Padraig Thornton Waste Disposal Ltd

Kilmainhamwood Compost

Waste Licence Reg. No. W0195-02

Annual Environmental Report 2016
Submitted March 2017

ISO 9001 CERTIFICATION EUROPE

OHSAS 18001 CERTIFICATION EUROPE

ISO 14001 CERTIFICATION EUROPE

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1 Introduction

This report is the Annual Environmental Report for Kilmainhamwood Compost. It has been prepared in compliance with Condition 11.9 of the Waste Licence (Licence Reg. No. W0195-02) and includes emission details and environmental reporting for the reporting period of 2016.

This licence was granted by the Environmental Protection Agency (EPA) to Padraig Thornton Waste Disposal Ltd (PTWDL) on the 26th February 2014. The contents of this report are as required by Schedule F of Waste Licence W0195-02.

1.1 Operator

The facility operator and licensee of licence number W0195-02 is Padraig Thornton Waste Disposal Ltd, T/A Thorntons Recycling. This AER relates to Kilmainhamwood Compost, Ballynalurgan, Kilmainhamwood, Kells, Co. Meath.

The address and contact details for the company headquarters are;

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1.2 Reporting Period

The reporting period for this Annual Environment Report (AER) is between the 01/01/2016 and the 31/12/2016.

2 Facility Activities

2.1 Waste Activities carried out at the Facility

The facility is licensed to process 40,000 tonnes of material for composting per annum. Part 1 of the Waste Licence W0195-02 lists those activities contained in the Third and the Fourth Schedule of the Waste Management Act 1996, which are licensed to be carried out at Kilmainhamwood Compost, Ballynalurgan, Kilmainhamwood, Kells, Co. Meath. These activities are as follows:

Third Schedule

Class D8	**Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs D1 to D12 of this Schedule:**
Class D15	**Storage pending any of the operations numbered D1 to D14 (excluding temporary storage (being preliminary storage according to the definition of "collection" in section 5(1)), pending collection, on the site where the waste is produced).**

Fourth Schedule

Class R3	**Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolisiis using the components as chemicals.**
Class R13	**Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage (being preliminary storage according to the definition of "collection" in section 5(1)), pending collection, on the site where the waste is produced).**

2.2 Operation Processes – Waste Activities at the facility

The following section details the operational procedure for dealing with acceptable biodegradable waste that enters the Kilmainhamwood Compost Facility (Appendix 1 details the facility layout with zone diagrams).

Standard Operation procedures in the Composting Building:
All vehicles are inspected on arrival to ensure that they are clean, that there are no residual materials on the truck body and that it is properly covered or netted. Passing inspection the vehicle is directed towards the weighbridge. After weighing the following information is recorded on our computerised system (WIMS);

a) Date
b) The name of the carrier (including if appropriate, the waste carrier registration details),
c) The vehicle registration number,
d) The name of the producer(s)/collector(s) of the waste as appropriate,
e) The name of the waste facility(if appropriate) from which the load originated including the waste licence or waste permit register number,
f) A description of the waste including the associated EWC codes,
g) The quantity of the waste, recorded in tonnes,
h) The name of the person checking the load.

Once weighed the vehicle is then directed to the Tipping Bay and is accompanied by a staff member who will supervise the tipping process and inspect the load while tipping. The lorry and trailer is directed to back onto the tipping bay area. The screw locks on the trailer back door are loosened and the lever lock is left locked. The staff member checks if the tipping area is clear and opens the door of the Tipping Bay. The vehicle is directed to back up to the tipping wall and directed to stop at the wall. The lever lock is opened and the driver is instructed to tip. The staff member will supervise the tipping process and when all the material has left the trailer, the driver is instructed to pull forward to allow the Tipping Bay door to be closed. The tipping supervisor staff member then inspects the load to ensure that it conforms to the feedstock type that was weighed in. Any material not suitable for processing or is in contravention of this licence shall be immediately separated and removed to temporary storage in a quarantine area.

If after inspection non-conforming feedstock is found and quarantined then the Manager is notified immediately. The non-conforming feedstock is identified as to animal by-product category type and an investigation is carried out as to the cause how it was in the load. This quarantined material will be removed off site to a facility licensed / permitted to process this waste type. Following the investigation the Manager will contact the supplier of the load and inform them of his findings and what corrective action is to be taken up to and including withdrawal of Approved Supplier status.

After tipping, containers, and vehicles used for transporting Animal By-Products to the plant must be cleaned, washed and disinfected both internally and externally with the following exceptions; 1. Vehicles transporting catering waste only then only the wheels of the vehicles need to be cleaned and disinfected as well as any gross external contamination of the vehicle. 2. Vehicles transporting manure only then only the exterior and the wheels of the vehicles need to be cleaned and disinfected. Instead of disinfectant a high pressure hot steam washer is used for cleaning and disinfecting vehicles insuring no residual material remains. Following cleaning a staff member checks that the trailer is clean before directing the driver back to the weighbridge to weigh out. The Haulier signs off EP10 ABPP01-F03 Vehicle Cleaning Form to verify he has cleaned his vehicle. The operator will sign off the EP10 ABPP01-F02 Inspection of Incoming Waste Kilmainhamwood record sheet if material is suitable for processing.

Inside the reception building, Zone A, the organic waste material suitable for composting is mixed and blended by weight with an amendment material. The typical blend is made up of 45% seed material/ wood chip, 10% sludge/grease trap waste (when available) and 45% Brown Bin/ source segregated catering waste. This mixed material is conveyed by loading shovel to a collection area where a batch size of 120 tonnes is reached and then removed by a loading shovel and placed into an aerated bay in Zone B. The material is given a unique sub-batch code which allows for full traceability of the ingredients of the batch and traceability of the batch through the facility. When the bay is full the operator places one temperature probe into the material. The aeration is switched on which is controlled by a plc that brings the temperature to the required level. The composting material stays in this bay for one week. After this period the material is taken out of the bay and placed over the wall where it is then placed into another bay. A temperature probe is placed into the

material and the aeration switched on. The composting material will stay in this bay for 2 weeks.

After this period the material is screened through a 12mm screen. The oversize material is sent back to the start of the process as seed compost and any residual plastic from the process comes out the end of the screener and is sent to a licensed landfill once a full load is collected. The screened 12mm material is placed into a bulking tunnel. The tunnel can hold up to 25 sub-batches and when full is then switched into a second bulking tunnel where it remains for a week prior to pasteurisation. While in the bulking tunnels water is added to the material to ensure it is kept moist. The material from the second bulking tunnel is switched into the pasteurisation tunnels and is then given its own unique Batch Number to allow for full traceability. Once inside the enclosed tunnels the aeration is switched on and the temperature is brought to over 70°C for 60 consecutive minutes to satisfy the Animal By-Product Regulations (ABPR). After pasteurisation the material is sampled in situ and the samples sent to an approved laboratory for analysis. Compost is then given a red label indicating it is not to be moved until results are returned. Once the material has passed the ABPR requirements and EPA standards it can be classified as compost is given a green label to indicate it can be loaded for transport off site to the appropriate end user.

Any material not meeting ABPR and EPA standards can be reworked in the facility to produce higher grade compost or transported to an appropriate landfill site as cover.

2.3 Weighbridge Calibration

The weighbridge was certified by Percia Molen in March 2016. A copy of the weighbridge verification test report is available within Appendix 2.

3 Waste Management Record - Quantity and Composition of Waste Received, Recovered and Disposed of During the Reporting Period

3.1 Waste Handled in Kilmainhamwood Compost

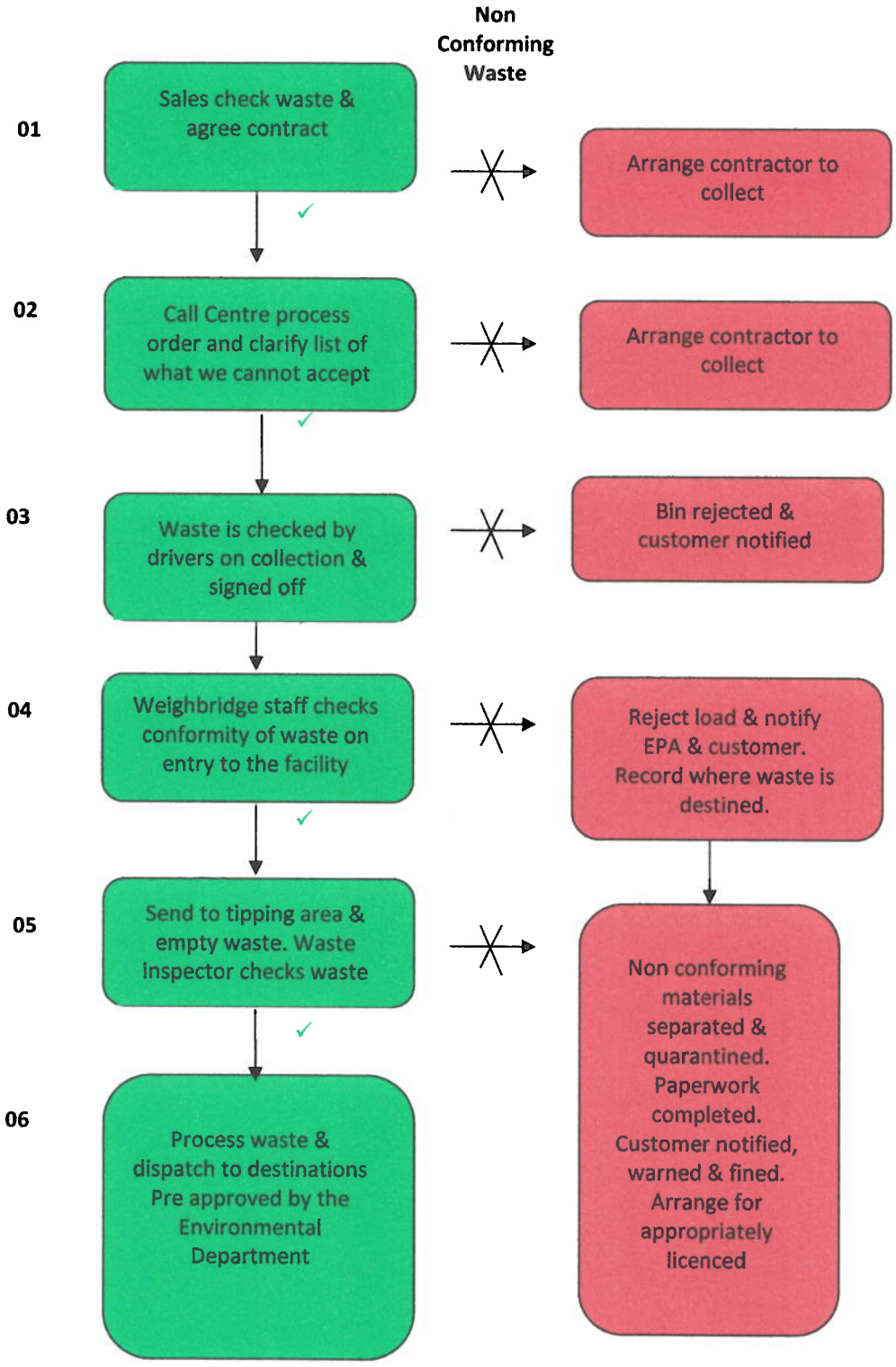
All waste is checked and documented at the weighbridge in accordance with our waste licence and our waste acceptance procedures as detailed in Section 2.2. Waste is then inspected, processed and placed into our production system. The composting process takes up to 8 weeks to produce mature compost. The facility has approval under the ABP Regulations from the Dept. of Agriculture, Food and the Marine. A copy of the Approval Certificate is contained within Appendix 3.

