Padraig Thornton Waste Disposal Ltd

Waste Licence Reg. No. W0195-02

Annual Environmental Report 2017
Submitted February 2018

ISO 9001 CERTIFICATION EUROPE™ OHSAS 18001 CERTIFICATION EUROPE™ ISO 14001 CERTIFICATION EUROPE™

Prepared By:

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1 Introduction

This report is the Annual Environmental Report (AER) for Kilmainhamwood Compost operated by Padraig Thornton Waste Disposal Limited (PTWDL) trading as Thorntons Recycling. It has been prepared in compliance with Condition 11.9 of the Waste Licence Reg. No. W0195-02 and includes emission details and environmental reporting for the 2017 reporting period.

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
Park West Business Park
Dublin 10.

Telephone: 01- 623 5133
Site Contact: Robert Brady
Mobile: 086-8563431

1.2 Reporting Period

The reporting period for this Annual Environment Report (AER) is 01/01/2017 to 31/12/2017.

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 pyrolysis 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).

- 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.
- The vehicle is directed towards the weighbridge where the following information is recorded on our computerised system (WIMS):
  - Date;
  - The name of the carrier (including if appropriate, the waste carrier registration details);
  - The vehicle registration number;
  - The name of the producer(s)/collector(s) of the waste as appropriate;
  - The name of the waste facility (if appropriate) from which the load originated including the waste licence or waste permit register number;
  - A description of the waste including the associated EWC codes;
  - The quantity of the waste, recorded in tonnes; and,
  - The name of the person checking the load.
- The vehicle is directed to the tipping bay and accompanied by a staff member who will supervise the tipping process and inspect the load while tipping.
- Any material not suitable for processing or is in contravention of licence requirements is separated and removed to temporary storage in a quarantine area and the Manager notified immediately.

- Quarantined material is removed off site to an authorised facility licensed / permitted to process this waste type. The Manager will follow up with supplier of the load and outline actions to prevent recurrence of unauthorised materials being accepted.
- All containers and vehicles transporting materials to the site must be cleaned, washed and disinfected both internally and externally. A staff member will check that the trailer is clean before directing the driver back to the weighbridge to weigh out and the haulier must sign off EP10 ABPP01-F03 Vehicle Cleaning Form.
- Inside the reception building, the material is mixed and blended with material typically consisting of 45% seed material/ wood chip, 10% sludge/grease trap waste (when available) and 45% brown bin catering waste.
- The material is conveyed into a batch of 120 tonnes and placed into an aerated bay. The material is given a unique sub-batch code which allows for full traceability of the batch through the facility.
- A temperature probe is placed into the material and aeration is switched on. The temperature probe is monitored to bring the temperature to the required level. The composting material stays in this bay for one week, after which it is placed in a designated bay over the wall. Another temperature probe is placed into the material and aeration switched on for a period of 2 weeks.
- Following this, the material is screened through a 12mm screen. Any oversize material is sent back to the start of the process as seed compost and any residual plastic from the process is bulked and sent to a licensed landfill.
- The screened 12mm material is placed into a bulking tunnel which can hold up to 25 sub-batches. When full, the material is 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 is placed into the pasteurisation tunnels and is given a unique Batch Number to allow for full traceability.
- During pasteurisation, aeration is switched on in the tunnels 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 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 is classified as compost and is given a green label to indicate that it can be transported 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 Precia Molen in July 2017. A copy of the weighbridge verification test report is available on file.

2.4 Department of Agriculture Approval

The Kilmainhamwood Compost facility also operates under a Department of Agriculture, Food and the Marine (DAFM) Approval issued under the European Union (Animal By-Products) Regulations 2014 (S.I. No. 187 of 2014) (ABP Regulations), as amended. This

approval outlines conditions relating to the acceptance of feedstock at the facility as well as the operational conditions to ensure the compost process meets required standards, testing requirements and records management for compost produced. The DAFM approval was renewed in July 2017 and the Approval Certificates active throughout 2017 are contained in Appendix 2.

