Padraig Thornton Waste Disposal Ltd

Waste Licence Reg. No. W0195-02

Annual Environmental Report 2015
Submitted March 2016

Prepared By:

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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 2015.

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;

Thorntons Recycling Head Office
Unit S3B Henry Road
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1.2 Reporting Period

The reporting period for this Annual Environment Report (AER) is between the 01/01/2015 and the 31/12/2015.

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 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 in Zone C 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. Once the material has passed the ABPR requirements and EPA standards it can be classified as compost and removed from the tunnel by a clean machine where it is stored in Zone C prior to being 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 July 2015. 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

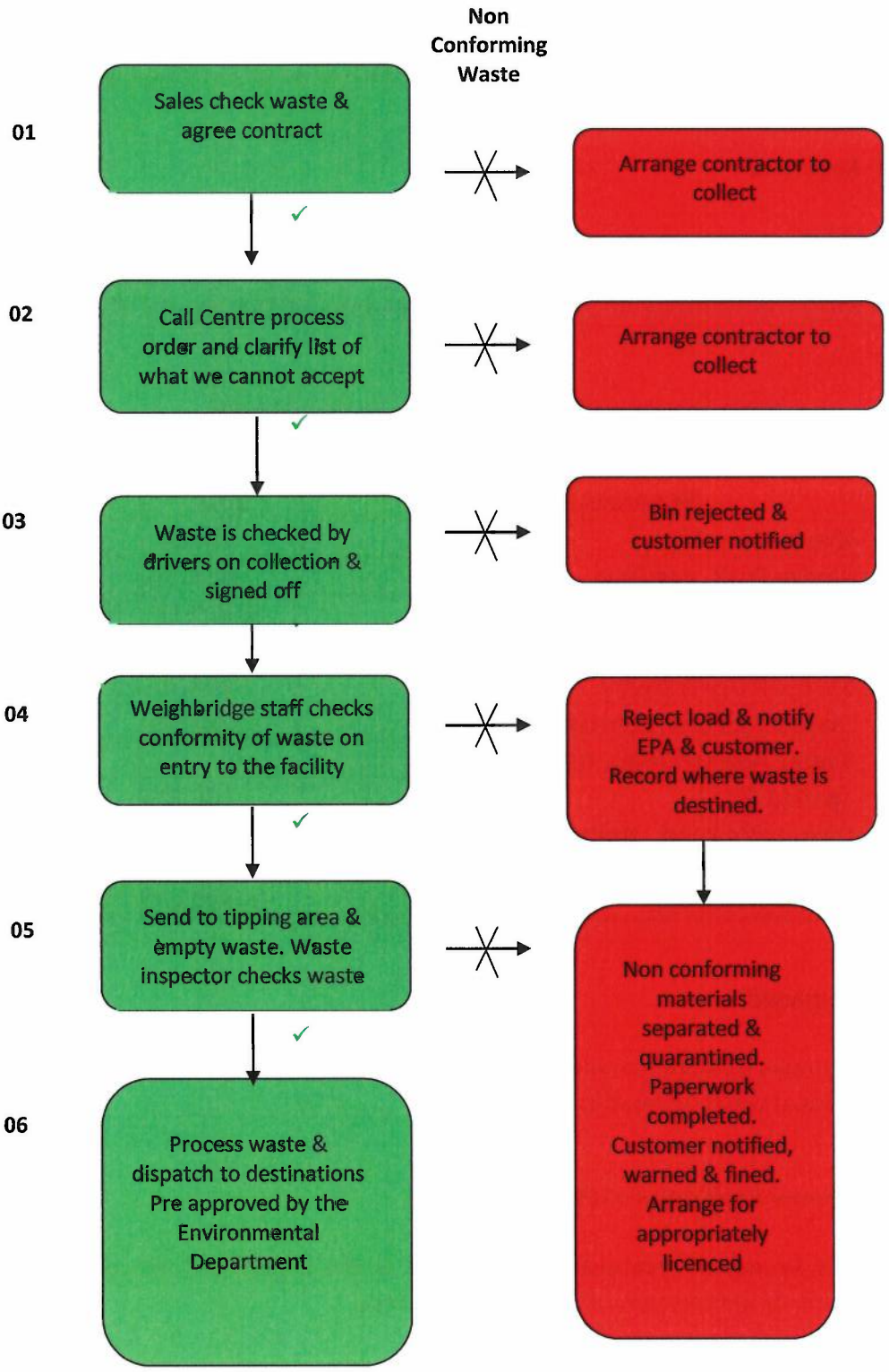
All waste is checked and documented at the weighbridge in accordance with our waste licence and our waste acceptance procedures as detailed in Section 2.2. Waste is then inspected, processed and placed into our production system. The composting process takes up to 8 weeks to produce mature compost. The 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 39,277.56 tonnes of waste for composting was accepted at the facility in the reporting period from 1st January 2015 to 31st December 2015. 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 2014-2015

EWC Code	Materials Received	2014	2015
20 01 25	Grease Trap Waste	789.52	251.53
02 03 04	Sludge Fruit, Veg Prep	826.96	-
20 01 08	Compostable Food Waste	35029.13	36774.40
19 12 07	Wood/ Sawdust	1961.44	1139.46
02 05 02	Sludge Dairy Industry	914.76	928.81
02 01 06	Sludge Textile Industrial	222.98	148.08
02 02 01	Sludge Animal Origin Washing	-	29.7
02 01 06	Spoiled Straw	46.88	-
05 05 01	Unsuitable Food - Dairy	-	5.58
	TOTAL TONNAGE	39791.67	39277.56

3.4 Waste Disposed

In 2015 3576.97 tonnes of a non-compostable material and was transferred from the facility as a stabilised residual waste to landfill.

3.5 Waste Recovered/Compost Produced

In 2015, 13,557.55 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 Diverted from Landfill

Year	Tonnes Diverted
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	35,700

Since its establishment in 2006 the facility has diverted successfully some 246,000 tonnes of biodegradable material away from landfill and produces an excellent resource in the form of compost. 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 2015. The following section details results obtained and interpretations of results.