Should any non-conforming waste come to the attention of our staff it is either rejected before collection or segregated and quarantined to be disposed of at an approved outlet. Paperwork in relation to all non-conforming wastes is maintained on site.

3.2 *Waste Acceptance*

A simplified diagram explaining our waste acceptance procedures at Kilmainhamwood Compost can be seen in Figure 1.

Figure 1: Waste Acceptance Procedure



All staff employed by Kilmainhamwood Compost have received an Environmental Health and Safety Induction which includes licence training, waste acceptance procedures, emergency procedures and environmental awareness. All staff employed at the facility are diligent in assisting in eliminating the occurrence of non-conforming waste and producing a good quality compost at the facility.

Kilmainhamwood Compost successfully maintained its certification for its management systems in ISO14001 Environmental, ISO 9001 Quality, OHSAS 18001 Health and Safety in 2015. The IMS system is available for inspection on the IMS drive at all company site offices.

3.3 Waste Received

A total of 37,090.59 tonnes of waste for composting was accepted at the facility in the reporting period from 1st January 2016 to 31st December 2016. Thorntons Recycling received its new waste licence in February 2014 allowing it to process 40,000 tonnes of material per year.

Table 1: Quantity and Composition of Waste Received 2015-2016

EWC Code	Materials Received	2015	2016
20 01 25	Grease Trap Waste	251.53	118.96
20 01 08	Compostable Food Waste	36774.40	34047.30
19 12 07	Wood/ Sawdust	1139.46	1459.79
02 05 02	Sludge Dairy Industry	928.81	762.98
02 01 06	Sludge Textile Industrial	148.08	159.30
02 02 01	Sludge Animal Origin Washing	29.7	140.24
02 01 06	Unsuitable Food Fruit Molasses	-	193.24
19 09 04	Carbon	-	26.78
05 05 01	Unsuitable Food - Dairy	5.58	182
	TOTAL TONNAGE	39277.56	37090.59

3.4 Waste Disposed

In 2016 3,746.03 tonnes of a non-compostable material and was transferred from the facility as a stabilised residual waste to landfill. AT4 test results are maintained onsite for this material.

3.5 Waste Recovered/Compost Produced

In 2016, 9,723.59 tonnes of compost was produced at the facility and was either sold to landscape gardeners or arable farmers in the Leinster area.

4 Waste Recovery Report

4.1 *Proposal for the Contribution of the Facility to the Achievement of Targets for the Reduction of Biodegradable Waste to Landfill as Specified in the Landfill Directive*

Progressive targets have been set out in the Landfill Directive (1999/31/EC) to reduce the proportion of biodegradable municipal waste landfilled. By 2006 Member States were restricted to land filling a maximum of 75% of the total weight of biodegradable municipal waste generated in 1995 (1,220,840), the baseline year. This target is further reduced to 50% of the 1995 baseline by 2009 and 35% by 2016. According to the National Waste Report 2012, 589,260 tonnes of biodegradable municipal waste was landfilled in Ireland in 2012. This is 326,740 tonnes less than the Landfill Directive target of 916,000 tonnes.

Kilmainhamwood Compost, Ballynalurgan, Kilmainhamwood, Kells, Co. Meath have been successfully contributing towards National Targets since its opening in 2006:

Table 2: Tonnes Accepted

Year	Tonnes Accepted
2007	18,709
2008	20,651
2009	20,748
2010	20,815
2011	26,890
2012	31,383
2013	28,870
2014	39,792
2015	39,278
2016	37,091

Since its establishment in 2006 the facility has accepted some 284,227 tonnes of biodegradable material which helps to divert waste away from landfill and produces an excellent resource in the form of compost. All this material would have historically gone for disposal to licensed landfills.

Thornton's Recycling offer all their customers the opportunity to segregate all biodegradable waste at source. The facility at Ballynalurgan, Kilmainhamwood, County Meath, and (Waste License W0195-02) has proven to be very successful. The facility accepts non-hazardous biodegradable wastes (including industrial sludge's, household and commercial waste for composting). Thorntons Recycling offers a three bin collection service to all households it services in Kildare, Meath, Wicklow and Dublin. It also offers a brown bin service to all commercial customers such as hospitals, hotels, restaurants etc. Kilmainhamwood Compost will aim to continue to increase the quantity of biodegradable waste that can be diverted from landfill even further and assist Ireland in achieving targets lay down by the Landfill Directive (1999/31/EC).

5 Summary Report and Interpretations on Environmental Monitoring and Emissions Data

In accordance with Schedule C of PTWDL waste licence W0195-02 monitoring of dust, emissions to air, surface water, groundwater and bioaerosols were carried out during the reporting period of 2016. The following section details results obtained and interpretations of results.

5.1 Total Dust Deposition 2016

Three fixed monitoring locations (D1, D2 and D3) were used to perform total dust deposition monitoring quarterly over the 30 day sampling period as per Waste Licence W0195-02. The monitoring locations are presented in Appendix 4. The results presented in Table 3 illustrate that total depositional dust at all locations. All dust depositions levels were under the emission limit of 350 mg/m^2/day, set by the EPA in Schedule B of the Waste Licence W0195-02. Quarterly reports were submitted to the EPA in 2016 and all were compliant:

Table 3: Total Dust Deposition Concentrations 2016

Dust Location	Units	Q1 2016	Q2 2016	Q3 2016	Q4 2016
DA	mg/m2/day	169	108	112	106
DB	mg/m2/day	158	199	204	196
DC	mg/m2/day	106	154	162	155

5.2 Groundwater Emissions

As per Schedule C of waste licence W0195-02 Groundwater was monitored at B1, B2 and B3 bore wells. Appendix 4 shows the location of all monitoring points on site.

Groundwater reports were submitted to the EPA and any elevations above levels in the Groundwater Regulations were discussed in detail in these reports. The results of monitoring during the reporting period are summarised in Appendix 5. All groundwater monitoring for 2016 was compliant.

5.3 Surface and Storm Water Emissions

As per Schedule C of waste licence W0195-02 surface and storm water was monitored at SW1, SW2, SW3 (roof and yard run-off). SW3 roof runoff and yard runoff were combined in 2015 to create one monitoring point. Appendix 4 shows the locations of the surface and storm water monitoring points and the results are outlined in the tables below. Samples taken for surface waste were taken from SW2 which represents the background water

quality in the stream adjacent to the composting plant and from SW1 which is a monitoring location downstream of the main activities at the site. SW3 represents storm water emissions and represents water runoff from the yard and from the roof. SW3 sampling from the roof and yard runoff only commenced in Quarter 2 of 2014 under the conditions of the new waste licence. Previously this sampling was not required.

Results of SW1 and SW2 were compared to the EC Environmental Objectives (Surface Waters) Regulations 2009. Results of SW3 (roof and yard run-off) were compared to trigger levels set out by the EPA in Condition 5.3 of the Waste Licence W0195-02. Full detailed quarterly reports for surface water monitoring and additional reports as requested were forwarded to the Agency in 2016.

There were no reportable incidents in relation to surface and storm water in 2016.

Table 4: Surface and Storm Water Results – SW1 Downstream

			2016	2016	2016	2016
PARAMETERS	UNIT	Limit	Q1	Q2	Q3	Q4
Notes			13.06.16	12.05.16	03.08.16	07.11.16
Colour	-		Clear	Clear	Clear	Clear
Total Suspended Solids	mg/l		6	25	4	<2
BOD	mg/l O2	<2.6	2	2	<2	<2
Mineral Oils	mg/l		2.5	2.5	<2.5	0.0025
pH	pH Units	>6- <9	7.2	7.5	8.5	7.5
Total Ammonia	NH_4 mg/l	<0.14	0.275	0.017	0.031	0.011
Chloride	Cl mg/l		15.02	5.85	10.88	1.63

Table 5: Surface and Storm Water Results – SW2 Upstream

			2016	2016	2016	2016
PARAMETERS	UNIT	Limit	Q1	Q2	Q 3	Q4
Notes			13.06.16	12.05.16	03.08.16	07.11.16
Colour	-		Clear	Clear	Clear	Clear
Total Suspended Solids	mg/l		4	12	<2	<2
BOD	mg/l O2	<2.6	2	2	<2	<2
Mineral Oils	mg/l		2.5	2.5	<2.5	0.0025
pH	pH Units	>6- <9	7.1	7.4	8.3	7.4
Total Ammonia	NH_4 mg/l	<0.14	0.096	0.024	0.071	0.021
Chloride	Cl mg/l		13.75	5.64	6.02	1.89

Table 6: Surface and Storm Water Results – Combined SW3 Sampling Point

			2016	2016	2016	2016
PARAMETERS	UNIT	Limit	Q1	Q2	Q3	Q4
Notes			13.06.16	12.05.16	03.08.16	07.11.16
Colour	-		Clear	Clear	Clear	Clear
Total Suspended Solids	mg/l	<25	2	3	<2	<2
BOD	mg/l O2	<2.6	2	2	<2	<2
Mineral Oils	mg/l		2.5	2.5	<2.5	0.0025
pH	pH Units	>6- <9	7.1	7.3	8.1	7.3
Total Ammonia	NH_4 mg/l	<0.14	0.134	0.018	0.01	0.016
Chloride	Cl mg/l		13.89	6.25	5.27	1.09

5.4 *Bio-aerosol Monitoring – Bacteria and Aspergillus Fumigatus*

As per Schedule C of the Waste Licence, bacteria and Aspergillus Fumigatus monitoring is carried out biannually. This was carried out in March and August by independent consultants Odour Monitoring Ireland and reports were submitted to the EPA in 2016.

5.5 *Biofilter Monitoring – Inlet and Outlet Gases*

As per Schedule C of the Waste Licence W0195-02, inlet and outlet gases of the biofilter are monitored on a monthly basis. Inlet gases are monitored for ammonia, hydrogen sulphide and mercaptans. Outlet gases are monitored for ammonia, hydrogen sulphide, mercaptans and amines. Emission limits are set for these parameters by the EPA in Schedule B of the waste licence. Monitoring is carried out onsite using colorimetric indicator tubes. Results of the monthly inlet and outlet gases can be seen in Table 7.