3 Waste Management Record - Quantity and Composition of Waste Received, Recovered and Disposed

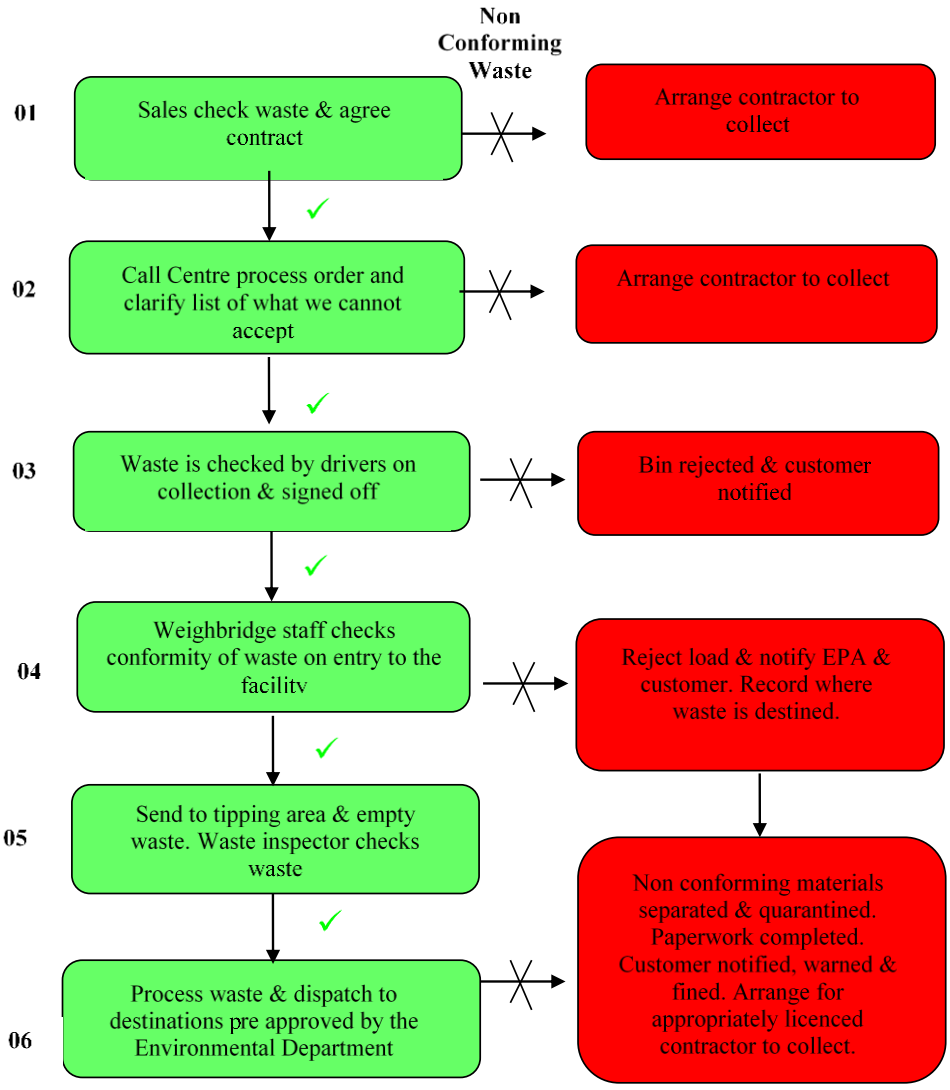
3.1 Materials Handled in Kilmainhamwood Compost

All waste is checked and documented at the weighbridge in accordance with the waste licence and the waste acceptance procedures as detailed in Section 2.2. Waste is then inspected, processed and placed into the production system. The composting process takes up to 8 weeks to produce mature compost.

3.2 Material Acceptance

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

Figure 1: Material 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 aware of non-conforming waste procedures and of producing a good quality compost at the facility.

Kilmainhamwood Compost is incorporated into the company Integrated management System, (IMS) and is certified with ISO14001 (Environmental), ISO 9001 (Quality), OHSAS 18001 (Health and Safety). The IMS system is available for inspection on the IMS drive at all company site offices.

3.3 Waste Received

Thorntons Recycling received its current waste licence in February 2014 allowing it to process 40,000 tonnes of material per year. A total of 37,746.58 tonnes of material was accepted at the facility for composting during 2017.

Table 1: Quantity and Composition of Waste Received 2015-2017

EWC Code	Materials Received	2015	2016	2017
20 01 25	Grease Trap Waste	251.53	118.96	57.84
20 01 08	Compostable Food Waste	36774.40	34047.30	34192.73
20 02 01	Green waste	-	-	123.40
19 12 07	Wood/ Sawdust	1139.46	1459.79	2001.42
02 01 03	Plant – tissue waste	-	-	1.14
02 05 02	Sludge Dairy Industry	928.81	762.98	805.81
02 01 06	Sludge Textile Industrial	148.08	159.30	78.54
02 02 01	Sludge Animal Origin Washing	29.7	140.24	-
02 01 06	Unsuitable Food Fruit Molasses	-	193.24	421.88
19 09 04	Carbon	-	26.78	63.82
05 05 01	Unsuitable Food - Dairy	5.58	182	-
	TOTAL TONNAGE	39,277.56	37,090.59	37,746.58

3.4 Waste Disposed

In 2017, 2,408.02 tonnes of a non-compostable material was transferred from the facility as a stabilised residual waste to landfill. In order to demonstrate that this material is stable, AT4 test results are required for every 500 tonnes of this material produced in accordance with condition 6.22.1 of Waste Licence W0195-02. Analysis was conducted in accordance with licence requirements; compared against the limit outlined in Condition 6.21.3 and results are summarised in Table 2 below:

Table 2: AT4 results 2017

AT4 results 2017		
Date	**Result (mgO_2/g DM)**	**Limit (mgO_2/g DM)**
28 Feb	0.31	<7
14 Mar	1.47	
24 Mar	4.91	
11 May	1.06	

AT4 results 2017		
Date	**Result (mgO_2/g DM)**	**Limit (mgO_2/g DM)**
1 Jun	1.61	
13 Jul	1.38	
15 Aug	0.31	
20 Sep	0.53	
5 Oct	0.20	
27 Nov	0.34	
18 Dec	0.87	
Average	**1.18**	

Laboratory analysis certificates detailing the above results can be viewed on site.

3.5 Waste Recovered/Compost Produced

In 2017, 9,306.72 tonnes of compost was produced at the facility and was either sold to landscape gardeners or arable farmers in the Leinster area. Records of compost dispatched from the facility are maintained and available on site for review.