5.1 Total Dust Deposition 2015

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 2015 and all were compliant:
Quarter 1 – 02/04/15 – EPA Reference LR015568
Quarter 2 – 08/07/15 – EPA Reference LR017146
Quarter 3 – 15/09/15 – EPA Reference LR018448
Quarter 4 – 18/12/15 – EPA Reference LR019907

Table 3: Total Dust Deposition Concentrations 2015

Dust Location	Units	Q1 2015	Q2 2015	Q3 2015	Q4 2015
DA	mg/m2/day	170	181	185	182
DB	mg/m2/day	157	164	169	165
DC	mg/m2/day	112	120	124	115

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 were discussed in detail in these reports. The results of monitoring during the reporting period are summarised in Appendix 5. The biannual report was submitted 27/04/15 under EPA reference LR015973 and the annual report was submitted 05/11/15 under EPA reference LR019245. Both were 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 run-off) and SW3 (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 2015 as follows:
Quarter 1 – 20/02/15 – EPA Ref: LR015020
Quarter 2 – 15/06/15 – EPA Ref: LR016655
Quarter 3 – 10/09/15 – EPA Ref: LR018448
Quarter 4 – 08/12/15 – EPA Ref: LR019721

Two incidents were recorded for breach of trigger levels on the SW3 outlet pipe. The first incident was for breaching ammonia trigger levels, the second was for breaching BOD levels and the third was for breaching both BOD and ammonia levels. All incidents were reported to the EPA.

Table 4: Surface and Storm Water Results – SW1 Downstream

			2015	2015	2015	2015
PARAMETERS	**UNIT**	**Limit**	**28.01.15**	**20.05.15**	**19.08.15**	**09.11.15**
Notes			Q1	Q2	Q3	Q4
Colour	-		Clear	Clear	Clear	Clear
Total Suspended Solids	**mg/l**		<20	<20	<10	2
BOD	**mg/l O2**	**<2.6**	<1	<5	1	<2
Mineral Oils	**mg/l**		<0.01	<0.001	<0.01	0.0025
pH	**pH Units**	**>6-<9**	7.4	7.7	7.2	7.4
Total Ammonia	**NH_4 mg/l**	**<0.14**	0.05	0.09	0.03	<0.01
Chloride	**Cl mg/l**		14.9	13.5	6.6	2.84

Table 5: Surface and Storm Water Results – SW2 Upstream

			2015	2015	2015	2015
PARAMETERS	**UNIT**	**Limit**	**28.01.15**	**20.05.15**	**19.08.15**	**09.11.15**
Notes			Q1	Q2	Q3	Q4
Colour	-		Clear	Clear	Clear	Clear
Total Suspended Solids	**mg/l**		<20	<20	<10	<2
BOD	**mg/l O2**	**<2.6**	<1	2	<1	<2
Mineral Oils	**mg/l**		<0.01	<0.001	<0.01	0.0025
pH	**pH Units**	**>6- <9**	7.4	7.5	7.2	7.3
Total Ammonia	**NH_4 mg/l**	**<0.14**	0.05	0.04	<0.02	0.024
Chloride	**Cl mg/l**		14.6	13.3	4.4	2.47

Table 6: Surface and Storm Water Results – SW3 Yard Run Off

			2015
PARAMETERS	**UNIT**	**Limit**	**28.01.15**
Notes			Q1
Colour	-		Clear
Odour	-		No odour
Total Suspended Solids	**mg/l**	**<25**	23
BOD	**mg/l O2**	**<2.6**	<2
Mineral Oils	**mg/l**		0.043
pH	**pH Units**	**>6- <9**	7.7
Total Ammonia	**NH_4 mg/l**	**<0.14**	0.09
Chloride	**Cl mg/l**		20.6

Table 7: Surface and Storm Water Results – SW3 Roof Run Off

			2015
PARAMETERS	**UNIT**	**Limit**	**28.01.15**
Notes			Q1
Colour	-		Clear
Odour	-		No odour
Total Suspended Solids	**mg/l**	**<25**	<10
BOD	**mg/l O2**	**<2.6**	<2
Mineral Oils	**mg/l**		0.359
pH	**pH Units**	**>6- <9**	6.9
Total Ammonia	**NH_4 mg/l**	**<0.14**	2.45
Chloride	**Cl mg/l**		46.8

Table 8: Surface and Storm Water Results – Combined SW3 Sampling Point

			2015	2015	2015
PARAMETERS	UNIT	Limit	20.05.15	19.08.15	09.11.15
Notes			Q2	Q3	Q4
Colour	-		Clear	Clear	Clear
Total Suspended Solids	mg/l	<25	<20	<10	<2
BOD	mg/l O2	<2.6	5	<1	<2
Mineral Oils	mg/l		<0.001	0.038	0.0025
pH	pH Units	>6- <9	7.5	6.8	7.1
Total Ammonia	NH_4 mg/l	<0.14	0.05	0.07	0.015
Chloride	Cl mg/l		13.1	8.5	3.6

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 by independent consultants Odour Monitoring Ireland and reports were submitted to the EPA in 2015.
Round 1 – Submitted 24/04/15 – EPA Reference LR015941
Round 2 – Submitted 02/10/15 – EPA Reference LR018676

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 9. Extra tests were carried out at the start of June 2015 during the biofilter bed media changeover.