Table 7: Monthly Biofilter Inlet and Outlet Gases Results

EP09-F02.1 Monthly Inspections of Biofilters at Kilmainhamwood Compost

Date	Biofilter - Inlet/Oulet	Ammonia centre (PPM)	Ammonia side (PPM)	Hydrogen sulphide centre (PPM)	Hydrogen sulphide side (PPM)	Mercaptans centre (PPM)	Mercaptans side (PPM)	Amines Centre (PPM)	Amines Side (PPM)
20.01.16	1 - Inlet	15		0		0			
20.01.16	1 - Outlet	5	10	0	0	0	0	0	0
20.01.16	2- Inlet	30		0		0			
20.01.16	2 - Outlet	20	20	0	0	0	0	0	0
22.02.16	1 - Inlet	30		0		0			
22.02.16	1 - Outlet	20	0	0	0	0	0	0	0

22.02.16	2- Inlet	25		0		0			
22.02.16	2 - Outlet	20	0	0	0	0	0	0	0
21.03.16	1 - Inlet	25		0		0			
21.03.16	1 - Outlet	15	20	0	0	0	0	0	0
21.03.16	2- Inlet	30		0		0			
21.03.16	2 - Outlet	10	15	0	0	0	0	0	0
22.04.16	1 - Inlet	20		0		0			
22.04.16	1 - Outlet	15	20	0	0	0	0	0	0
22.04.16	2- Inlet	30		0		0			
22.04.16	2 - Outlet	15	15	0	0	0	0	0	0
20.05.16	1 - Inlet	20		0		0			
20.05.16	1 - Outlet	5	5	0	0	0	0	0	0
20.05.16	2- Inlet	25		0		0			
20.05.16	2 - Outlet	10	15	0	0	0	0	0	0
21.06.16	1 - Inlet	20		0		0			
21.06.16	1 - Outlet	10	0	0	0	0	0	0	0
21.06.16	2- Inlet	30		0		0			
21.06.16	2 - Outlet	15	0	0	0	0	0	0	0
27.07.16	1 - Inlet	15		0		0			
27.07.16	1 - Outlet	23	23	0	0	0	0	0	0
27.07.16	2- Inlet	30		0		0			
27.07.16	2 - Outlet	20	27	0	0	0	0	0	0
30.08.16	1 - Inlet	30		0		0			
30.08.16	1 - Outlet	15	10	0	0	0	0	0	0
30.08.16	2- Inlet	25		0		0			
30.08.16	2 - Outlet	12	10	0	0	0	0	0	0
20.09.16	1 - Inlet	30		0		0			
20.09.16	1 - Outlet	15	10	0	0	0	0	0	0
20.09.16	2- Inlet	25		0		0			
20.09.16	2 - Outlet	12	10	0	0	0	0	0	0
25.10.16	1 - Inlet	30		0		0			
25.10.16	1 - Outlet	10	10	0	0	0	0	0	0

25.10.16	2- Inlet	20		0		0			
25.10.16	2 - Outlet	12	10	0	0	0	0	0	0
24.11.16	1 - Inlet	25		0		0			
24.11.16	1 - Outlet	10	10	0	0	0	0	0	0
24.11.16	2- Inlet	20		0		0			
24.11.16	2 - Outlet	12	10	0	0	0	0	0	0
23.12.16	1 - Inlet	30		0		0			
23.12.16	1 - Outlet	10	10	0	0	0	0	0	0
23.12.16	2- Inlet	20		0		0			
23.12.16	2 - Outlet	12	10	0	0	0	0	0	0

5.6 Biofilter Monitoring – Bed Media

As per Schedule C of the waste licence, the biolfilter bed media is analysed for pH, ammonia and total viable counts on a biannual basis. A copy of these test results can be seen in Table 8.

Table 8: Biofilter Bed Media Testing

Date	Biofilter	Ammonia mg/kg as N	pH	Total Viable Counts cfu/g
19/05/16	BF1	205.78	5.5	18,400,000
	BF2	1290.28	7.7	19,600,000
08/11/16	BF1	9.97	4.5	164,000
	BF2	1008.04	7.8	1,840,000

5.7 Odour Monitoring

Odour monitoring was carried out on a quarterly basis as per Schedule C of the waste licence. This analysis was carried out by independent consultants Odour Monitoring Ireland and a copy of these reports were submitted to the EPA in 2016.

6 Noise Monitoring 2016

The noise surveys were carried out at the location N1 referenced in the waste licence (see monitoring location Appendix 4). Monitoring was carried out twice in 2016 as per the agreement with the Agency on the 28/07/15 to reduce monitoring from four times per year to twice per year (EPA Reference LR017760). The monitoring results are presented in Table 11. Reports have been submitted to the EPA, as per waste license requirements. Under the licence W0195-02 noise monitoring is to be carried out three times during the day, once in

the evening and twice at night time. An agreement was reached with the EPA on the 18th August 2014 (EPA Reference LR011713) that if evening noise levels were below the night time limits, noise monitoring would not have to be carried out during the night.

6.1 Summary of Noise Monitoring

Results for noise monitoring for the year show that the facility was compliant with noise limits set out in Schedule B of waste licence W0195-02. Day time limits are set at 55dB LArt, evening limits are set at 50dB LArt and night limits are set at 45dB LArt. Throughout the year one day time limit was exceeded but from notes taken during the monitoring this was deemed to be from an external source and not as a consequence of site operations. Quarterly noise reports were submitted to the EPA for 2016.

Table 9: Recorded Noise Levels dB (A) – Intervals 30 minutes 2016

	Location	Survey Time	LA eq (dBA)	LArt (dBA)	LA10 (dBA)	LA90 (dBA)
Quarter 2 29/06/16	N1	Day (1) – 14:57	46.1	**51.1**	46.6	37.4
	N1	Day (2) – 16:04	46	56	49.4	40.9
	N1	Day (3) – 17:09	44.5	**44.5**	46.9	38.5
	N1	Evening – 19:12	43	**43**	45.2	34.6
	Location	**Survey Time**	**LA eq (dBA)**	**LArt (dBA)**	**LA10 (dBA)**	**LA90 (dBA)**
Quarter 4 16/11/16	N1	Day (1) - 10:38	53.4	**53.4**	51.9	42
	N1	Day (2) - 11:39	50.8	**50.8**	54.9	42.8
	N1	Day (3) - 14:09	50.9	**50.9**	52.2	41.6
	N1	Evening - 19:32	41.8	**41.8**	44.3	38.1

7 Review of Nuisance Controls

Potential nuisances at composting facilities include dust, noise, odour, litter, birds, vermin and mud. Kilmainhamwood Compost do their utmost to control any nuisance which may occur at the facility, checks on nuisances are carried out daily and corrective actions are carried out as required.

7.1 Dust

Kilmainhamwood Compost is required to carry out dust monitoring quarterly (please refer to Section 5.1 of this report). As all waste processes take place indoors there are no dust emissions from the process. The main source of dust is from the roadways which are wetted down during dry weather conditions. In an effort to further reduce dust emissions from the yard and roadways Kilmainhamwood Compost use Thornton's road sweeper on a regular basis at the facility.

7.2 Noise

Noise monitoring surveys were conducted at the facility; see Section 6 of this report. As all processing activities take place inside the building noise levels are within the permitted range.

7.3 Odour

All processing activities take place inside the fully enclosed building which is under negative pressure. In 2009 the composting bays were enclosed in order to capture the process air. During 2010 the installation of an acid scrubber was completed and the total upgrade of the odour abatement system was commissioned in quarter 1 of 2011. This has led to the ammonia being removed from the processed air before entering the biofilter system and has thus enhanced the efficiency of the biofiltration system.

This biofilter system is designed to breakdown any foul odours before it leaves the system. Daily monitoring of this system takes place and the biofilters were continuously assessed during 2016.

7.4 Litter

Daily checks are carried out on litter within and around the site boundary any litter which may escape is cleared up immediately. All waste transportation vehicles are either enclosed or have a net which covers waste, preventing littering while waste is in transit. All staff sweep and tidy picking areas throughout the day and daily housekeeping checks are carried out by supervisors in all areas with random checks carried out by the site manager to ensure that these are completed. All housekeeping checks are maintained on file in the site office.

7.5 Birds

Kilmainhamwood Compost has no problems with birds at the facility. Doors at the facility are kept closed.

7.6 Vermin

Complete Pest Control are contracted to carry out pest control for the facility. This includes rodents and flies. They conduct regular checks of all bait points around the facility which effectively controls rodents at the facility, all documentation for site visits and reports are maintained on site.
Flies have not been a problem at the facility. However to ensure a fly problem never develops at the facility, Complete Pest Control carry out mitigation measures of spraying of areas where flies would most likely occur at regular intervals e.g. in the corridors.

7.7 Mud

All surfaces are hard standing and as such mud is not an issue at the facility. We also have a scheduled Thornton's road sweeper that keeps these hard standings clean and is on call as required.

8 Summary of Incidents and Complaints

8.1 Incidents

There was one incident logged with the EPA 2016. This related to a failure of four batches of compost for stability in 2014 which were previously unreported. Procedures were amended and staff were retrained to ensure there will be no repeat of this incident.

8.2 Complaints

There were 27 complaints made to the Facility and/or to the EPA during 2016. Full details of the complaints have been maintained on site at the facility as per our complaints procedure PM08 – Complaints

One complaint was in relation to litter, another in relation to dust and the rest were in relation to odour.

9 Energy Efficiency Audit Report Summary

As per Condition 7.1 of the licence W0195-02 a new energy efficiency audit was submitted to the Agency in 2015.

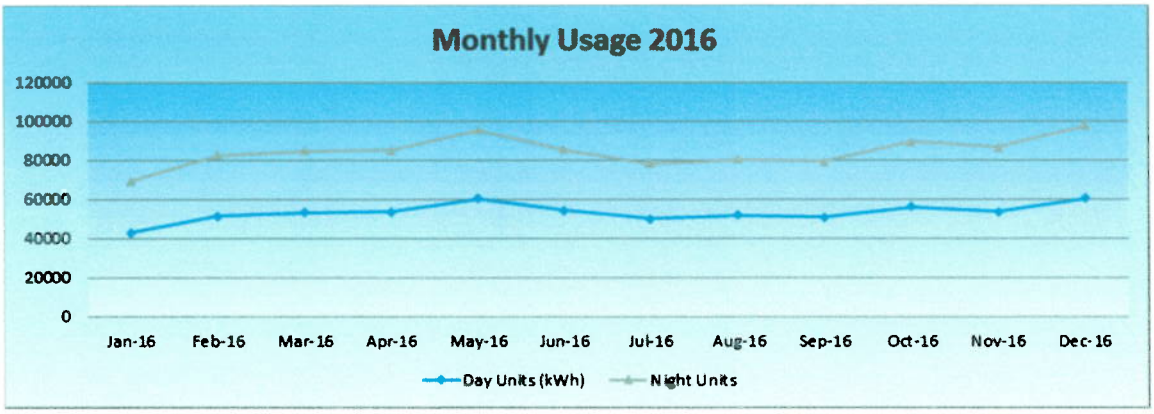
10 Resource Consumption Summary

The following section discusses resources such as Electricity, Fuel and Water used at Kilmainhamwood Compost in 2016. The company has an energy management system in place as part of the company's key performance indicators (KPI's) which records trends and identifies management opportunities for savings in relation to electricity and diesel used at the facility monthly.

10.1 Electricity

Electricity consumption at the facility in 2016 was a total of 1,012,347kWh. Figure 2 displays the monthly day and night time trend for the year's energy consumption at Kilmainhamwood Compost.

