-02                         | Crag Avenue,Clondalkin Industrial Estate,Clondalkin Co Dublin, ,Ireland                                     |
| Within the Country | 19 12 12 | No |          | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 | R12 | M | Waighed | Offsite in Ireland | Grayhound,W0205-01                         | Shephards Drive,Cambano Industrial Estate,Nowry Co. Down,BT35 6JQ,Ireland                                   |
| Within the Country | 19 12 12 | No |          | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 | R1  | M | Waighed | Offsite in Ireland | Rogen,44110                                | Killean Road,Ballyformot,Dublin 10, ,Ireland  |
| Within the Country | 19 12 12 | No |          | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 | R12 | M | Waighed | Offsite in Ireland | Padraig Thornton Waste Disposal Ltd,W0044  | Ballymount Cross,Tallaght,Dublin 24, ,Ireland   |
| Within the Country | 19 12 12 | No |          | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 | R13 | M | Waighed | Offsite in Ireland | Panda Ballymount,W0039-02                  | Middleton,Co. Cork, , ,Ireland  |
| Within the Country | 19 12 12 | No |          | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 | R12 | M | Waighed | Offsite in Ireland | Wiser, ,                                   | Tom Ross Point Facility,Baltray Road,Drogheda,Co. Louth,Ireland   |
| Within the Country | 19 12 12 | No | 4362.14  | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 | R10 | M | Waighed | Offsite in Ireland | Ballynagran Landfill,W0165                 | Co. Wicklow, , , ,Ireland   |
| Within the Country | 19 12 12 | No |          | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 | R12 | M | Waighed | Offsite in Ireland | Dublin Regional Recovery Facility,W0238-01 | Martywall Industrial Estate,Ballymount Road Lower,Ballymount Dublin 12, ,Ireland                            |
| Within the Country | 19 12 12 | No | 11875.65 | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 | R10 | M | Waighed | Offsite in Ireland | Bord na Mona Drahid Landfill,W0201-03      | Killinagh Upper,Carbury,Co. Kildara, ,Ireland   |
| Within the Country | 19 12 12 | No |          | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 | R10 | M | Waighed | Offsite in Ireland | Limerick County Council,W0017-04           | Gortadroma Landfill,Ballynahill,Co. Limerick, ,Ireland  |
| Within the Country | 19 12 12 | No |          | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11 | R12 | M | Waighed | Offsite in Ireland | Irish Packaging Recycling Ltd,W0263-01     | Ballymount Road,Walkinstown,Dublin 12, ,Ireland   |

|                    |          | other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 |   |     |   |         |                    |  |  |
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| Within the Country | 19 12 12 | No   | 19546.02 11                             | R10 | M | Waighad | Offsite in Ireland | Tara Mines,P0516-03                        | Knockumber,Navan,Co. Meath, Ireland  |
| Within the Country | 20 01 01 | No   | 2094.02 paper and cardboard             | R12 | M | Waighad | Offsite in Ireland | Irish Packaging Recycling Ltd,W0263-01     | Ballymount Road,Walkinstown,Dublin 12, Ireland                                 |
| Within the Country | 20 01 01 | No   | 302.32 paper and cardboard              | R12 | M | Waighad | Offsite in Ireland | Dublin Regional Recovery Facility,W0238-01 | Marywill Industrial Estate,Ballymount Road Lower,Ballymount Dublin 12, Ireland |
| Within the Country | 20 01 02 | No   | 0.0 glass                               | R12 | M | Waighad | Offsite in Ireland | Agnail,Ira/Ag117/12                        | Unit 9 Rosfield,50 Rosemount Business Park,Ballycoolfin ,Dublin 11,Ireland     |