Table 9: Monthly Biolfilter Inlet and Outlet Gases Results

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)
30.01.15	1 - Inlet	15		0		0			
30.01.15	1 - Outlet	0	0	0	0	0	0	0	0
30.01.15	2- Inlet	40		0		0			
30.01.15	2 - Outlet	0	0	0	0	0	0	0	0
27.02.15	1 - Inlet	11		0		0			

27.02.15	1 - Outlet	1.5	2	0	0	0	0	0	0
27.02.15	2- Inlet	9		0		0			
27.02.15	2 - Outlet	1	0	0	0	0	0	0	0
30.03.15	1 - Inlet	21		0		0			
30.03.15	1 - Outlet	5	0	0	0	0	0	0	0
30.03.15	2- Inlet	31		0		0			
30.03.15	2 - Outlet	2	3	0	0	0	0	0	0
30.04.15	1 - Inlet	20		0		0			
30.04.15	1 - Outlet	5	5	0	0	0	0	0	0
30.04.15	2- Inlet	60		0		0			
30.04.15	2 - Outlet	12	10	0	0	0	0	0	0
30.05.15	1 - Inlet	20		0		0			
30.05.15	1 - Outlet	0	0	0	0	0	0	0	0
30.05.15	2- Inlet	40		0		0			
30.05.15	2 - Outlet	15	20	0	0	0	0	0	0
01.06.15	1 - Inlet	15		0		0			
01.06.15	1 - Outlet	5	10	0	0	0	0	0	0
01.06.15	2- Inlet	40		0		0			
01.06.15	2 - Outlet	15	15	0	0	0	0	0	0
03.06.15	1 - Inlet	20		0		0			
03.06.15	1 - Outlet	12	15	0	0	0	0	0	0
03.06.15	2- Inlet	45		0		0			
03.06.15	2 - Outlet	20	15	0	0	0	0	0	0
05.06.15	1 - Inlet	25		0		0			
05.06.15	1 - Outlet	10	20	0	0	0	0	0	0
05.06.15	2- Inlet	40		0		0			
05.06.15	2 - Outlet	20	10	0	0	0	0	0	0
08.06.15	1 - Inlet	40		0		0			
08.06.15	1 - Outlet	20	15	0	0	0	0	0	0
08.06.15	2- Inlet	35		0		0			
08.06.15	2 - Outlet	15	15	0	0	0	0	0	0
10.06.15	1 - Inlet	35		0		0			

10.06.15	1 - Outlet	15	10	0	0	0	0	0	0
10.06.15	2- Inlet	30		0		0			
10.06.15	2 - Outlet	15	10	0	0	0	0	0	0
29.06.15	1 - Inlet	30		0		0			
29.06.15	1 - Outlet	15	0	0	0	0	0	0	0
29.06.15	2- Inlet	25		0		0			
29.06.15	2 - Outlet	10	0	0	0	0	0	0	0
27.07.15	1 - Inlet	20		0		0			
27.07.15	1 - Outlet	10	0	0	0	0	0	0	0
27.07.15	2- Inlet	15		0		0			
27.07.15	2 - Outlet	5	0	0	0	0	0	0	0
25.08.15	1 - Inlet	15		0		0			
25.08.15	1 - Outlet	2.5	0	0	0	0	0	0	0
25.08.15	2- Inlet	15		0		0			
25.08.15	2 - Outlet	5	0	0	0	0	0	0	0
26.09.15	1 - Inlet	20		0		0			
26.09.15	1 - Outlet	15	0	0	0	0	0	0	0
26.09.15	2- Inlet	20		0		0			
26.09.15	2 - Outlet	10	0	0	0	0	0	0	0
27.10.15	1 - Inlet	25		0		0			
27.10.15	1 - Outlet	10	0	0	0	0	0	0	0
27.10.15	2- Inlet	15		0		0			
27.10.15	2 - Outlet	10	0	0	0	0	0	0	0
27.11.15	1 - Inlet	20		0		0			
27.11.15	1 - Outlet	12	0	0	0	0	0	0	0
27.11.15	2- Inlet	15		0		0			
27.11.15	2 - Outlet	10	0	0	0	0	0	0	0
30.12.15	1 - Inlet	20		0		0			
30.12.15	1 - Outlet	10	0	0	0	0	0	0	0
30.12.15	2- Inlet	18		0		0			
30.12.15	2 - Outlet	12	0	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 10.

Table 10: Biofilter Bed Media Testing

Date	Biofilter	Ammonia mg/kg as N	pH	Total Viable Counts cfu/g
29/06/15	BF1	2520.16	5.6	24,000,000
	BF2	1535.98	6.5	3,000,000
22/10/15	BF1	415.45	6.6	9,200,000
	BF2	1514.66	5.5	11,800,000

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 2015.
Quarter 1 – 25/03/15 – EPA Reference LR015410
Quarter 2 – 25/06/15 – EPA Reference LR016847
Quarter 3 – 02/10/15 – EPA Reference LR018657
Quarter 4 – 18/12/15 – EPA Reference LR019921

6 Noise Monitoring 2015

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 2015 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 two night time limits and two day time limits were exceeded but from notes taken during the monitoring these were deemed to be from external sources and not as a consequence of site operations. Quarterly noise reports were submitted to the EPA for 2015.
Quarter 1 – 13/04/15 – EPA Reference LR015728

Quarter 2 – 25/06/15 – EPA Reference LR016857

Table 11: Recorded Noise Levels dB (A) – Intervals 30 minutes 2015

	Location	Survey Time	LA eq (dBA)	LArt (dBA)	LA10 (dBA)	LA90 (dBA)
Quarter 1	N1	Day (1) – 14:16	54	**54**	56	45.2
	N1	Day (2) – 15:02	64.7	**64.7**	53.3	43.1
	N1	Day (3) – 15:48	58.6	**63.6**	47.1	39.1
	N1	Evening – 18:56	53.4	**63.4**	48	34.9
Quarter 2	Location	Survey Time	LA eq (dBA)	LArt (dBA)	LA10 (dBA)	LA90 (dBA)
	N1	Day (1) - 12:33	46.1	**51.1**	45.9	37.1
	N1	Day (2) - 13:22	43.3	**48.3**	44.5	37.6
	N1	Day (3) - 14:16	46	**51**	48	38.6
	N1	Evening - 18:56	41.7	**66.7**	44.5	34.4

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.

In June 2015 the media in biofilter 2 was removed and replaced with shredded pine logs. The media in biofilter 1 was replaced in August 2015 with a mixture of waste timber and shredded pine logs.

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 2015.

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 were three incidents recorded in 2015. These all related to surface water monitoring point, SW3, exceeding trigger level values for both ammonia and BOD. These were reported to the EPA.