Figure 2: Electricity Consumption 2016



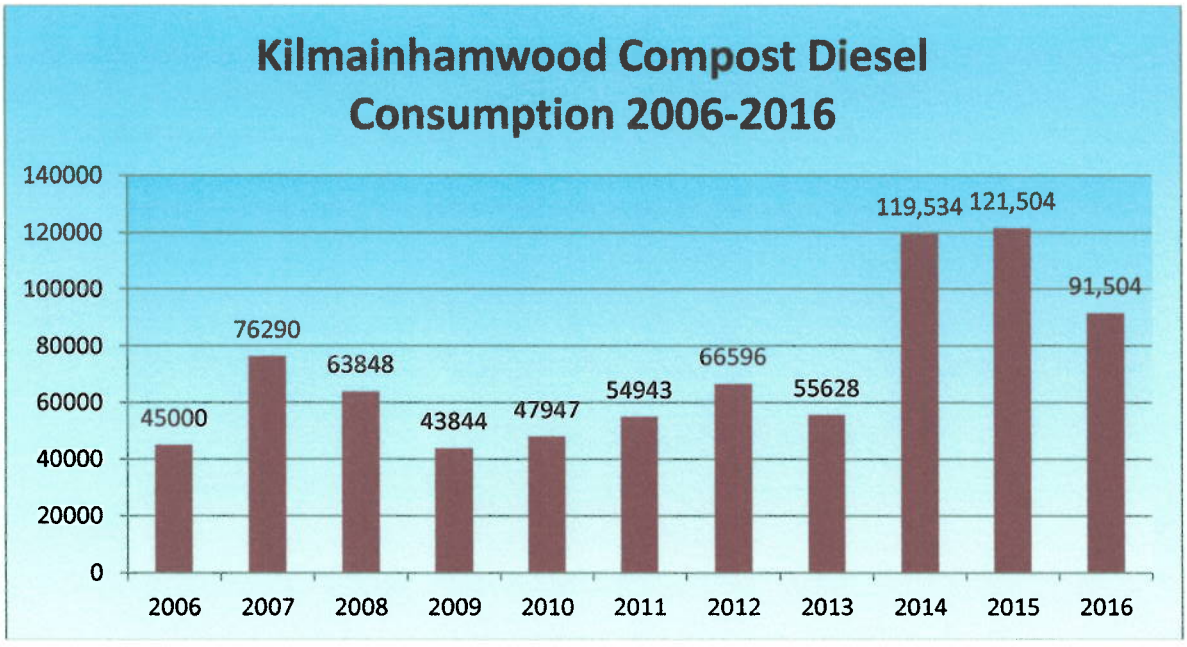
10.2 Water

Kilmainhamwood compost is not connected to the local water mains. There is an over ground collection tank that holds 90,000 litres and is supplied by Bore well 3. This water is used for washing trailers, equipment and floors. It is estimated that around 1,248,000L is used from this tank on an annual basis. No water is used in the process as the incoming material contains excess moisture and leachate from the process is recycled back into the process. Drinking water is supplied by a contract water supplier and is bought in large bottles.

10.3 Diesel

The main consumption of diesel in 2016 was the loading shovels and shredding used in the composting processes. A total of 91,504 litres of diesel was consumed in 2016. All machines are serviced regularly in order to achieve optimum fuel efficiency. The composting process at the facility is continuously monitored in order to assess energy efficiency.

Figure 3: Diesel Consumption 2006 – 2016



11 Schedule of Environmental Objectives and Targets Proposal for 2016

The contents of the Integrated Management System (IMS) are too large to contain within the main body of this report, however the Agency can access the system for inspection on a specially designated Drive (X Drive or IMS Drive) at any of the companies' site offices. The following is a summary of what is currently on the IMS and which relates to Kilmainhamwood Compost;

Top Level Manual
Legal Register
Emergency Response Plans
Polices – EHS and Quality
Key Performance Indicators
Training File – Skills Matrix
Management Programme – Objectives and Targets
Staff Handbook

Environmental Procedures

- Communications Programme
- Waste Outlet Audit
- Environmental Monitoring and Analysis
- Odour Control
- Oil – Chemical Spill
- House Keeping
- Biofilters Monitoring Procedure Kilmainhamwood
- Feedstock Acceptance Kilmainhamwood
- Vehicle Emergency Response WCP Procedure
- Residual Waste Management Kilmainhamwood
- Tanker Emergency Response WCP Procedure
- Screen Sampling Procedure for Kilmainhamwood
- Housekeeping Procedure Kilmainhamwood
- Pathogen Sampling Procedure Kilmanhaimwood
- Filling Pasteurisation Tunnel Procedure.
- Pasteurisation procedure
- Emptying Compost from Pasteurisation Tunnel Procedure
- Compost quality sampling procedure
- Screener Inspection Procedure
- Dispatch of Compost Procedure
- Total Clean Down and Disinfection of Zone C Procedure
- Biofilter turning and media change procedure

Health and Safety

- A detailed Safety Statement with risk assessments is also contained within the EMS
- An emergency site specific plan is available for Kilmainhamwood Compost.

Quality

- Staff Appraisal
- Purchasing
- Weekly Operating Report Procedure
- Customer Focus
- Third Party Contractors

Generic Procedures

- Aspects
- Legal Identification and Evaluation
- Management Programmes
- Communications
- Training
- Emergency Response
- Monitoring and measurement
- Complaints
- Non-conformance and preventative actions
- Document control
- Internal auditing
- Management Review
- Records Management
- Risk Assessment
- Contractor Control
- Operational Control

A new schedule of objectives and targets for the forthcoming year of 2017 for Kilmainhamwood Compost is contained within Appendix 6 of this report. The schedule for 2017 may be amended and finalised after the management review in February 2017. This schedule will be available to the EPA to inspect during any of their site audits in 2017 at any of our facilities.

12 Environmental Management Programme – Report for Previous Year

An update on the Environmental Objectives and Targets for Kilmainhamwood Compost, waste licence W0195-02, as detailed in the Management Programme for the company for 2016 is contained within the integrated management system on site. A report of the progress of these objectives and targets is contained within Appendix 7.

13 Tank, drum, pipeline and bund testing.

At Kilmainhamwood Compost there are four underground tanks in use. There is one tank which collects the leachate from the biofilters, another tank collects washings and run off from the reception hall and the wash bay and the third tank acts as a pressure trap for the newly constructed pasteurization tunnel. The fourth tank was installed in 2015 to collect water run-off from the composting process. There are no fixed fuel tanks on site and diesel

is filled via a bunded mobile tank. Kilmainhamwood Compost commissioned Fitz Scientific consultants to carry out an integrity test on three underground tanks in 2017 to BS8007 standards. A copy of this report was submitted to the EPA. These three tanks are due for another integrity test in 2020. The fourth tank will be due an integrity test in 2018.

Thorntons Tankers carried out a CCTV survey on all pipes onsite in October 2014. This is required under the licence every 3 years. Required repairs that were highlighted in this report were carried out in 2015. A full CCTV survey showing repairs was carried out and submitted to the EPA in 2016. Therefore a CCTV survey is not required until 2019.

14 Assessment of the Efficiency of Use of Raw Materials in Processes and the Reduction in Waste Generated.

At Kilmainhamwood Compost our sources of raw materials are wood, sludges and biodegradable food waste. These materials are blended in a controlled ratio to ensure optimum compost production. Leachate generated in the process is reused to dampen the compost at the end stage of production. This reduces the need for clean water from the bore well on site. At the end of the process compost is produced and is available to local farmers / landscapers for use. However there is a residual fraction of non-composted material which is currently only suitable for landfill. This material is comprised of non-conforming waste that is placed in the food waste bin before it reaches the facility. Thorntons Recycling tries to reduce and eliminate all non-conforming waste from entering the site and this is done through educating our customers on what materials are suitable for composting.

15 Progress Made and Proposals Being Developed to Minimise Water Demand and the Volume of Trade Effluent Discharges

Water consumption is minimal at the facility but is hard to define as it is not metered or connected to the local mains and water consumption is directly from the well on site. There is an over ground tank that holds 90,000 litres of water and is supplied by bore well number 3. It is estimated that around 1,248,000L is used annually from this well. No water from this tank is used for processing as incoming material normally contains excess moisture from the natural degrading process. Leachate from the process is stored in underground tanks and is recycled back into the process as required. The only discharges on site are from rainwater runoff from the roof and the yard.

16 Financial Provision, Management Structure, Programme for Public Information

16.1 Programme of Public Information

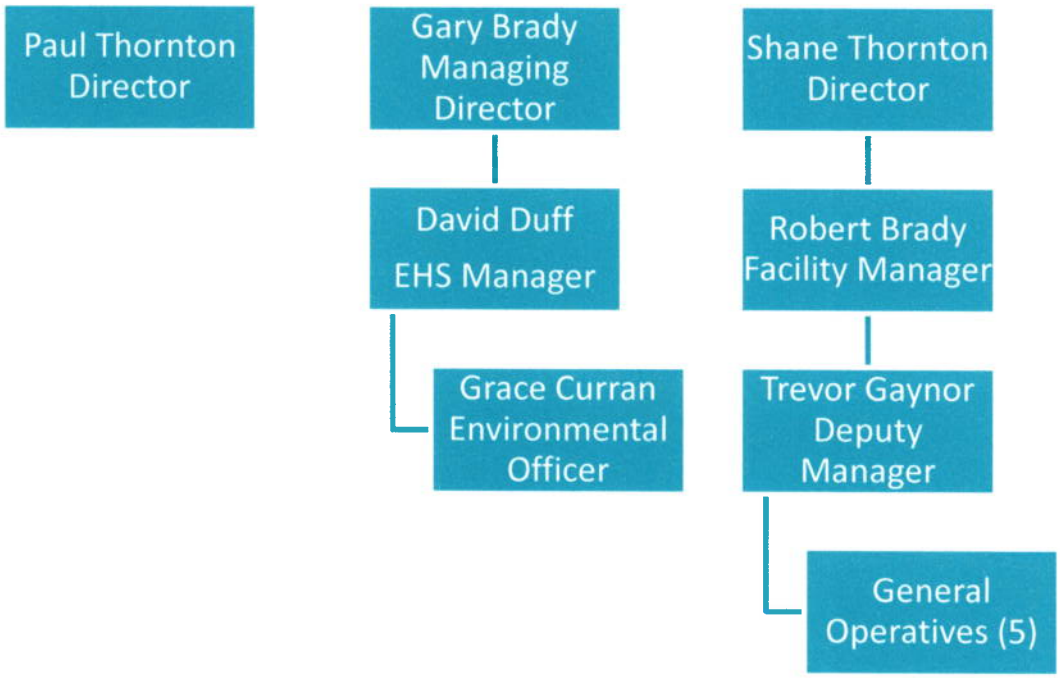
Kilmainhamwood Compost operates an open door policy at the facility and has carried out tours with local representative groups, students, clients etc.

New and existing clients are brought through our waste acceptance procedures and are supplied with information by sales representatives or call centre agents in relation to what waste types we can accept at the facility. Thornton's Recycling has also upgraded its website so customers can access information such as waste collection permit details and waste licences and permits. Detailed information and stickers on what can be placed in a brown bin are available on request.

All information relating to activities carried out at Kilmainhamwood Compost is maintained on site. Public information is accessible at the site at all times at the site office or at the Office of Environmental Protection Agency. Detailed Communications Procedures (PM04-Communications, PM08 Complaints Procedure and EP01 – Communications Programme) has been implemented in our IMS and are used throughout the company.