| Within the Country | 20 01 06 | No   | biodegradable kitchen and canteen waste | R13 | M | Waighad | Offsite in Ireland | Nurondala,W0039-02                         | Ballymount Cross,Tallaght,Dublin 24, Ireland                                   |
| Within the Country | 20 01 25 | No   | edible oil and fat                      | R3  | M | Waighad | Offsite in Ireland | Slano Farm Oils,WFP-MH-10-0005-01          | Slano,Co. Meath, Ireland   |
| Within the Country | 20 01 30 | No   | plastics                                | R12 | M | Waighad | Offsite in Ireland | Irish Packaging Recycling Ltd,W0263-01     | Ballymount Road,Walkinstown,Dublin 12, Ireland                                 |
| Within the Country | 20 01 30 | No   | plastics                                | R12 | M | Waighad | Offsite in Ireland | Nurondala,W0261-01                         | Cappagh Road,Finglas,Dublin 11, Ireland  |
| Within the Country | 20 02 01 | No   | biodegradable waste                     | R13 | M | Waighad | Offsite in Ireland | Nurondala,W0039-02                         | Ballymount Cross,Tallaght,Dublin 24, Ireland                                   |
| Within the Country | 20 03 01 | No   | mixed municipal waste                   | D1  | M | Waighad | Offsite in Ireland | Ballooly Landfill,W0009-03                 | Ballooly Landfill,Lusk,Co. Dublin, Ireland                                     |
| Within the Country | 20 03 01 | No   | 3130.19 Dry Recyclables                 | R12 | M | Waighad | Offsite in Ireland | Dublin Regional Recovery Facility,W0238-01 | Lower,Ballymount Dublin 12, Ireland  |
| Within the Country | 20 03 01 | No   | 43.52 Dry Recyclables                   | R12 | M | Waighad | Offsite in Ireland | Killamay Waste Disposal,W0217-01           | Aughacourreen,Killamay,Co. Kerry, Ireland                                      |
| Within the Country | 20 03 01 | No   | 26.18 mixed municipal waste             | D1  | M | Waighad | Offsite in Ireland | Bord na Mona Drohid Landfill,W0201-03      | Kilnaghy Upper,Carbury,Co. Kildare, Ireland                                    |
| Within the Country | 20 03 01 | No   | Dry Recyclables                         | R12 | M | Waighad | Offsite in Ireland | Grayhound,W0205-01                         | Crag Avenue,Clonsilla Industrial Estate,Clonsilla Co Dublin, Ireland           |
| Within the Country | 20 03 01 | No   | 83.9 mixed municipal waste              | R1  | M | Waighad | Offsite in Ireland | Indaver,W0167-02                           | Camranstown,Dulceek,Co. Meath, Ireland   |
| Within the Country | 20 03 01 | No   | 149.84 mixed municipal waste            | D1  | M | Waighad | Offsite in Ireland | Knockharley Landfill,W0146-02              | Knockharley,Navan,Co. Meath, Ireland   |
| To Other Countries | 20 03 01 | No   | 2921.69 Dry Recyclables                 | R12 | M | Waighad | Abroad             | Regen,44110                                | Shophords Drive,Cambane Industrial Estate,Nowry Co. Down,BT35 6JQ,Ireland      |
| Within the Country | 20 03 01 | No   | mixed municipal waste                   | R13 | M | Waighad | Offsite in Ireland | Panda Ballymount,W0039-02                  | Ballymount Cross,Tallaght,Dublin 24, Ireland                                   |
| Within the Country | 20 03 01 | No   | mixed municipal waste                   | D1  | M | Waighad | Offsite in Ireland | Whiteriver Landfill,W0060-02               | Dunloer,Co. Louth, Ireland   |
| Within the Country | 20 03 01 | No   | mixed municipal waste                   | D1  | M | Waighad | Offsite in Ireland | Ballynagan Landfill,W0165                  | Co. Wicklow, Ireland   |
| Within the Country | 20 03 01 | No   | Dry Recyclables                         | R12 | M | Waighad | Offsite in Ireland | Irish Packaging Recycling Ltd,W0263-01     | Ballymount Road,Walkinstown,Dublin 12, Ireland                                 |