8.2 Complaints

There were 14 complaints made to the Facility and/or to the EPA during 2015. Full details of the complaints have been maintained on site at the facility as per our complaints procedure PM08 – Complaints

9 Energy Efficiency Audit Report Summary

As per Condition 7.1 of the licence W0195-02 a new energy efficiency audit was drafted and submitted to the Agency in 2015. This was submitted on the 08/05/15 under EPA Reference LR016121.

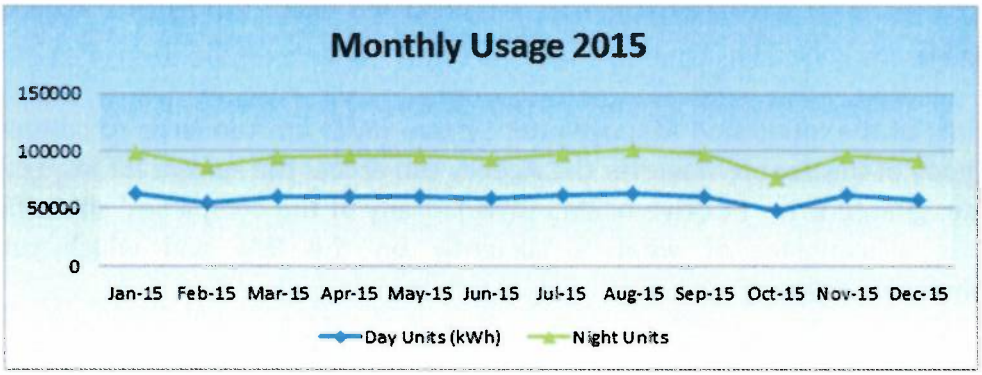
10 Resource Consumption Summary

The following section discusses resources such as Electricity, Fuel and Water used at Kilmainhamwood Compost in 2015. 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 2015 was a total of 1,126,809kWh. Figure 2 displays the monthly day and night time trend for the year's energy consumption at Kilmainhamwood Compost.

Figure 2: Electricity Consumption 2015



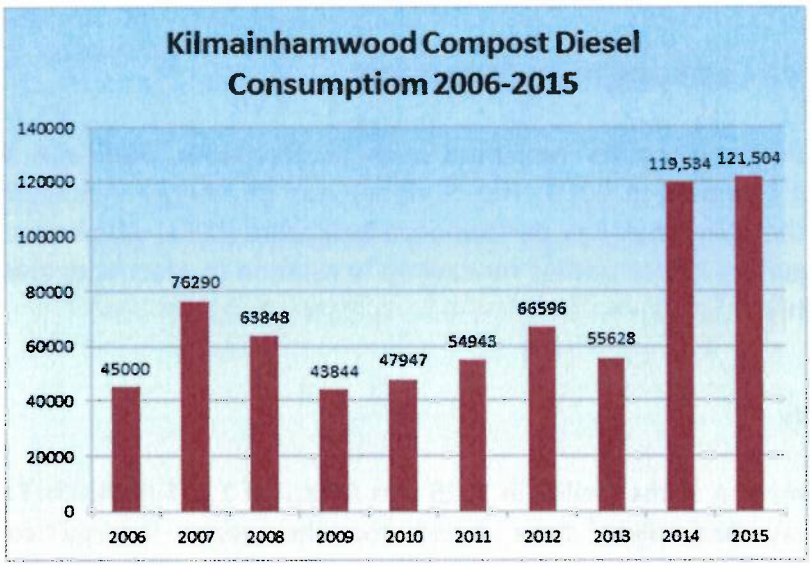
10.2 Water

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 2015 was the loading shovels and shredding machine used in the composting processes. A total of 121,504 litres of diesel was consumed in 2015. 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 – 2015



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 2016 for Kilmainhamwood Compost is contained within Appendix 6 of this report. The schedule for 2016 may be amended and finalised after the management review in March 2016. This schedule will be available to the EPA to inspect during any of their site audits in 2016 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 2015 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 2013 to BS8007 standards. A copy of this report was submitted to the EPA and was included in previous AERs. These three tanks are due for another integrity test in 2016. 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. A copy of this report was submitted to the EPA on

30/12/14 under EPA Reference LR014028. Required repairs that were highlighted in this report were carried out in 2015.

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 the Thorntons Recycling Group 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;

Paul Thornton
Director

Gary Brady
Managing Director

Shane Thornton
Director

Sean Campbell
Facility Manager

Brendan Hilliard
Deputy Manager

General Operatives
(5)

Shane Thornton, Sean Campbell, Brendan Hilliard and Robert Brady have all completed the Certificate in Compost Facility Operation. Shane Thornton and Sean Campbell have also 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 1/7/2015 and runs to 30/6/2016. 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)