16.2 Management Structure

Kilmainhamwood Compost is part of Thorntons Recycling and as such has access to the Management Facilities of Thornton's Recycling. These facilities include an Environmental Department which includes Grace Curran and David Duff. Below is a brief outline of the management structure of the site;



Shane Thornton and Robert Brady have all completed the Certificate in Compost Facility Operation. Shane Thornton and Trevor Gaynor have completed HACCP training.

16.3 Financial Provision

Thorntons Recycling has in place Material Damage and Business Interruption insurance up to €20m and considers this adequate for any claim. This insurance covers all sites including Kilmainhamwood Compost The company's insurance was renewed on 1/7/2016 and runs to 30/6/2017. A summary of insurance can be seen in Appendix 8.

17 Decommissioning Management Plan

A decommissioning management plan was submitted to the EPA on 30/09/14 under EPA Reference LR012483. This was carried out in line with Condition 10.2 of the Waste Licence W0195-02. Decommissioning Management Plans are to be reviewed on an annual basis.

18 Environmental Liabilities

18.1 Statement of Measures in Relation to Prevention of Environmental Damage and Remedial Actions

As part of the IMS system on site Thorntons Recycling has in place Environmental Aspects which assess all on site activities that may result in an environmental incident. All aspects are given a risk rating and any aspects with a rating of over 20 are flagged within the management programme to the company and are addressed immediately. The environmental aspects register also contains the existing and future layers of protection for each aspect. The Environmental Aspects for the Kilmainhamwood Compost site is contained within Appendix 9.

18.2 Environmental Liabilities Risk Assessment (ELRA)

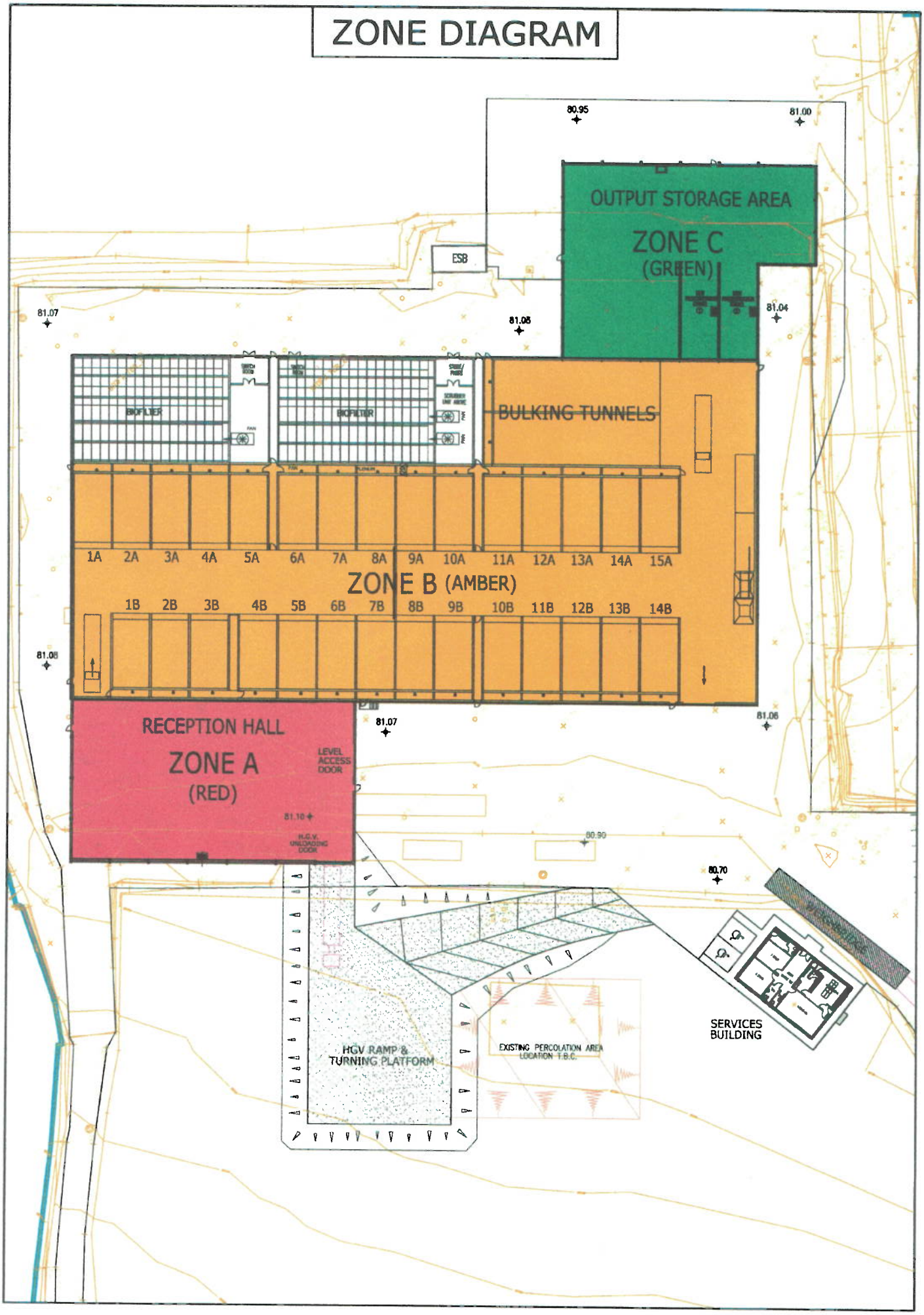
Condition 12.2 of the Waste Licence W0915-02 requires that a fully costed ELRA be submitted to the EPA. This was submitted to the Agency on the 01/04/15 under EPA Reference LR015547.

19 Achievement of Compost Quality Standards

There were 19 batches of compost analysed in 2016 and a summary of their reports can be found in Appendix 10 of this report. All compost produced was within 1.2 times the limit values set out in Schedule E of the Waste Licence W0195-02 and met the parameters of Class II Standard compost.

Appendix 1

ZONE DIAGRAM



Appendix 2

College Road, Clane,
Co. Kildare.
Ph: +353 1 835 3084

NSAI Legal Metrology Service
AUTHORISED VERIFIER

WEIGHBRIDGE VERIFICATION TEST REPORT NO : SO13487

CUSTOMER:	**Thornton Compost**	**TYPE APPROVAL CERT NO:**	DK 0199.27	
SITE ADDRESS:	Kilmainhamwood	**INDICATOR TYPE:**	LD5204	10000224
	Co.Meath	**DATA PLATE:**	Yes	
		INDICATOR SERIAL NO:	100427616	
SERVICE REPORT NO:	21035	**MINIMUM CAPACITY (kg):**	400	
MANUFACTURER:	Leon	**MAXIMUM CAPACITY (kg):**	50000	
TYPE:	Weighbridge	**DIVISION (e) (kg):**	20	
SIZE:	18M X 3M	**PRINTER SERIAL NO:**		
LOCATION:	Enterance	**TARE FACILITY:**	Disabled	

Accuracy of Zero, Linearity/Hysteresis, Discrimination & Comparison Tests = *

Approximate Test Interval (e)	MPE (e)	Actual Load (kg)	Indicator Up	Display Error (e)	True Error (e)	Indicator Down	Display Error (e)	True Error (e)	SL	Discrimination	Comparison
ZERO	0.25	0	0	0.00		0	0.00				
2	0.25	40	40	0.00	0.00	40	0.00	0.00			
20	0.25	540	540	0.00	0.00	538	-0.10	-0.10		Yes	Yes
500	0.50	10040	10042	0.10	0.10	10042	0.10	0.10			
1000	1.0	20040	20042	0.10	0.10				SL1		
1250	1.0	25040	25042	0.10	0.10	25044	0.20	0.20	SL2	Yes	Yes
2000	1.0	40040	40044	0.20	0.20	40044	0.20	0.20			
2458	1.5	49200	49220	1.00	1.00					Yes	Yes
SL1		20040	20042								
SL2		25040	25042								
PASSED		Yes									

SL - Substitute Load

NOT TESTED AT MAX CAPACITY, BALLAST NOT PROVIDED

REPEATABILITY TEST (Zero Track On)
50%-MPE(e) 0.30
>90%-MPE(e) 1.50

	Indicator	Indicator	Indicator
50%	25044	25046	25042
>90%	49220	49216	49218
PASSED	Yes		

ECCENTRIC LOAD TEST - MPE (e): 0.5

Position	1	2	3	4	5	6	7	8	9	10
Test Load	8040	8040	8040	8040	8040	8040	8040	8040		
Indicator	8042	8042	8038	8038	8042	8042	8044	8042		
Error (e)	0.10	0.10	-0.10	-0.10	0.10	0.10	0.20	0.10		
PASSED	Yes									

LOADCELL DATA

Number	8
Make	Zemic
Type	C16-40t
Test cert	NR D09-95.28
Divisions	3000
Conformity	Yes
PASSED	Yes

COMPARISON TEST

Printer	Yes
Remote	N/A
PC	Yes
Other	N/A
PASSED	N/A

MARKINGS

CE	Yes
SEALING	Yes
CLASS	Yes
GREEN M	Yes
PASSED	Yes

OTHER TESTS

Leveling	N/A
High Res	Yes
Max +9e	N/A
Zero 4%	N/A
PASSED	Yes

CUSTOMER CONTACT:	Sean	**EMAIL:**	
PHYSICAL CONDITION:	Good	**AUTHORISED PERSON :**	10000048-Milly Perry
TEST WEIGHTS USED :	PM1-28	**CERTIFICATE NO :**	T277034
	DT1-17		04052
VERIFICATION DATE :	16 March 2016	**NEXT CALIBRATION DATE:**	16 March 2017
SIGNATURE :	D. Cam...	**Electronic Cal Record no.**	N/A

The Weighbridge Verification test is carried out in according to EN 45501 Clause 8.2.