| Within the Country | 20 03 01 | No   | Dry Recyclables                         | R12 | M | Waighad | Offsite in Ireland | Padraig Thornton Waste Disposal Ltd,W0044  | Killean Road,Ballyfarmot,Dublin 10, Ireland                                    |
| Within the Country | 20 03 01 | No   | mixed municipal waste - levy exempt     | D1  | M | Waighad | Offsite in Ireland | Whiteriver Landfill,W0060-02               | Dunloer,Co. Louth, Ireland   |
| Within the Country | 20 03 01 | No   | Dry Recyclables                         | R13 | M | Waighad | Offsite in Ireland | Panda Ballymount,W0039-02                  | Ballymount Cross,Tallaght,Dublin 24, Ireland                                   |

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| Within the Country | 20 03 01 | No | Dry Recyclables   | R13 | M | Waighed | Offsite in Ireland | Nurondala,W0261-01                       | Cappagh Road,Finglas,Dublin 11,.,Ireland                                |
| Within the Country | 20 03 01 | No | mixed municipal waste   | R13 | M | Waighed | Offsite in Ireland | Nurondala,W0039-02                       | Ballymount Cross,Tallaght,Dublin 24,.,Ireland                           |
| Within the Country | 17 05 04 | No | 543.18 in 17 05 03 soil and stones other than those mentioned   | R10 | M | Waighed | Offsite in Ireland | Knockharley Landfill,W0146-02            | Knockharley,Navan,Co. Meath,.,Ireland                                   |
| Within the Country | 19 12 04 | No | 47.7 plastic and rubber   | R1  | M | Waighed | Offsite in Ireland | Indaver,W0167-02                         | Carranstown,Duleek,Co. Meath,.,Ireland                                  |
| Within the Country | 19 12 04 | No | 381.42 plastic and rubber   | D1  | M | Waighed | Offsite in Ireland | Knockharley Landfill,W0146-02            | Knockharley,Navan,Co. Meath,.,Ireland                                   |
| Within the Country | 19 12 09 | No | 401.44 minerals (for example sand, stones)  | R10 | M | Waighed | Offsite in Ireland | Ballynagran Landfill,W0165               | Co. Wicklow,.,.,Ireland   |
| Within the Country | 19 12 10 | No | 13839.43 combustible waste (refuse derived fuel) other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 | R1  | M | Waighed | Offsite in Ireland | Quinn Cement Ltd,P0378-08                | Scotchtown,Ballyconnell,.,Co. Cavan,Ireland                             |
| Within the Country | 19 12 12 | No | 29212.1 11  | R10 | M | Waighed | Offsite in Ireland | Knockharley Landfill,W0146-02            | Knockharley,Navan,Co. Meath,.,Ireland                                   |
| Within the Country | 20 01 01 | No | 240.78 paper and cardboard  | R12 | M | Waighed | Offsite in Ireland | Nurondala,W0261-02                       | Cappagh Road,Finglas,Dublin 11,.,Ireland                                |
| Within the Country | 20 01 02 | No | 16.6 glass  | R12 | M | Waighed | Offsite in Ireland | Glassco Recycling Ltd,WFP. KE-08-0357-01 | Unit 4 Osberstown Business Park,Carragh Rd,Naas,Co. Kildare,Ireland     |
| Within the Country | 20 02 01 | No | 46.48 biodegradable waste   | R3  | M | Waighed | Offsite in Ireland | Bord Na Mona Kiberry,W0198-01            | Kiberry,Atty. Co. Kildare,.,Ireland                                     |
| Within the Country | 20 03 01 | No | 5.94 mixed municipal waste  | R12 | M | Waighed | Offsite in Ireland | South Dublin Baling Station,W0003        | Ballymount Baling Station,Ballymount Road,Walkinstown,Dublin 12,Ireland |
| Within the Country | 20 03 03 | No | 246.76 street-cleaning residues   | D1  | M | Waighed | Offsite in Ireland | Knockharley Landfill,W0146-02            | Knockharley,Navan,Co. Meath,.,Ireland                                   |