4 Waste Recovery Report

4.1 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 tonnes), 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. Details of tonnages accepted at the site from 2007 to 2017 are detailed below:

Table 3: 2007-2017 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

2017	37,747
TOTAL	**321,974**

Since its establishment in 2006 the facility has accepted some 321,974 tonnes of biodegradable material helping to divert waste away from landfill and produce an excellent product 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 biodegradable waste at source. The facility accepts non-hazardous biodegradable wastes (including industrial sludge's, household food waste and commercial food and catering 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 outlined in the Landfill Directive (1999/31/EC).

5 Summary Report and Interpretations on Environmental Monitoring and Emissions Data

In accordance with Schedule C of Waste Licence W0195-02, monitoring of the biofilter, dust, odour, surface water, groundwater and bioaerosols were carried out during the 2017 reporting period. The following section details results obtained and interpretations of results.

5.1 Total Dust Deposition 2017

Three fixed monitoring locations (D1, D2 and D3) were used to perform total dust deposition monitoring quarterly as per Schedule C4 of Waste Licence W0195-02. The monitoring method used was Bergerhoff method such that gauges were placed at a height of at least 1.5m above the ground for a continuous period of 30 days. The monitoring locations are presented in Appendix 3.

The results of dust deposition monitoring are presented in Table 4 below.

Table 4: Total Dust Deposition Concentrations 2017

Dust Location	Units	Q1 2017	Q2 2017	Q3 2017	Q4 2017	ELV
D1	$mg/m^2/day$	100	96	100	104	350
D2	$mg/m^2/day$	185	179	184	186	350
D3	$mg/m^2/day$	147	140	145	148	350

The results confirm that there were no exceedances of the emission limit of 350 $mg/m^2/day$ required at the facility throughout 2017.

5.2 Groundwater Emissions

As per Schedule C5 of waste licence W0195-02, groundwater was monitored at B1, B2 and B3 bore wells biannually during 2017. 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 2017 for all three boreholes is summarised in Table 5 below:

Table 5: Summary of Groundwater Results for 2017

Parameter	Unit	Limit (GW Regs 2009)	Monitoring Well A (BH1)		Monitoring Well B (BH2)		Monitoring Well C (BH3)	
			Q1-2	Q3-4	Q1-2	Q3-4	Q1-2	Q3-4
Meters above Ordnance	**mAoD (malin)**		**80.81**	**80.81**	**86.93**	**86.93**	**86.51**	**86.51**
Ground Water Level	**M**		77.31	67.61	64.83	64.63	75.21	72.51
pH	**pH Units**		7.4	7.7	7.2	7.4	7.5	7.7
Ammonia	**mg/l**	65-175	0.123	0.62	<0.01	<0.02	<0.01	<0.02
Calcium	**mg/l**		-	56.9	-	83.5	-	84.9
Chloride	**mg/l**	24-187.5	21.23	18.6	13.13	12.4	15.01	13.5
Nitrate	**mg/l**	37.5	-	<0.11	-	<0.11	-	0.29
Potassium	**mg/l**		-	14.9	-	1.6	-	3
Ortho-Phosphate	**mg/l**		-	0.1	-	0.01	-	0.07
Sodium	**mg/l**	150	-	10.2	-	22.5	-	16.3
Sulphate	**mg/l**	187.5	35.97	45.61	153.71	147.48	130.52	132.62
Boron	**mg/l**	0.75	-	0.174	-	0.178	-	0.421
Cadmium	**mg/l**	0.00375	-	<0.001	-	<0.001	-	<0.001
Chromium (Total)	**mg/l**	0.0375	-	<0.003	-	<0.003	-	<0.003
Copper	**mg/l**	1.5	-	0.007	-	0.006	-	0.001
Iron	**mg/l**		-	1.97	-	<0.001	-	0.01
Lead	**mg/l**	0.01875	-	0.022	-	<0.001	-	<0.001
Magnesium	**mg/l**		-	8.2	-	22.8	-	18.4
Manganese	**mg/l**		-	0.358	-	0.055	-	0.007
Nickel	**mg/l**	0.015	-	0.013	-	0.005	-	0.005
Zinc	**mg/l**		-	0.241	-	0.249	-	0.572
Faecal Coliforms	**cfu/100ml**		-	970	-	0	-	0
Total Coliforms	**cfu/100ml**		-	510	-	0	-	0
Volatile Organic Compounds	**mg/l**		-	<0.005	-	0.005	-	0.005
Semivolatiles	**mg/l**		-	0.0005	-	0.0005	-	0.0005
Pesticides	**mg/l**	0.000375	-	0.0001	-	0.0001	-	0.0001

All groundwater monitoring during 2017 was compliant with the levels outlined in the European Communities Environmental Objectives (Groundwater) Regulations 2010, as amended.

A comparison of 2017 results against the past four years data has been included in Appendix 4. These results predominantly show a decreasing trend from previous years indicating that Kilmainhamwood Compost is not having negative impacts on the quality of groundwater in the vicinity of the facility.

5.3 Surface and Storm Water Emissions

As per Schedule C3 and C4 of waste licence W0195-02, surface and storm water was monitored at SW1, SW2, SW3 (roof and yard run-off) on a quarterly basis during 2017. SW3 roof runoff and yard runoff were combined in 2015 to create one monitoring point. Samples were also taken from the stream adjacent to the facility at SW2 which is upstream of the main operations at the site and SW1 which is downstream of the main activities at the site. Appendix 3 shows the locations of the surface and storm water monitoring points and the results are outlined in the tables 6-8 below. SW3 sampling from the roof and yard runoff only commenced in Quarter 2 of 2014 as required by the revised waste licence.