27th October 2014

Appendix 3

Department of Agriculture, Food and the Marine
An Roinn Talmhaíochta, Bia agus Mara

Approval as a Composting Plant under the European Union (Animal By-Products) Regulations 2014 (S.I. No 187 of 2014) and in accordance with Regulation (EC) No. 1069 of 2009 and Regulation (EU) No. 142 of 2011

Company	Padraig Thornton Waste Disposal Ltd.		
Address	Unit S3B, Henry Road, Parkwest Business Park, Dublin 12		
Approval No.	Comp 06		
Plant address	Kilmainhamwood Compost, Ballynalurgan, Kilmainhamwood, Kells, Co. Meath		
CRO No.	72366		
VAT No.	4537333I		
Map coordinates	E279801 N292082		
Contact details			
Operator	Mr. Tom McDonnell	**Title**	Facility Manager
Phone	01 6235133 Ext 2448	**Mobile**	086 85634341
Email	tom@thorntons-recycling.ie		

Plant description	Section VII: Approved composting plant in accordance with Article 24 (1)(g) of Regulation (EC) No. 1069 of 2009
ABP/derived product used in the plant	Category 2 and Category 3 animal by-products as set out in the Ministerial conditions attached.
Activities	COMP: Composting plant All feedstock accepted into the plant must be transformed to the following EU transformation parameters: (a) Maximum particle size before entering the composting reactor : 12mm (b) Minimum temperature in all material in the reactor: 70°C (c) Minimum time in the reactor at 70°C (all material): 60 continuous minutes
Product	COMR: Compost after composting
Remarks	This approval is subject to the specific and general Ministerial Conditions attached together with the conditions set out in the enclosed document *Approval and Operation of Composting Plants Transforming Animal By-Products and Derived Products in Ireland.*
Valid from	16th July 2014 to 15th July 2017

Dated this 16th day of July, 2014

For the Minister for Agriculture, Food and the Marine

Mairéad Broderick

Mairéad Broderick

An Officer Authorised by the said Minister

Stamp of Competent Authority

Department of Agriculture, Food and the Marine
IRELAND

Appendix 4

LEGEND

DUST MONITORING (D1, D2, D3)

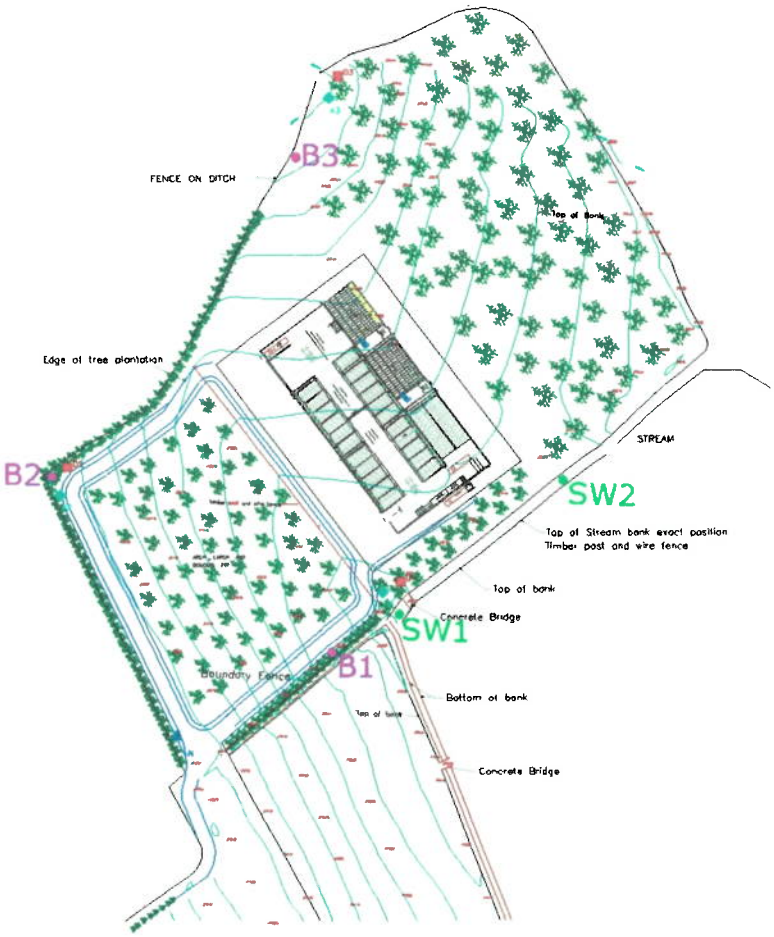
NOISE MONITORING (N)

AIR MONITORING (A1, A2, A3)

BOREHOLE (B1, B2, B3)

SURFACE WATER (SW1, SW2)

N



Appendix 5

MONITORING WELL A: Chemical Analysis of Groundwater.										
PARAMETERS	UNIT	Limit	20/09/2013	09/12/2013	09/06/2014	02/12/2014	22/04/2015	13/10/2015	30/03/2016	03/08/2016
Meters above Ordinance	mAoD(malin)		80.81	80.81	80.81	80.81	80.81	80.81	80.81	80.81
Ground Water Level	M		70.11	63.81	71.41	63.31	61.71	64.51	63.11	59.01
pH	pH Units		7.3	7.4	7.8	7.1	7.7	7.3	7.5	7.3
Ammonia	NH_4 mg/l		<0.01	<0.01	<0.01	0.012	0.01	<0.01	<0.01	<0.01
Calcium	Ca mg/l		-	80.2	-	39.08	-	46.73	-	44.12
Chloride	Cl mg/l	24-187.5	17.2	11.14	7.89	7.68	7.35	7.28	12.3	14.84
Nitrate	$N0_3$ mg/l	37.5	-	0.52	-	1.02	-	1.88	-	0.6
Potassium	K mg/l		-	4.415	-	6.417	-	6.185	-	19.65
Ortho Phosphate	PO_4 mg/l		-	0.096	-	0.067	-	0.18	-	0.068
Sodium	Na mg/l	150	-	22.71	-	10.04	-	9.133	-	19.56
Sulphate	SO_4 mg/l	187.5	156.67	146.85	11.54	11.39	18.6	20.22	34.08	39.04
Boron	B mg/l	0.75	-	0.2087	-	0.01671	-	0.0192	-	0.1221
Cadmium	Cd mg/l	0.00375	-	0.000148	-	0.00009	-	0.00009	-	0.00009
Chromium (Total)	Cr mg/l	0.0375	-	0.0148	-	0.00214	-	0.00214	-	0.00214
Copper	Cu mg/l	1.5	-	0.001072	-	0.003247	-	0.006005	-	0.008331
Iron	Fe mg/l		-	0.001863	-	0.1115	-	0.5082	-	0.3488
Lead	Pb mg/l	0.01875	-	0.01141	-	0.002024	-	0.01391	-	0.004569
Magnesium	Mg mg/l		-	26.3	-	2.266	-	2.648	-	4.862
Manganese	Mn mg/l		-	0.3348	-	0.002682	-	0.04614	-	0.01053
Nickel	Ni mg/l	0.015	-	0.002224	-	0.001559	-	0.002388	-	0.005039
Zinc	Zn mg/l		-	0.3535	-	0.02748	-	0.1629	-	0.00041
Feacal Coliforms	cfu/100ml		-	56	-	34	-	87	-	140
Total Coliforms	cfu/100ml		-	60	-	77	-	260	-	150
Volatile Organic Compounds	mg/l		-	<0.001	-	<0.001	-	0.005	-	0.005
Semivolatiles	mg/l		-	<0.0005	-	<0.0005	-	0.0005	-	0.0005
Pesticides	mg/l	0.375	-	<0.0001	-	<0.0001	-	0.0001	-	0.0001

MONITORING WELL B: Chemical Analysis of Groundwater.										
PARAMETERS	UNIT	Limit	20/09/2013	09/12/2013	09/06/2014	02/12/2014	22/04/2015	13/10/2015	30/03/2016	03/08/2016
Meters above Ordinance	mAoD(malln)		86.93	86.93	86.93	86.93	86.93	86.93	86.93	86.93
Ground Water Level	M		64.93	65.43	69.73	64.93	57.63	64.53	62.13	58.03
pH	pH Units		7.4	7.2	7.3	7	7.3	7.1	7.2	7.1
Ammonia	NH_4 mg/l		0.408	<0.01	0.014	0.024	0.01	0.013	<0.01	<0.01
Calcium	Ca mg/l		-	95.18	-	138.4	-	137.3	-	197.8
Chloride	Cl mg/l	24-187.5	14.47	14.07	14.5	14.13	14.62	14.93	13.35	14.59
Nitrate	NH_3 mg/l	37.5	-	<0.110	-	<0.110	-	<0.110	-	2.53
Potassium	K mg/l		-	2.485	-	2.246	-	1.854	-	1.875
Ortho Phosphate	PO_4 mg/l		-	0.031	-	0.005	-	0.017	-	0.065
Sodium	Na mg/l	150	-	31.38	-	35.18	-	34.38	-	31.11
Sulphate	SO_4 mg/l	187.5	219.3	183.8	243.72	141.33	225.66	334.18	166.28	274.42
Boron	B mg/l	0.75	-	0.169.1	-	0.05473	-	0.04088	-	0.00433
Cadmium	Cd mg/l	0.00375	-	0.00013	-	0.00009	-	0.00009	-	0.00009
Chromium (Total)	Cr mg/l	0.0375	-	<0.00214	-	0.00214	-	0.00214	-	0.00214
Copper	Cu mg/l	1.5	-	0.01207	-	0.000374	-	0.000781	-	0.00011
Iron	Fe mg/l		-	0.174.7	-	0.007588	-	0.04293	-	0.1446
Lead	Pb mg/l	0.01875	-	0.004331	-	0.000049	-	0.000231	-	0.0184
Magnesium	Mg mg/l		-	28.92	-	40.5	-	37.01	-	35.59
Manganese	Mn mg/l		-	0.06978	-	0.6257	-	0.9665	-	0.2514
Nickel	Ni mg/l	0.015	-	0.001199	-	0.00025	-	0.000238	-	0.00014
Zinc	Zn mg/l			0.1716	-	0.001671	-	0.01698	-	0.00041
Feacal Coliforms	cfu/100ml		-	14	-	17	-	12	-	28
Total Coliforms	cfu/100ml		-	20	-	100	-	56	-	170
Volatile Organic Compounds	mg/l		-	<0.001	-	<0.001	-	0.005	-	0.005
Semivolatiles	mg/l		-	<0.0005	-	0.001787	-	0.0005	-	0.0005
Pesticides	mg/l	0.375	-	<0.0001	-	<0.0001	-	0.0001	-	0.0001

MONITORING WELL C: Chemical Analysis of Groundwater.										
PARAMETERS	UNIT	Limit	20/09/2013	09/12/2013	09/06/2014	02/12/2014	22/04/2015	13/10/2015	30/03/2016	03/08/2016
Meters above Ordinance	mAoD(malin)		86.51	86.51	86.51	86.51	86.51	86.51	86.51	86.51
Ground Water Level	M		67.81	76.31	64.31	59.51	55.01	71.21	66.41	54.11
pH	pH Units		7.8	7.6	7.5	7.1	7.7	7.5	7.5	7.2
Ammonia	NH_4 mg/l		<0.01	0.012	0.015	0.039	0.01	0.013	<0.01	<0.01
Calcium	Ca mg/l		-	80.64	-	85.28	-	87.79	-	76.81
Chloride	Cl mg/l	24-187.5	14.68	14.13	15.82	19.02	14.68	15.5	15.25	15.03
Nitrate	NH_3 mg/l	37.5	-	0.63	-	0.48	-	0.75	-	1.2
Potassium	K mg/l		-	2.422	-	1.983	-	1.563	-	1.826
Ortho Phosphate	PO_4 mg/l		-	0.09	-	0.031	-	0.031	-	0.032
Sodium	Na mg/l	150	-	18.17	-	20.47	-	13.04	-	10.72
Sulphate	SO_4 mg/l	187.5	118.81	117.8	121.66	118.11	111.82	137.9	130.81	132.89
Boron	B mg/l	0.75	-	0.02878	-	0.03076	-	0.02503	-	0.00433
Cadmium	Cd mg/l	0.00375	-	<0.00009	-	0.00009	-	0.00009	-	0.00009
Chromium (Total)	Cr mg/l	0.0375	-	0.004875	-	0.00214	-	0.00214	-	0.004882
Copper	Cu mg/l	1.5	-	0.02059	-	0.000188	-	0.000385	-	0.00011
Iron	Fe mg/l		-	0.6908	-	0.000782	-	0.003593	-	0.09
Lead	Pb mg/l	0.01875	-	<0.00002	-	0.00002	-	0.00002	-	0.00002
Magnesium	Mg mg/l		-	20.32	-	20.16	-	16.47	-	17.24
Manganese	Mn mg/l		-	0.002225	-	0.06702	-	0.01972	-	0.8723
Nickel	Ni mg/l	0.015	-	0.000156	-	0.00014	-	0.00014	-	0.00014
Zinc	Zn mg/l		-	0.01223	-	0.00119	-	0.006881	-	0.00041
Feacal Coliforms	cfu/100ml		-	0	-	0	-	1	-	0
Total Coliforms	cfu/100ml		-	0	-	0	-	23	-	10
Volatile Organic Compounds	mg/l		-	<0.001	-	0.001	-	0.005	-	0.005
Semivolatiles	mg/l		-	<0.0005	-	0.0005	-	0.0005	-	0.0005
Pesticides	mg/l	0.375	-	<0.0001	-	0.0001	-	0.0001	-	0.0001