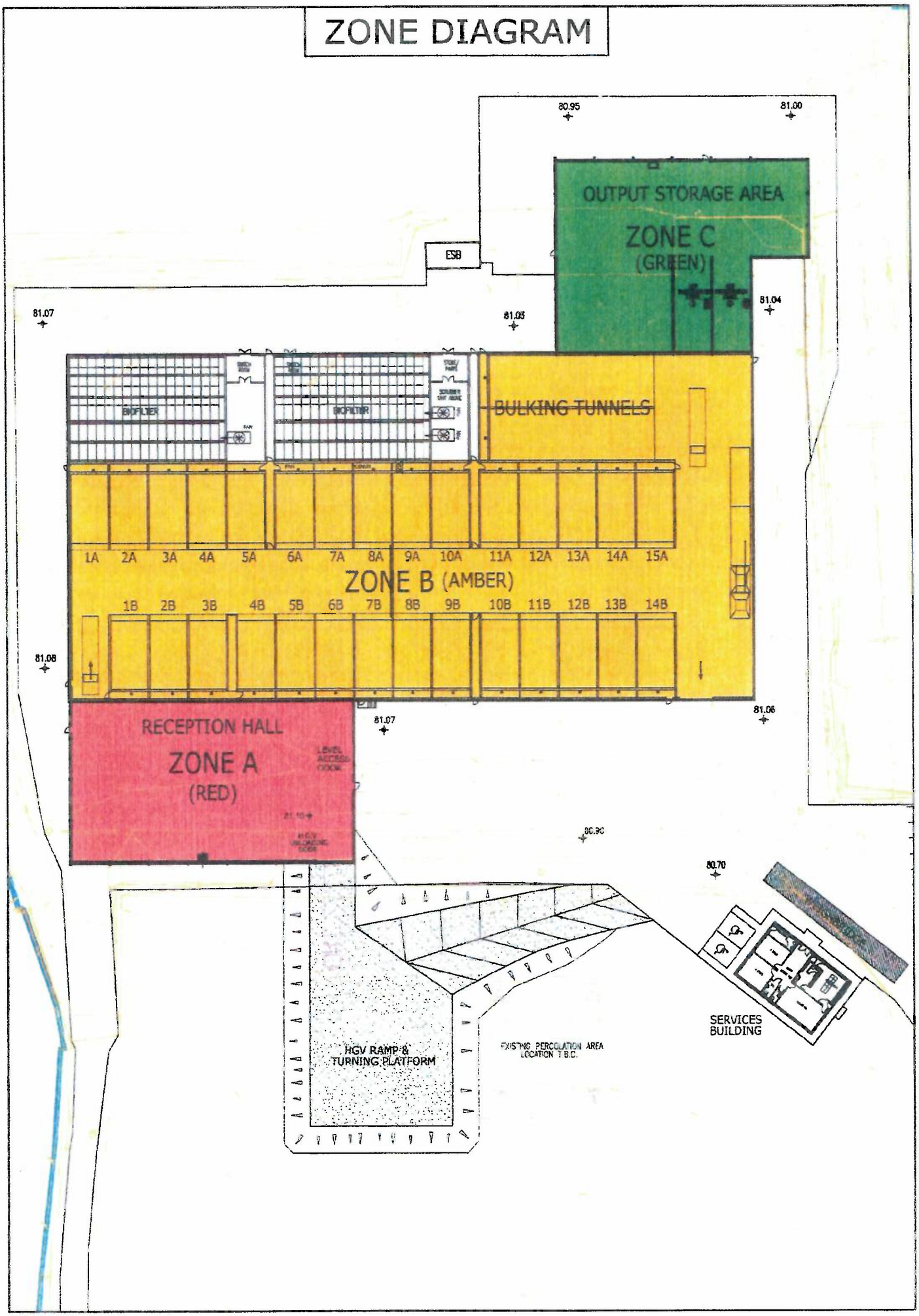
Condition 12.2 of the Waste Licence W0915-02 requires that a fully costed ELRA be submitted to the EPA. This was submitted to the Agency on the 01/04/15 under EPA Reference LR015547.

19 Achievement of Compost Quality Standards

There were 13 batches of compost analysed in 2015 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

PRECIA MOLEN

NSAI Legal Metrology Service
AUTHORISED VERIFIER

Unit F5 Maynooth Business Campus,
Maynooth,
Co. Kildare.
Ph: +353 1 835 3084

WEIGHBRIDGE VERIFICATION TEST REPORT NO : SO12307

CUSTOMER:	**Thorntons Compost**	TYPE APPROVAL CERT NO:	DK 0199.27	
SITE ADDRESS:	Ballynalugan	INDICATOR TYPE:	LD5204	10000224
	Kilmainhamwood	DATA PLATE:	Yes	
	Co.Meath	INDICATOR SERIAL NO:	100427616	
SERVICE REPORT NO:	19609	MINIMUM CAPACITY (kg):	400	
MANUFACTURER:	Leon	MAXIMUM CAPACITY (kg):	50000	
TYPE:	Weighbridge	DIVISION (e) (kg):	20	
SIZE:	18M X 3M	PRINTER SERIAL NO:		
LOCATION:	Exit	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	40048	0.40	0.40	40050	0.50	0.50			
2458	1.5	49200	49230	1.50	1.50					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%	49230	49226	49228
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	8038	8036	8038	8040	8044	8044	8048	8046		
Error (e)	-0.10	-0.20	-0.10	0.00	0.20	0.20	0.40	0.30		
PASSED	Yes									

LOADCELL DATA

Number	8
Make	KELI
Type	ZSFY-30t
Test cert	R60/TC6827 Rev2
Divisions	3000
Conformity	Yes
PASSED	Yes

COMPARISON TEST

Printer	Yes
Remote	Yes
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:
EMAIL:

PHYSICAL CONDITION: Good
AUTHORISED PERSON : 10000048-Milly Perry

TEST WEIGHTS USED : PM1-28, DT1-17
CERTIFICATE NO : T277034, 03825

VERIFICATION DATE : 06 July 2015
NEXT CALIBRATION DATE: 06 July 2016

SIGNATURE : D. Cunningham.
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

Environmental Monitoring Locations

SW3 – Storm Water – Roof Run Off and Yard Run Off

Appendix 5

Groundwater Results Well A – B1

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
Meters above ordinance	mAoD(malin)		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
pH	pH Units		7.3	7.4	7.8	7.1	7.7	7.3
Ammonia	NH_4 mg/l		<0.01	<0.01	<0.01	0.012	0.01	<0.01
Calcium	Ca mg/l		-	80.2	-	39.08	-	46.73
Chloride	Cl mg/l	24-187.5	17.2	11.14	7.89	7.68	7.35	7.28
Nitrate	$N0_3$ mg/l	37.5	-	0.52	-	1.02	-	1.88
Potassium	K mg/l		-	4.415	-	6.417	-	6.185
Ortho Phosphate	PO_4 mg/l		-	0.096	-	0.067	-	0.18
Sodium	Na mg/l	150	-	22.71	-	10.04	-	9.133
Sulphate	SO_4 mg/l	187.5	156.67	146.85	11.54	11.39	18.6	20.22
Boron	B mg/l	0.75	-	0.2087	-	0.01671	-	0.0192
Cadmium	Cd mg/l	0.00375	-	0.000148	-	0.00009	-	0.00009
Chromium (Total)	Cr mg/l	0.0375	-	0.0148	-	0.00214	-	0.00214
Copper	Cu mg/l	1.5	-	0.001072	-	0.003247	-	0.006005
Iron	Fe mg/l		-	0.001863	-	0.1115	-	0.5082
Lead	Pb mg/l	0.01875	-	0.01141	-	0.002024	-	0.01391
Magnesium	Mg mg/l		-	26.3	-	2.266	-	2.648
Manganese	Mn mg/l		-	0.3348	-	0.002682	-	0.04614
Nickel	Ni mg/l	0.015	-	0.002224	-	0.001559	-	0.002388
Zinc	Zn mg/l		-	0.3535	-	0.02748	-	0.1629
Feacal Coliforms	cfu/100ml		-	56	-	34	-	87
Total Coliforms	cfu/100ml		-	60	-	77	-	260
Volatile Organic Compounds	mg/l		-	<0.001	-	<0.001	-	0.005
Semivolatiles	mg/l		-	<0.0005	-	<0.0005	-	0.0005
Pesticides	mg/l	0.375	-	<0.0001	-	<0.0001	-	0.0001

Groundwater Results Well B – B2

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
Meters above ordinance	mAoD(malin)		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
pH	pH Units		7.4	7.2	7.3	7	7.3	7.1
Ammonia	NH_4 mg/l		0.408	<0.01	0.014	0.024	0.01	0.013
Calcium	Ca mg/l		-	95.18	-	138.4	-	137.3
Chloride	Cl mg/l	24-187.5	14.47	14.07	14.5	14.13	14.62	14.93
Nitrate	NH_3 mg/l	37.5	-	<0.110	-	<0.110	-	<0.110
Potassium	K mg/l		-	2.485	-	2.246	-	1.854
Ortho Phosphate	PO_4 mg/l		-	0.031	-	0.005	-	0.017
Sodium	Na mg/l	150	-	31.38	-	35.18	-	34.38
Sulphate	SO_4 mg/l	187.5	219.3	183.8	243.72	141.33	225.66	334.18
Boron	B mg/l	0.75	-	0.169.1	-	0.05473	-	0.04088
Cadmium	Cd mg/l	0.00375	-	0.00013	-	0.00009	-	0.00009
Chromium (Total)	Cr mg/l	0.0375	-	<0.00214	-	0.00214	-	0.00214
Copper	Cu mg/l	1.5	-	0.01207	-	0.000374	-	0.000781
Iron	Fe mg/l		-	0.174.7	-	0.007588	-	0.04293
Lead	Pb mg/l	0.01875	-	0.004331	-	0.000049	-	0.000231
Magnesium	Mg mg/l		-	28.92	-	40.5	-	37.01
Manganese	Mn mg/l		-	0.06978	-	0.6257	-	0.9665
Nickel	Ni mg/l	0.015	-	0.001199	-	0.00025	-	0.000238
Zinc	Zn mg/l			0.1716	-	0.001671	-	0.01698
Feacal Coliforms	cfu/100ml		-	14	-	17	-	12
Total Coliforms	cfu/100ml		-	20	-	100	-	56
Volatile Organic Compounds	mg/l		-	<0.001	-	<0.001	-	0.005
Semivolatiles	mg/l		-	<0.0005	-	0.001787	-	0.0005
Pesticides	mg/l	0.375	-	<0.0001	-	<0.0001	-	0.0001

Groundwater Results Well C – B3

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
Meters above ordinance	mAoD(malin)		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
pH	pH Units		7.8	7.6	7.5	7.1	7.7	7.5
Ammonia	NH_4 mg/l		<0.01	0.012	0.015	0.039	0.01	0.013
Calcium	Ca mg/l		-	80.64	-	85.28	-	87.79
Chloride	Cl mg/l	24-187.5	14.68	14.13	15.82	19.02	14.68	15.5
Nitrate	NH_3 mg/l	37.5	-	0.63	-	0.48	-	0.75
Potassium	K mg/l		-	2.422	-	1.983	-	1.563
Ortho Phosphate	PO_4 mg/l		-	0.09	-	0.031	-	0.031
Sodium	Na mg/l	150	-	18.17	-	20.47	-	13.04
Sulphate	SO_4 mg/l	187.5	118.81	117.8	121.66	118.11	111.82	137.9
Boron	B mg/l	0.75	-	0.02878	-	0.03076	-	0.02503
Cadmium	Cd mg/l	0.00375	-	<0.00009	-	0.00009	-	0.00009
Chromium (Total)	Cr mg/l	0.0375	-	0.004875	-	0.00214	-	0.00214
Copper	Cu mg/l	1.5	-	0.02059	-	0.000188	-	0.000385
Iron	Fe mg/l		-	0.6908	-	0.000782	-	0.003593
Lead	Pb mg/l	0.01875	-	<0.00002	-	0.00002	-	0.00002
Magnesium	Mg mg/l		-	20.32	-	20.16	-	16.47
Manganese	Mn mg/l		-	0.002225	-	0.06702	-	0.01972
Nickel	Ni mg/l	0.015	-	0.000156	-	0.00014	-	0.00014
Zinc	Zn mg/l		-	0.01223	-	0.00119	-	0.006881
Feacal Coliforms	cfu/100ml		-	0	-	0	-	1
Total Coliforms	cfu/100ml		-	0	-	0	-	23
Volatile Organic Compounds	mg/l		-	<0.001	-	0.001	-	0.005
Semivolatiles	mg/l		-	<0.0005	-	0.0005	-	0.0005
Pesticides	mg/l	0.375	-	<0.0001	-	0.0001	-	0.0001

Appendix 6

PM03- F01 Management Programme 2016

COMPLETED		ON HOLD CARRY FORWARD TO 2016			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	SC		16/08/2016	
EP03	Jan-16	Environmental	Leachate Storage Tank Integrity Test	Kilmainhamwood	SC		22/07/2016	
EP 04	Jan-16	Environmental	Pasteurisation Leachate Tank Integrity Test	Kilmainhamwood	SC		16/06/2016	
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	
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**
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**
EP 17	Sep-15	Environmental	Tidy up Environmental Legal Register to remove all irrelevant legislation	All Sites	GC	1. Review existing Legal Register & ascertain which legislation does not apply to Thorntons Recycling & remove 2. Re do register to simplify 3. insert section for revoked legislation	Dec-16	Carry over to 2016 to complete.