Results were compared to the levels outlined in the EC Environmental Objectives (Surface Waters) Regulations 2009 and trigger levels set out in Condition 5.3 of Waste Licence W0195-02. Full detailed quarterly reports for surface and stormwater monitoring were forwarded to the Agency throughout 2017.

There were no reportable incidents in relation to surface and storm water in 2017.

Table 6: Surface and Storm Water Results – SW1 Downstream

Surface Water Monitoring Location SW1: Chemical Analysis						
	Trigger value	**UNIT**	**Q1**	**Q2**	**Q3**	**Q4**
Parameters/ Date			07.02.17	07.04.17	31.07.17	27.11.17
Total Suspended Solids	**<25**	**mg/l**	<2	11	<2	2
BOD	**<2.6**	**mg/l O_2**	<2	5	<2	<2
Mineral Oils		**mg/l**	<0.0025	<0.0025	<0.0025	<0.0025
pH	**>6 <9**	**pH Units**	7.7	7.6	7.9	7.3
Total Ammonia	**<0.14**	**N mg/l**	0.017	0.267	0.013	0.02
Chloride		**Cl mg/l**	10.79	12.36	13.9	9

Table 7: Surface and Storm Water Results – SW2 Upstream

Surface Water Monitoring Location SW2: Chemical Analysis						
	Trigger value	**UNIT**	**Q1**	**Q2**	**Q3**	**Q4**
Parameters/ Date			07.02.17	07.04.17	31.07.17	27.11.17
Total Suspended Solids	**<25**	**mg/l**	2	5	<2	2
BOD	**<2.6**	**mg/l O_2**	<2	<2	<2	<2
Mineral Oils		**mg/l**	<0.0025	<0.0025	<0.0025	<0.0025
pH	**>6 <9**	**pH Units**	7.7	7.6	7.8	7.5
Total Ammonia	**<0.14**	**NH_4 mg/l**	0.02	0.104	<0.01	0.15
Chloride		**Cl mg/l**	10.95	13.47	13	8

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

Surface Water Monitoring Location SW3: Chemical Analysis						
	Trigger value	**UNIT**	**Q1**	**Q2**	**Q3**	**Q4**
Parameters/ Date			07.02.17	07.04.17	31.07.17	27.11.17
Total Suspended Solids	**<25**	**mg/l**	2	10	<2	5
BOD	**<2.6**	**mg/l O_2**	<2	<2	<2	<2
Mineral Oils		**mg/l**	<0.0025	<0.0025	<0.0025	<0.0025
pH	**>6 <9**	**pH Units**	7.5	7.7	7.9	7.7
Total Ammonia	**<0.14**	**NH_4 mg/l**	0.019	0.069	0.014	0.04
Chloride		**Cl mg/l**	16.17	14.17	13.6	9

5.4 Bio-aerosol Monitoring – Bacteria and Aspergillus Fumigatus

As per Schedule C4 of Waste Licence W0195-02, bioaerosol monitoring consisting of quantification of Mesophilic Bacteria and Aspergillus Fumigatus (micro-organisms) in the vicinity of the facility was carried out biannually during 2017. This was carried out in March and December 2017 by independent consultants Odour Monitoring Ireland and the results are summarised in Table 9 below:

Table 9: Monthly Biofilter Inlet and Outlet Gases Results

Monitoring Location	**Units**	**Aspergillus fumigatus**		**Limits**	**Mesophilic bacteria**		**Limits**
		16/03/2017	**13/12/2017**		**16/03/2017**	**13/12/2017**	
D1	CFU m^3	1.41	<3	0-400	212	226	79-3204
D2	CFU m^3	1.76	<3		265	79	
D3	CFU m^3	2.35	<3		353	109	

5.5 Biofilter Monitoring – Inlet and Outlet Gases

As per Schedule C.1.1 and C.1.2 of 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, whereas outlet gases are monitored for ammonia, hydrogen sulphide, mercaptans and amines. Emission limits are set for these parameters by the EPA in Schedule B1 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 10.

Table 10: Monthly Biofilter Inlet and Outlet Gases Results

Date	**Biofilter - Inlet/ Outlet**	**Ammonia centre**	**Ammonia side**	**Hydrogen sulphide centre**	**Hydrogen sulphide side**	**Mercaptans centre**	**Mercaptans side**	**Moisture Content**	**Amines Centre**	**Amines Side**
30.01.17	1- Inlet	20		0		0				
30.01.17	1-Outlet	10	10	0	0	0	0	70%	0	0
30.01.17	2-Inlet	25		0		0				
30.01.17	2-Outlet	10	10	0	0	0	0	70%	0	0
24.02.17	1-Inlet	30		0		0				
24.02.17	1-Outlet	10	10	0	0	0	0	70%	0	0
24.02.17	2- Inlet	20		0		0				