Appendix 6

PM03- F01 Management Programme 2017

COMPLETED		ON HOLD CARRY FORWARD TO 2018			ON HOLD			
Ref Number	**Date**	**Type**	**Objective and Target**	**Location**	**Responsibility**	**Method**	**Time Frame**	**Status**
EP 01	Jan-16	Environmental	Biofilter Leachate Tank Integrity Test	Kilmainhamwood	GC		Jan-17	Complete
EP 02	Jan-16	Environmental	Leachate Storage Tank Integrity Test	Kilmainhamwood	GC		Jan-17	Complete
EP 03	Jan-16	Environmental	Pasteurisation Leachate Tank Integrity Test	Kilmainhamwood	GC		Jan-17	Complete
EP 13	Jan-17	Environmental	Investigate possibility of a recirculation pump system from the biofilter leachate tank back into the compost bulking area.	Kilmainhamwood	GC	1. Review the benefit of installing an automatic recirculation pump for the biofilter leachate. 2. If beneficial organise works	Apr-17	
EP 14	Jan-17	Environmental	High level liquid alarm on biofilter tank	Kilmainhamwood	GC	Investigate necessity of high level liquid alarm on biofilter leachate tank and install if necessary	Mar-17	
EP 15	Dec-17	Environmental	Changeover to 14001 new standard	All sites	GC			
EP 18	Feb-17	Environmental	ELRA and Cramp Costing Approval	Kilmainhamwood	DD	1. Liaise with the EPA and agreed costings and put bond in place	Dec-17	

Appendix 7

PM03- F01 Management Programme 2016

COMPLETED		ON HOLD CARRY FORWARD TO 2017			ON HOLD			
Ref Number	**Date**	**Type**	**Objective and Target**	**Location**	**Responsibility**	**Method**	**Time Frame**	**Status**
EP 02	Jan-16	Environmental	Biofilter Leachate Tank Integrity Test	Kilmainhamwood	GC		Dec-16	Arranged for january 2017- Carry forward
EP03	Jan-16	Environmental	Leachate Storage Tank Integrity Test	Kilmainhamwood	GC		Dec-16	Arranged for january 2017- Carry forward
EP 04	Jan-16	Environmental	Pasteurisation Leachate Tank Integrity Test	Kilmainhamwood	GC		Dec-16	Arranged for january 2017- Carry forward
EP 08	Jan-16	Environmental	Review of Environmetal Legal Register file	All Sites	GC	1. Review existing Legal Register. 2 Ascertain new legislation which applies to Thorntons Recycling . 3. Input new legistation 3. insert section for revoked legislation	Jul-16	Carry over from 2015
EP 09	Jan-16	Environmental	Review third party tipping recording template and create one template for all sites	All Sites	DD/GC/SC	1. Review current format and identify missing data. .2 Create a new format. 3 Each site to track third party tippers and update	Jun-16	Template created and all sites are on the one sheet and can be filtered by site if needed. Missing data on spreedsheet needs to be collated. On going work.
EP 15	Jan-15	Environmental	Horizon funding to businesses for research	Kilmainhamwood	SC	Investigate possible funding / research re compost process	Dec-16	WIP - Access further suitable calls available during 2016- Not successful in tender bin. Closed
EP 16	Jan-15	Environmental	Building of gangway on top of biofilter	Kilmainhamwood	SC	1. Gangway to be built	Dec-16	Main sections complete and in place . Remainder constructed and to to be installed by April 2016

Appendix 8

24th June 2016

To Whom It May Concern

Confirmation of Insurance Cover

Our Client: **Padraig Thornton Waste Disposal Ltd and Subsidiary Companies**

We act as Insurance Brokers to the above client and confirm that the following insurance has been arranged on their behalf.

Insurance Type	:	Combined Liability
Period	:	01 July 2016 to 30 June 2017
Business Description	:	Domestic, Industrial and Commercial Waste Collection, Recycling and Disposal (Including:- Liquid Waste for Local Authorities) Management and Operation of Bring centre and Property Owners (including:- some building work), Composting, End of Life Vehicle Processing, Maintenance of Own Vehicles and Contractors Vehicles used on the business of the insured and Property Owners (Including some building work)
Public Liability Limit of Indemnity	:	€13,000,000 any one occurrence or series of occurrences arising from any one originating cause including costs and expenses
Products/Pollution Limit of Indemnity	:	€13,000,000 in all during the period
Employers Liability Limit of Indemnity	:	€20,000,000 any one occurrence or series of occurrences arising out of one originating cause
Insurers	:	QBE Casualty Syndicate 386
Policy Number	:	AA156568I
Risk Reference	:	PADR05

Yours sincerely,

Colin Hehir
Account Manager
JLT Ireland
Direct Dial: 01 202 6053
Mobile: 087 2167055
Email: chehir@jlt.ie

Cont...

This document does not confer upon the addressee, recipient or holder any rights in the insurance nor does it set out the full terms, clauses, conditions, limits and exclusions of the Insurance. These statements have been made in good faith and are a summary of the insurance cover in force as at the date of this letter (which insurance remains subject to the full terms and conditions of the subscribing insurers' policy), although the Limit of Indemnity may have been impaired by incurred claims and therefore may vary from the amount shown. We accept no responsibility whatsoever for any inadvertent or negligent act, error or omission on our part in preparing these statements or for any loss, damage or expenses thereby occasioned to any recipient of this letter. The information contained in this letter should be treated as confidential.

Should the insurance cover be cancelled, assigned or changed in any way during the period of insurance, neither we nor the subscribing insurer(s) accept any obligation to notify any recipient of this letter.

The subscribing insurers' obligations under contracts of insurance to which they subscribe are several and not joint and are limited solely to the extent of their individual subscriptions. The subscribing insurers are not responsible for the subscription of any co-subscribing insurer who for any reason does not satisfy all or part of its obligations.

Notwithstanding the issuance of this letter we are and remain solely the agent of our Client in this matter and owe no duties to any recipient of this letter.

Appendix 9

Environmental aspects and impacts register

No.	Activity	Aspect	Normal conditions (N) Abnormal conditions (A) Emergency situation (E)	Impact					Impact evaluation								Layer of protection		Measuring and Monitoring
				Air pollution	Soil pollution	Water pollution	Noise	Resources consumption	Scale (1,2,3,4)	Severity (1,2,3,4)	Frequency (1,2,3,4)	Duration (1,2,3,4)	Legal exposure (1,3,5)	Costumer benefit (1,3,5)	Public image (1,3,5)	Evaluation of total impact	Existing	Planned	
1	Incoming Waste	**Unacceptable Waste** (Haz, contaminated)	E		x				1	1	4	1	1	1	3	12	1.Waste License List of acceptable waste types 2. EP10 Waste Acceptance Procedure 3. Weightbridge Checks 4. Driver checks 5. Yard Checks 6. PM06 Emergency Response	Brown Bin Awareness	1. Monthly KPI's 2. Internal Audit 3. Waste Acceptance Procedure / EHS induction
		Dust (Generated from high volume of traffic)	N	x					2	2	2	2	3	1	3	15	1. Waste Licence W0195-02 2.Occasional yard sweeping 3. Cleaning Schedule (clean as you go)	n/a	1. Dust Monitoring as required in Waste License compliance 2. Internal Audits
		Air bourne pathogens	A	x					2	2	1	2	3	1	1	12	1. All lorries carrying green waste and brown bin waste are carried in lorries with covers. 2 Grease trap waste is transported by tanker which is fully enclosed 3. All waste is composted in a fully enclosed facility under negative pressure	n/a	1. Bio aersol monitoring as per waste licence 2. Waste Licence compliance re covering etc of vehicles
		Noise (traffic at site entrance)	N				x		2	2	4	4	3	1	3	19	1. Facility only operational times permitted by Waste License 2. Noise Monitoring carried out Internally	n/a	Noise monitoring as per Waste License conditions
2	Mixing	**Noise** (Mechanical Mixing)	N				x		1	1	1	4	3	1	3	14	1. All operations are carried out indoors 2. Noise Monitoring carried out Internally	n/a	Noise monitoring as per Waste License conditions
		Dust (Generated by shredding waste)	N	x					1	2	1	2	3	1	3	13	1.Net coverings are used for green waste 2.All sorting and shredding is carried out indoors 3. Dust Monitoring carried out by External Consultant 4. EP03 Monitoting and Calibration procedure in place	n/a	1. Dust monitoring and reporting carried out as per the waste license condtions. 2. EP03 Monitoting and Calibration
		Water Discharges (Liquid from waste)	E			x			3	2	1	3	5	1	3	18	1. The license forbids any water discharges from the site. 2. All Waters from site are continuously fed back into the system and used in the process 3. Manual bungs are available on site in the event of an emegency 4. Yard is cleaned on a regular basis	n/a	1. Monitoring as per the conditions in the Waste License
		Odour (from composting)	A	x					2	2	1	2	3	3	3	16	1. Odour control system in place, sealed building, kept under negative pressure 2 Bio-filtration system 3.Daily odour monitoring 4. Monitoring check points	Emergency plan to detail breakdown of odour control system.	1. Daily Monitoring 2. 24 hour Complaints recording procedure - out of office diverted to security in KR

		Natural Resource (Electricity used in the aeration system)	N					x	1	1	4	4	1	1	1	13	1 Energy Management system in place	n/a	Internal Audit
		Toxic gases (Ventilation system failure, build up of Hydrogen Sulphide or Ammonia)	E	x					2	3	1	2	1	1	1	11	Odour control system in place to control air quality.	n/a	Internal Audit