Appendix 7

PM03- F01 Management Programme 2015

COMPLETED		ON HOLD CARRY FORWARD TO 2016			ON HOLD			
Ref Number	Date	Type	Objective and Target	Location	Responsibility	Method	Time Frame	Status
EP 01	Jan-15	Environmental	CCTV Survey reported some faults on the lines . 2X defective joints between SECTION 8 AJF5-AJF9 and SECTION 9 AJF9-AJF10. The EPA instructed in correspondence folloing submission of LR014028 that these worked be incorporated into the EMP, in accordance with Condition 2.2.2.3.	Kilmainhamwood	SC/GC	1 - Organise through TTS	Jul-15	Repairs completed but re survey to be carried out by end of Nov 2015 and submitted with Kilmainhamwood AER.
EP 02	Jan-15	Environmental	HACCP Training and Cre Compost Training for Staff in Kilmainhamwood	Kilmainhamwood	SC/GC	1. MK / GC to organise bookings with Percy Foster in Cre	Jun-15	Completed - SC and ST carried out HACCP training 28.01.15. 3 members staff completed compost management course in Feb
EP03	Jan-15	Environmental	Environmental Guidance File on X Drive to be reviewed and Completely updated	All Sites	Team	1. MK split folder between all staff to ensure all folders up to date 2 Circulate to head office when complete useful for tenders and customers	May-15	Completed - DD completed sections assigned in April 2015. GC & MK completed Sections May 2015
EP 06	Jan-15	Environmental	Smarter Way of reporting Third Party tipping on. WIMS to be investigated	All Sites	SR/ MK	1. SR to review with WIMS and resend the data dump format in a spreadsheet that could be used. Liase with DB	Dec-15	WIP - MK/SR to redesign reports. Templates completed in May 2015. MK to meet with NF to discuss
EP 07	Jan-15	Environmental	Weighbridge Ticket - Investigate new design with new information	All Sites	SR	1. Get 4 samples of tickets from other companies 2. Get samples of tickets from other companies using WIMS/AMCS system 3. Team to make decision on look. SR to look at costs for changing 4. Loot at Haulier Name and Registration option	Dec-15	WIP - SR/DD have designed new tickets, needs team approval. 4 x tickets as templates from other waste companies . MK/SR sent request for new reports and tickets to NF June 2015 WIMS working on putting data on new platform so will be at least Aug/Sept before requests looked at
EP 09	Jan-15	Environmental	Glass Domestic and Commercial Collections - Feasibility Study	All Sites	MK	1 Glass Feasibility on hold	Dec-15	On Hold by GB in Jan 2015 E-mail
EP 14	Jan-15	Environmental	Energy Audit - Kilmainhamwood	Kilmainhamwood	DD/SC/GC	1. Update energy efficeincy audit carried out in 2008 to reflect new changes in site and licence	Jun-15	Completed by DD - 8.05.15
EP 15	Jan-15	Environmental	Optimisation of external heating sources for pasteurisation tunnel	Kilmainhamwood	SC	1. Trial of various boilers/heaters for external heating for pasteurisation tunnel to determine most effective method	Dec-15	Complete - most effective method agreed
EP 16	Jan-15	Environmental	Replacement of temperature probes in pasteurisation tunnels	Kilmainhamwood	SC	1. New probes required for pasteurisation tunnel 2. Probes to be calibrated once installed	Apr-15	Completed - Probes calibrated in April prior to installation in May 2015
EP 17	Jan-15	Environmental	Procedure for traceability to be drawn up	Kilmainhamwood	GC/SC	1. SOP to be drawn up detailing full traceability for compost batches	Mar-15	Completed - GC March 2014 in IMS
EP 18	Jan-15	Environmental	Horizon funding to businesses for research	Kilmainhamwood	SC	Investigate possible funding / research re compost process	Dec-15	WIP - Access further suitable calls available during 2016
EP 19	Jan-15	Environmental	Building of gangway on top of biofilter	Kilmainhamwood	SC	1. Gangway to be built	Dec-15	Main sections complete and in place . Remainder constructed and to to be installed by April 2016
EP 20	Jan-15	Environmental	Investigation of better water management system for bulking tunnels	Kilmainhamwood	SC	1. Investigate different ways of ensuring compost in bulking tunnels is kept moist	Jun-15	Complete - new tank installed in shed for runoff and tanker onsite being used to transport and apply water
EP 21	Jan-15	Environmental	Installation of insulation door on Building 2	Kilmainhamwood	SC	New door to be fitted to building 2 to maintain heat and reduce condensation	Sep-15	Completed Sept 2015
EP24	Mar-15	Environmental	Installation of a new wash down tank in the compost process shed	Kilmainhamwood	SC	1. New concrete under ground tank to be installed underground in compost process area. 2. Integrity test to be carried out on tank once installed.	May-15	Completed May 2015
EP25	Sep-15	Environmental	Tidy up Environmental Legal Register to remove all irrelevant legislation	All Sites	GC	1. Review existing Legal Register & ascertain which legislation does not apply to Thorntons Recycling & remove 2. Re do register to simplify 3. insert section for revoked legislation	Dec-15	Carry over to 2016 to complete.