Date	Biofilter - Inlet/ Outlet	Ammonia centre	Ammonia side	Hydrogen sulphide centre	Hydrogen sulphide side	Mercaptans centre	Mercaptans side	Moisture Content	Amines Centre	Amines Side
24.02.17	2- Outlet	12	10	0	0	0	0	70%	0	0
27.03.17	1- Inlet	20		0		0				
27.03.17	1- Outlet	10	10	0	0	0	0	70%	0	0
27.03.17	2- Inlet	20		0		0				
27.03.17	2- Outlet	10	10	0	0	0	0	70%	0	0
26.04.17	1- Inlet	20		0		0				
26.04.17	1- Outlet	10	10	0	0	0	0	70%	0	0
26.04.17	2- Inlet	25		0		0				
26.04.17	2- Outlet	12	10	0	0	0	0	70%	0	0
29.05.17	1- Inlet	25		0		0				
29.05.17	1- Outlet	10	10	0	0	0	0	70%	0	0
29.05.17	2- Inlet	20		0		0				
29.05.17	2- Outlet	10	10	0	/	0	/	70%	/	/
28.06.17	1- Inlet	20		0		0				
28.06.17	1- Outlet	12	10	0	/	0	/	70%	/	/
28.06.17	2- Inlet	22		0		0				
28.06.17	2- Outlet	14	10	0	0	0	0	70%	/	/
27.07.17	1- Inlet	30		0		0				
27.07.17	1- Outlet	15	10	0	0	0	0	70%	0	0
27.07.17	2- Inlet	25		0		0				
27.07.17	2- Outlet	12	10	0	0	0	0	70%	0	0
28.08.17	1- Inlet	25		0		0				
28.08.17	1- Outlet	10	10	0	0	0	0	70%	/	/
28.08.17	2- Inlet	20		0		0				
28.08.17	2- Outlet	10	10	0	/	0	/	70%	/	/
27.09.17	1- Inlet	25		0		0				
27.09.17	1- Outlet	12	10	0	/	0	/	70%	/	/
27.09.17	2- Inlet	20		0		0				
27.09.17	2- Outlet	10	10	0	/	0	/	70%	/	/
25.10.17	1- Inlet	23		0		0				
25.10.17	1- Outlet	10	10	0	/	0	/	70%	/	/
25.10.17	2- Inlet	25		0		0				
25.10.17	2- Outlet	10	10	0	/	0	/	70%	/	/
30.11.17	1- Inlet	20		0		0				
30.11.17	1- Outlet	12	10	0	/	0	/	70%	/	/
30.11.17	2- Inlet	30		0		0				
30.11.17	2- Outlet	15	12	0	/	0	/	70%	/	/
29.12.17	1- Inlet	27		0		0				
29.12.17	1- Outlet	15	12	0	/	0	/	70%	/	/
29.12.17	2- Inlet	23		0		0				
29.12.17	2- Outlet	17	12	0	/	0	/	70%	/	/

5.6 Biofilter Monitoring – Bed Media

As per Schedule C.1.1 of the Waste Licence, the biolfilter bed media is required to be analysed for pH, ammonia and total viable counts on a biannual basis. A copy of these test results can be seen in Table 11.

Table 11: Biofilter Bed Media Testing

Date	Biofilter	Ammonia mg/kg as N	pH	Total Viable Counts cfu/g
06/07/2017	BF1	1,667	7.4	500,000
	BF2	725	5.8	1,210,000
20/12/2017	BF1	348	7.3	2,850,000
	BF2	992	7.4	8,900,000

5.7 Odour Monitoring

Odour monitoring of the biofilters was carried out on a quarterly basis as per Schedule C.1.2 of the waste licence. This analysis was carried out by independent consultants Odour Monitoring Ireland and a summary of the results can be seen in Table 12 below:

Table 12: Biofilter Bed Media Testing

Dust Location	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Limit
Biofilter 1	13,355	16,470	17,440	15,042	NA
Biofilter 2	26,894	31,454	29,449	29,895	NA
Total	**40,249**	**47,924**	**46,889**	**44,937**	**48,485**

6 Noise Monitoring 2017

Noise surveys were carried out at the noise monitoring location N1 referenced in the waste licence (see monitoring location in Appendix 3). Monitoring was carried out twice during 2017 as per the agreement with the Agency on 28 July 2015 to reduce monitoring from quarterly to biannually (EPA Reference LR017760).

Noise monitoring is carried out three times during the day and once during the evening as agreed with the EPA on the 18th August 2014 (EPA Reference LR011713). The monitoring results were submitted to the EPA during 2017 and a summary is presented in Table 13 below:

Table 13: Recorded Noise Levels dB (A) – Intervals 30 minutes 2017

	Location	Survey Time	LA eq (dBA)	LArt (dBA)	LA10 (dBA)	LA90 (dBA)	Limit
Sample 1 18.05.17 & 19.05.17	N1	Day (1) – 8:39	52	52	49.5	36.6	55
	N1	Day (2) – 11:02	40.2	45.2	42.9	35.8	55
	N1	Day (3) – 12:32	43.1	48.1	43.6	34.3	55
	N1	Evening – 19:00	41.2	41.2	43.1	33.3	50
Sample 2 09.11.17	N1	Day (1) – 09:52	56.4	61.4	44.6	39.2	55
	N1	Day (2) – 12:00	41.7	41.7	43.9	39	55
	N1	Day (3) – 14:04	44.3	44.3	47.2	39.7	55
	N1	Evening – 20:01	40.2	50.2	41.4	37.1	50

Noise monitoring results for 2017 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. There were 2 no. day time limit exceedances and 1 no. evening time exceedances, which were attributed to external sources and not due to site operations. Biannual noise reports were submitted to the EPA for 2017.

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 minimise and prevent nuisance where possible; daily checks are carried out and corrective actions implemented 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 road sweepers throughout the site on a regular basis.