3	Shredding	**Dust**	N	x					2	2	2	2	3	3	3	17	1.Net coverings are used for green waste 2.All sorting and shredding is carried out indoors 3. Dust Monitoring carried out by External Consultant 4. EP03 Monitoting and Calibration	n/a	Internal Audit
		Noise	N				x		2	2	2	2	3	3	3	17	1. All operations are carried out indoors 2. Noise Monitoring carried out by Internally	n/a	Internal Audit
		Unacceptable Waste (metal waste)	N		x				1	1	3	4	1	1	1	12	1. Automatically removed by magnet during the shredding process.	n/a	Internal Audit
		Unacceptable Waste (plastic waste)	N		x				1	1	4	4	1	1	1	13	1. Mechanically removed during screening	n/a	Internal Audit
4	Screening	**Non-recyclable waste** (residue from screening process, potential to enter final compost product)	N		x				1	1	3	4	1	1	1	12	1. Collected in a skip and removed by Thorntons 2 AT4 carried out to ensure material is stablised	n/a	Internal Audit
5	Pasteurisation	**Improper Pasteurisation** (failure of equipment may result in improper pasturisation)	A		x				2	2	1	3	5	3	3	19	1. Computerised temperature controlled atmosphere to ensure proper pasteurisation. 2. Fancom system in place to monitor temperatures inside tunnel	n/a	Internal Audit
6	Bio-filters	**Surface water contamination** (Biofilter leachate, high BOD waste)	N			x			2	2	1	3	5	3	3	19	1. Interceptor in place 2. Biofilter leachate passes into a holding tank not connected to any drainage network	n/a	Internal Audit
		Fugitive emissions (Emissions of Ammonia and Hydrogen sulphide)	A	x					2	2	2	2	3	3	3	17	1. Air monitoring carried out in accordance with the license.	n/a	Internal Audit
7	Misc.	**Diesel filling** (Tank bunded, risk of polting surface water)	N		x	x			2	2	1	1	3	1	1	11	1. Portable double skinned bunded tank used for the storage of diesel	n/a	Internal Audit
		Vermin	N						1	1	4	4	1	1	1	13	1. Vermin control in place	n/a	External contractors have programme in place for checks
		Inappropriate storage of waste (IBCs left in the yard)	N			x			1	1	3	1	1	3	3	13	1. IBCs that contained non-hazardous waste left in the yard.	n/a	Internal Audit Site Daily checks
		Oil leakage from machines	A		x	x		x	1	2	2	1	1	1	1	9	1. Spill kits in place on the facility. 2. Spill kits in lorries. 3. Staff training tool box talks on handling spills. 4. Manual cut off points on SW	n/a	1. EP07 Oil and Chemical Spill Procedure
		Canteen Waste (improper segregation of waste)	A		x				1	1	3	1	1	1	1	9	1.Bin for recyclables provided	n/a	Internal Audit
8	Odour Abatement - Acid Shrubber	**Environmental pollution**	No	x	x	x			2	2	1	1	3	1	3	13	1.Acid Scrubber removes ammonia from process air before going to Biofilters. 2.Odour abatement Maintenance Procedure 3. Fully bunded area. 4. SCADA controlled system. 5. Check sheets 6. PM06 Emergecny Response	n/a	Internal Audit and check sheets.

9	Site General	**Fire (destruction of facility)**	E	x	x	x		X	3	4	1	2	5	1	3	19	1. Fire Prevention system in place including alarms, detectors 2 Fire fighing equipment on site to include entinguishers, fire blankets and hose reels 3 Water Tank on site 4 Emergency response plan and planned evacuations 5 Staff Training 6 High level of moisture in waste accepted on site	n/a	Internal Audit and check sheets. Contractor Fire checks quarterly. Hot works permit to work systems in place Meath County Council Fire Brigade on site in 2014 and report given to H & S

Appendix 10

Parameters	Limits	Batch 30916A	Batch 31116A	Batch 31316A	Batch 31516A	Batch 31816A	Batch 31916A	Batch 32116A	Batch 32216A	Batch 32616A	Batch 32916A	Batch 33216A	Batch 33316A	Batch 33516A	Batch 33716A	Batch 33816A	Batch 34016A	Batch 34216A	Batch 34316A
Date Sampled								14/06/2016	14/06/2016	07/07/2016	03/08/2016	20/08/2016	29/08/2016	06/09/2016	20/09/2016	03/10/2016	14/10/2016	28/10/2016	04/11/2016
Nutrients																			
Ammonium Nitrogen mg/kg DM		47.1	47.5	854	69.2	428	50.1	135	384	0.0:1	145	443	140.7	45.1	142.9	227.4	269.8	335.2	541.9
Nitrate mg/kg DM		293	359	159	342	241	341	213	135	17109	558	36.5	691.7	127	91.6	76.9	263.5	52	80.8
Nitrogen mg/kg DM	-	1.67	1.69	1.7	1.71	1.88	1.68	1.68	1.78	4902	1.83	1.65	17341	16315	12951	3802	533.3	387.2	622.7
Phosphorous mg/kg DM	-	4053	3932	4501	4302	4168	4347	4242	4190	5737	4905	5971	5471	3755	443	3183	4392	3102	3064
Potassium mg/kg DM	-	5525	5703	5972	5594	5585	5541	5224	5179	6341	6115	7028	6249	8117	945	5589	8446	5082	4676
pH	-	7	7.3	7.3	7.4	7.1	7.5	7	7.3	6.7	7.47	8.4	7.3	8.4	4.4	7.8	7.4	7.4	7.2
Dry Matter %	-	39.5	39	42	39.5	40.2	39.8	43	43.8	44.5	53.8	57.4	59.6	70.3	32.3	55.4	81.3	59.5	62.4
Moisture Content %	-	61.5	61	58	60.5	59.8	60.2	57	56.2	55.5	46.2	42.6	40.4	29.7	67.7	44.6	18.3	40.5	37.6
Stability																			
Oxygen Uptake Rate mmol O2/kg	13	2.11	1.46	1.72	2.19	2.91	1.8	1.62	2.14	1.53	1.45	1.62	1.43	1.84	1.33	1.55	1.92	1.74	1.73
Metals																			
Cadmium mg/kg Dm	1.5	1.02	0.63	0.71	0.69	1.02	0.64	0.77	0.76	0.95	0.67	0.77	0.82	0.82	< 0.1	0.74	0.96	0.65	0.55
Chromium mg/kg DM	150	64.3	30.6	29.7	32.5	26.1	26.9	27.9	26.3	34.9	27.2	22.7	28.4	22	3.28	23.9	29.2	27.4	26.8
Mercury mg/kg DM	1	0.17	0.17	0.17	0.17	0.13	0.17	0.2	0.25	>.02	0.43	0.31	0.43	0.31	0.31	0.37	0.24	0.24	< 0.2
Lead mg/kg DM	150	52.1	51.3	62.3	56	51.7	64.4	95.7	89.5	85.8	66	166	80.9	55.4	7.66	55.4	94.9	69.9	42.2
Zinc mg/kg DM	400	223	216	252	233	204	238	255	249	279	266	276	261	262	28.5	206	306	202	301
Nickel mg/kg DM	75	43.3	23.6	24.7	25.2	21.8	22.8	27.1	25.2	33	26.6	23.2	28.9	23.1	2.97	23	30.7	24.3	25.2
Copper mg/kg DM	150	83.7	79.3	107	91	73	86.5	148	131	160	139	150	154	92.5	1.04	155	137	149	87.2
Arsenic mg/kg	-	7.94	7.03	7.59	6.3	6.9	7.05	7.45	7.2	7.82	7.2	7.19	7.91	7.39	< 3	7.08	11.7	6.8	6.2
Pathogens																			
Salmonella Species	Absent in 25g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E. coli cfu	<1000 cfu per gram	0	0	0	0	0	0	0	0	0	0	<10	<10	< 10	< 10	< 10	< 10	<10	< 10
Impurities																			
Impurities >2mm	<0.5%	0.03	0.01	0	0	0	0	0	0	0	0	0.03	0	0	0.02	0.25	0	0	0.01
Sharps	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gravel and Stones >5mm	<5%	0.42	0.14	0.25	0.29	0.11	0	0.18	0.08	0	1.05	5.72	0.13	0.12	0.45	1.48	0.06	0.36	0.06
Organic Matter																			
Organic Matter	>20%	33.1	31.9	29.1	31.6	35.1	31.7	32.4	32.7	48.8	44.2	37.3	38	36.4	89	45.8	45.6	58.2	56.5
Maturity																			
Microbial Respiration Rate mgCO2/g/d	16									0	5	1.6	5.8	14.1	3	8.7	2.4	5.4	2
											start using								
Miscellaneous (N/a form August 2016)	PA monthly reports form 2nd Sept 2016										CO2								
Viable Weed Seeds	<3 per litre	0	0	0	0	0	0	0	0	< 3 / litre									

* query N value to be used

Appendix 11

Environmental Protection Agency

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2016

1. FACILITY IDENTIFICATION

Parent Company Name	Padraig Thornton Waste Disposal Limited
Facility Name	Kilmainhamwood Compost
PRTR Identification Number	W0195
Licence Number	W0195-02

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Ballynalurgan
Address 2	Kilmainhamwood
Address 3	Kells
Address 4	
	Meath
Country	Ireland
Coordinates of Location	-6.78888 53.8686
River Basin District	GBNIIENB
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Grace Curran
AER Returns Contact Email Address	grace@thorntons-recycling.ie
AER Returns Contact Position	Environmental Officer
AER Returns Contact Telephone Number	N/A
AER Returns Contact Mobile Phone Number	0867911688
AER Returns Contact Fax Number	N/A
Production Volume	40000.0
Production Volume Units	Tonnes
Number of Installations	1
Number of Operating Hours in Year	2860
Number of Employees	7
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General
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) ?	

4.1 RELEASES TO AIR

Link to previous years emissions data

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

* 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		METHOD						QUANTITY		
			Method Used		DA	DB	DC			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
210	Dust	M	OTH	30 Day composite sample measured in mg/m2/day using standard method VDI2119	0.045169	0.069076	0.052651	0.166896	0.0	0.0

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

Additional Data Requested from Landfill operators

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

Landfill: Kilmainhamwood Compost

Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Used: Method Code	Method Used: 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# : W0195 | Facility Name : Kilmainhamwood Compost | Filename : W0195_2016.xls | Return Year : 2016 |

27/3/2017 14:23

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 or

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
No. Annex II	Name	M/C/E	Method Used: Method Code	Method Used: 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)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
Pollutant No.	Name	M/C/E	Method Used: Method Code	Method Used: 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

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			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* 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			
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* 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# : W0195 | Facility Name : Kilmainhamwood Compost | Filename : W0195_2016.xls | Return Year : 2016 | 27/03/2017 14:24

SECTION A : PRTR POLLUTANTS

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

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

3

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	19 05 01	No	3410.35	non-composted fraction of municipal and similar wastes	D5	M	Weighed	Offsite in Ireland	Bord na Mona Drehid Landfill,W0201-03	Drehid,.,Co. Kildare,.,Ireland		
Within the Country	19 05 01	No	99.78	non-composted fraction of municipal and similar wastes	D5	M	Weighed	Offsite in Ireland	Ballynagran Landfill Ltd,W0165-02	Ballynagran Residual Landfill,Ballynagran,Coolbeg and Kilcandra,Co Wicklow,Ireland		
Within the Country	19 05 01	No	235.9	non-composted fraction of municipal and similar wastes	D5	M	Weighed	Offsite in Ireland	Knockharley Landfill Ltd,W0146-02	Knockharley Landfill,Knockharley,Navan, Co Meath ,Ireland		

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