Appendix 8

Celebrating 50 years in Ireland

JLT Ireland
Friends First House
Cherrywood Business Park
Loughlinstown
Dublin 18

Tel +353 1 2026000
Email jlt@jlt.ie

www.jlt.ie

EFB

To Whom it May Concern

30 June 2015

Confirmation of Insurance Cover

Our Client: Padraig Thornton Waste Disposal Ltd

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

Insurance Type Liability	:	Combined Liability comprising Employers, Public and Products
Period	:	01 July 2015 to 30 June 2016
Business Description	:	Waste Collection, Recycling and Disposal including Electrical Waste and End of Life Vehicles, Composting, Maintenance of Own Vehicles and Contractor's Vehicles used on the business of the Insured, Bin Repair and Drain Cleaning, Sludge Dewatering, Pressure Jetting & CCTV Services, Industrial Cleaning, Hazardous Waste Cleaning, Removal & Disposal, Tank Cleaning, Hazardous & Non –Hazardous Waste, Septic Tank & Grease Tap Cleaning and Waste (Hazardous & Non- Hazardous) Removal & Disposal and Property Owners
Limit of Indemnity	:	€20,000,000 in respect of Employers Liability €13,000,000 in respect of Public/Products Liability
Insurers	:	QBE Syndicate 386, London
Policy Number	:	AA156568

Insurance Type	:	Motor Fleet
Period	:	01 July 2015 to 30 June 2016
Limit of Indemnity	:	€6,400,000 – Third Party Property Damage
Insurers	:	QBE Europe Ltd
Policy Number	:	Y105938FLT0215A

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 polluting 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 30215A	Batch 30615A	Batch 30915A	Batch 31815A	Batch 32015A	Batch 32115A	Batch 32315A	Batch 32515A	Batch 32615A	Batch 32715A	Batch 32815A	Batch 33215A	Batch 33415A
Nutrients														
Ammonium Nitrogen mg/kg DM	-	1	25.3	<1	791	<1	883	728	644	565	889	889	950	819
Nitrate mg/kg DM	-	1276	1174	1251	<1	429	<1	<1	<1	20.8	<1	<1	<1	<1
Nitrogen g/100g DM	-	2.56	2.6	2.44	1.59	2.33	1.71	1.75	2.39	1.78	1.47	1.83	1.76	1.68
Phosphorous mg/kg DM	-	4699	4449	4450	3068	3854	3253	2790	3746	3332	2662	2486	3389	3190
Potassium mg/kg DM	-	13238	12326	12534	9854	8717	10157	9397	8313	9817	8815	8115	9722	9390
pH	-	7.7	7.7	7.7	8.3	8	8	8.9	8.2	8.7	8.9	8.7	8.9	8.9
Dry Matter %	-	44.5	45.4	43.6	70.6	44.9	67.2	70.5	46.3	62.6	70.9	64.9	70.6	63
Moisture Content %	-	55.5	54.6	56.4	29.4	55.1	32.8	29.5	53.7	44.8	29.1	35.1	29.4	37
Stability														
Oxygen Uptake Rate mmol O2/kg	13	0	0	0	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Metals														
Cadmium mg/kg Dm	1.5	0.73	0.73	0.69	0.58	0.68	0.78	0.53	0.7	0.78	0.6	0.71	0.65	0.71
Chromium mg/kg DM	150	18.3	16.7	18.6	25.6	16.1	22.8	25.3	14.8	35.4	28.3	20	22.6	21.6
Mercury mg/kg DM	1	0.09	0.09	0.09	<0.05	0.09	0.08	<0.05	0.11	0.09	<0.05	0.06	<0.05	0.09
Lead mg/kg DM	150	43.8	39.8	48.5	47.3	45.3	71.7	68.8	56.4	91.1	40.5	114	103	55
Zinc mg/kg DM	400	234	206	273	216	219	203	190	223	212	229	200	198	192
Nickel mg/kg DM	75	22.3	21.1	21.1	22.8	19.5	24	24.7	18.4	29	27.2	20.7	22.2	22.2
Copper mg/kg DM	150	54.2	43.9	45	66.2	38.5	57.1	72.6	45.4	70.7	57.2	59.3	53.7	53.5
Arsenic mg/kg	-	6.23	5.42	5.75	7.88	6.07	8.86	7.47	5.24	8.01	9.03	8.77	6.55	8.1
Pathogens														
Salmonella Species	Absent in 25g	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	0	0	0
Impurities														
Impurities >2mm	<0.5%	0.04	0.01	0	0	0.03	0	0.02	0	0	0	0	0	0
Sharps	0%	0	0	0	0	0	0	0	0	0	0	0	0	0
Gravel and Stones >5mm	<5%	3.06	3.01	2.02	0	1.56	0	0	0	0	0	0	0	0
Organic Matter														
Organic Matter	>20%	29.4	30.8	29.1	22.8	27.6	26.3	24.2	29.1	26	22.8	27	25.1	26.6
Miscellaneous														
Viable Weed Seeds	<3 per litre	0	0	0	0	0	0	0	0	0	0	0	0	0
Carbon Nitrogen Ratio	-	11.48	11.84	11.92	14.32	11.84	15.38	13.82	12.17	14.6	15.51	15.51	14.26	15.83
Compost Class Standard		Class II	Class II	Class II	Class II	Class II	Class II	Class II	Class II	Class II	Class II	Class II	Class II	Class II

Appendix 11

| PRTR# : W0195 | Facility Name : Kilmainhamwood Compost | Filename : W0195_2015.xls | Return Year : 2015 |

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2015

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	6
User Feedback/Comments	
Web Address	www.thorntons-recycling.ie

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 [PRTR# W0195 | Facility Name : Kilmainhamwood Compost | Filename : W0195_2015.xls | Return Year : 2015 | 05/02/2016 15:11]

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	0.0655175	0 05976875	0 04297875	0 168265	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_2015.xls | Return Year : 2015 | 05/02/2016 15:12

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 on

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

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

| PRTR# : W0195 | Facility Name : Kilmainhamwood Compost | Filename : W0195_2015.xls | Return Year : 2015 |

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 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 ie Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	19 05 01	No	3576.97	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	20 02 01	No	157.78	biodegradable waste	R3	M	Weighed	Offsite in Ireland	Barrockstown Farm,WFP/MH/14/0007/02	Barrockstown Farms Ltd,Barrockstown,Maynooth, Co Kildare,Ireland		

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