7.2 Noise

Noise monitoring surveys were conducted at the facility during 2017; see Section 6 of this report. As all processing activities take place inside the process 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. Air emissions from the process building pass through an acid scrubber and biofilter reducing potentially odorous air emissions from the facility.

Odour monitoring and monitoring biofilter efficiency has been carried out as per licence requirements during 2017. Please see sections 5.5-5.7 outlined above for further details.

7.4 Litter

Daily checks are carried out throughout the site to detect and clean up any litter in the vicinity of the facility. All vehicles transporting waste to and from the site are either enclosed or have a net covering waste and preventing potential littering issues. Daily housekeeping checks are carried out throughout the site by supervisors and site managers and records maintained on file in the site office.

7.5 Birds

Doors at the facility are kept closed at all reasonable times and there has never been an issue with birds at the site.

7.6 Vermin

Complete Pest Control are contracted to implement pest control measures for rodents and flies at the facility. Regular checks are conducted on all bait points throughout the facility to

ensure effective control measures have been implemented to control rodents at the facility. All site visit documentation and reports are maintained on site.

There have never been fly problems at the facility; however Complete Pest Control conduct regular spraying of areas where flies would most likely occur at regular intervals to prevent increases in fly numbers.

7.7 Mud

The majority of surfaces throughout the site are hard standing and as such mud is not an issue. A road sweeper is available for use on hardstanding areas throughout the site to prevent any mud accumulation or issues.

8 Summary of Incidents and Complaints

8.1 Incidents

There were no incidents at the facility during 2017.

8.2 Complaints

There were 7 complaints received by the facility and/or to the EPA during 2017. This is a 74% decrease on the previous year. All complaints received during 2017 related to odour from the facility. The last complaint was received in May 2017. Full details of the complaints are maintained 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, an energy efficiency audit was submitted to the Agency in 2015.

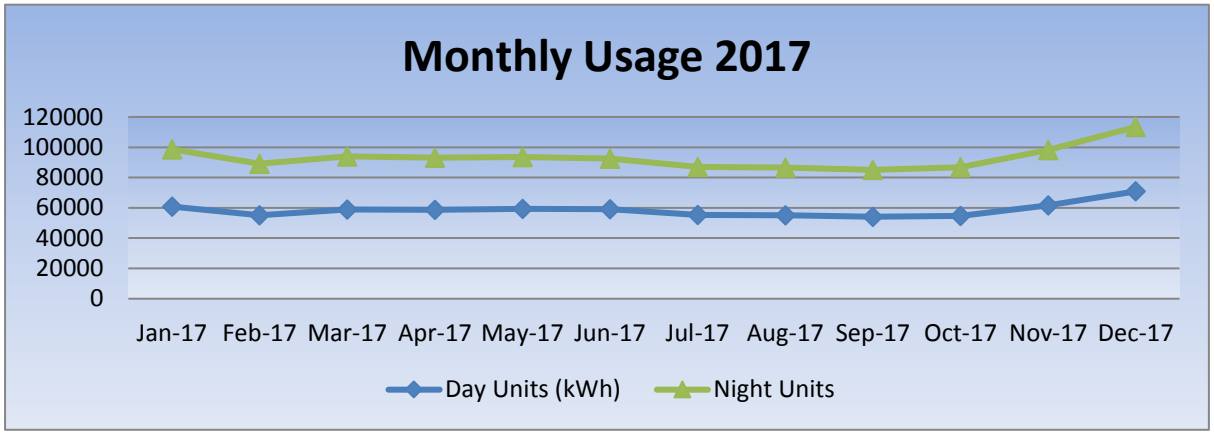
10 Resource Consumption Summary

The following section discusses resources such as Electricity, Fuel and Water used at Kilmainhamwood Compost in 2017. The company has an energy management system in place as part of the company's key performance indicators (KPIs) 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 2017 was a total of 1,111,192kWh. Figure 2 displays the monthly day and night time trend for the year's energy consumption at Kilmainhamwood Compost.

Figure 2: Electricity Consumption 2017



From Figure 2, it can be seen that peak electricity usage at the site is in December. The usage ranged from 85,034kWh in September to 113,405kWh in December.

10.2 Water

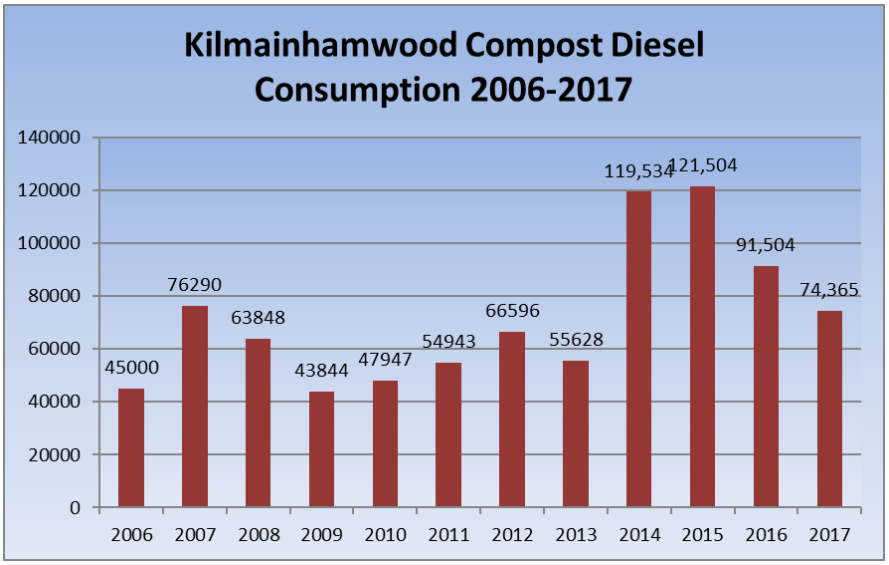
Kilmainhamwood compost is not connected to the local water mains and water for the site is sourced from borehole 3. Water is pumped from borehole 3 and stored in an over ground collection tank with a capacity of 90,000L.

Water usage throughout the site includes water for washing trailers, equipment and floors as well as toilets and washing associated with the office building and kitchen. Drinking water is supplied by a contract water supplier. 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. It is estimated that around 1,248,000L is used from this tank on an annual basis.

10.3 Diesel

The main consumption of diesel in 2017 was the operation of loading shovels and screening processes for composting. A total of 74,365 litres of diesel was consumed in 2017. All machines are serviced regularly in order to achieve optimum fuel efficiency. Processes at the facility are monitored to identify areas for reductions in diesel consumption.

Figure 3: Diesel Consumption 2006 – 2017



11 Schedule of Environmental Objectives and Targets Proposal for 2018

Kilmainhamwood Compost operates under Thorntons Recycling Integrated Management System (IMS) which is accredited to ISO14001, ISO9001 and OHSAS18001.

As part of IMS requirements, a schedule of objectives and targets for 2018 relating to Kilmainhamwood Compost have been developed and are contained within Appendix 5 of this report. The 2018 objectives and targets are subject to review and may be amended and finalised after the management review in February 2018. This schedule will be available to the EPA to inspect during any of their site audits in 2018 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 2017 is contained within the integrated management system on site. A report of the progress of these objectives and targets is contained within Appendix 6.

13 Tank, drum, pipeline and bund testing.

There are four underground tanks in use at the facility with the following uses:

- Collecting leachate from the biofilters;
- Collecting washings and run off from the reception hall and the wash bay;
- A pressure trap tank for the pasteurization tunnel; and,
- A tank was installed in 2015 to collect water run-off from the composting process.

There are no fixed fuel tanks on site and diesel used on the site is filled from a mobile diesel bowser.

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, another full CCTV survey of the site is not required until 2019.

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

The raw materials in the composting process 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.

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 by educating customers on suitable composting materials.

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 with a capacity of 90,000 litres and is supplied by borehole 3. It is estimated that 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 previously carried out tours with local representative groups, students, clients etc.

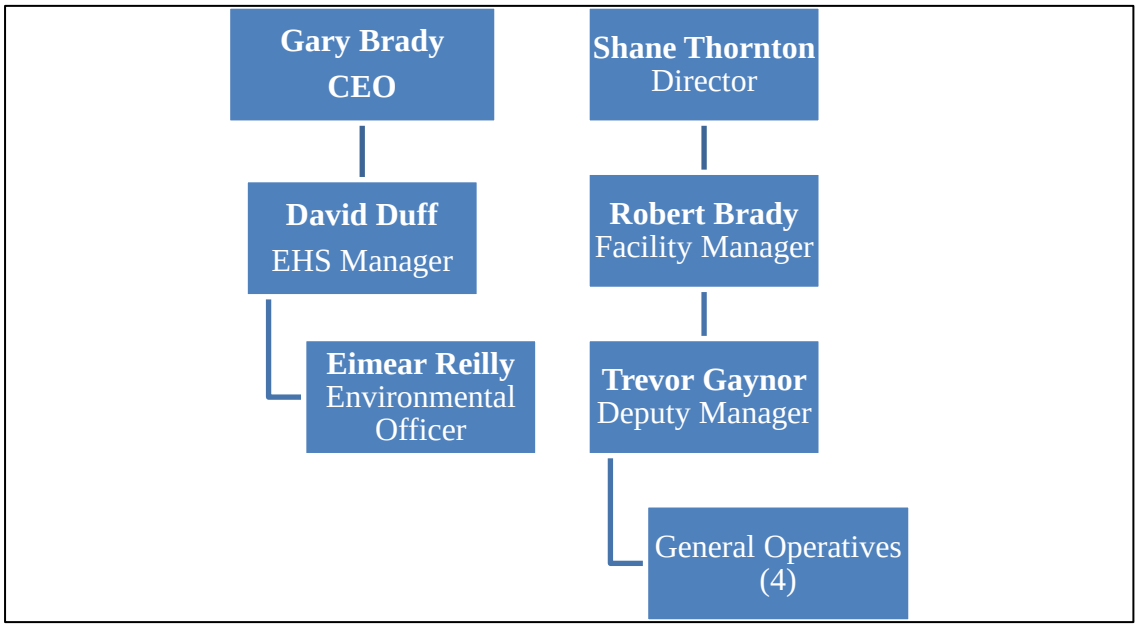
New and existing clients are brought through our waste acceptance procedures and are supplied with information by sales representatives or call centre agents in relation to what waste types we can accept at the facility. Thornton’s Recycling has also upgraded its website

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 Thorntons Recycling. Below is a brief outline of the management structure of the site:



Shane Thornton and Robert Brady have completed the Certificate in Compost Facility Operation. Shane Thornton and Trevor Gaynor has 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 potential claim. This insurance covers all sites including Kilmainhamwood Compost. The company's insurance was renewed on 01/07/2017 and expires on 30/06/2018. A summary of insurance can be seen in Appendix 7.

17 Decommissioning Management Plan

A decommissioning management plan (DMP) was submitted to the EPA on 30/09/14 under EPA Reference LR012483 as required by Condition 10.2 of the Waste Licence W0195-02. However, the report has not yet been approved by the EPA. In accordance with condition 10.2.2, the DMP is required to be reviewed annually and any proposed changes included in

the AER. Following review of the DMP, there are no proposed changes to the report originally submitted to the EPA in September 2014.

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 have developed 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 and appropriate controls implemented to reduce the risk where possible. The environmental aspects register outlines the existing and future controls for each aspect. Environmental Aspects relevant to Kilmainhamwood Compost are detailed in Appendix 8.

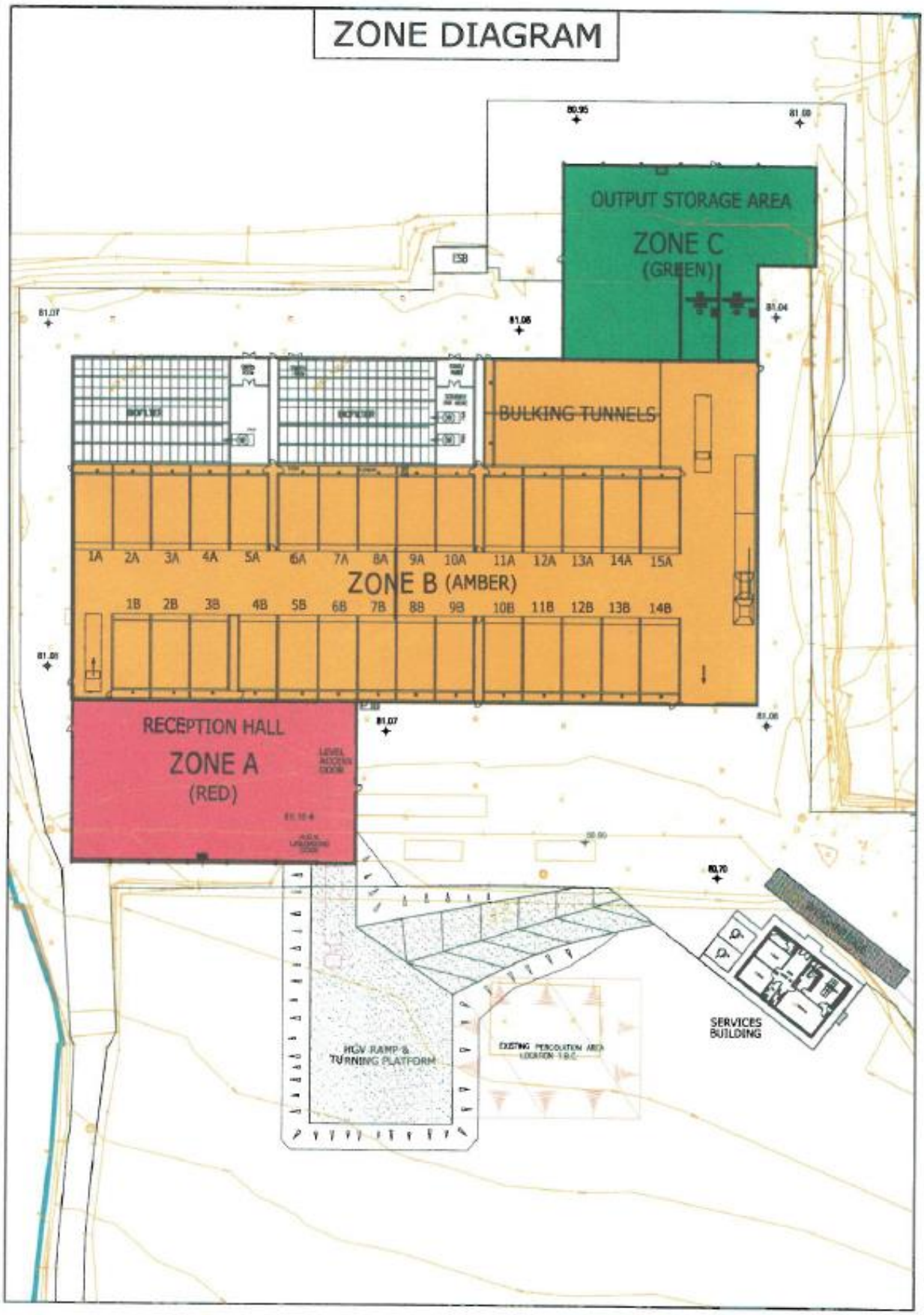
18.2 Environmental Liabilities Risk Assessment (ELRA)

Condition 12.2 of the Waste Licence W0195-02 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

Monthly samples of compost were obtained and analysed during 2017 and a summary of the results obtained can be found on file at the site. 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 of Process


ZONE DIAGRAM
OUTPUT STORAGE AREA
ZONE C
(GREEN)
ESB
BULKING TUNNELS
1A 2A 3A 4A 5A 6A 7A 8A 9A 10A 11A 12A 13A 14A 15A
ZONE B (AMBER)
1B 2B 3B 4B 5B 6B 7B 8B 9B 10B 11B 12B 13B 14B
RECEPTION HALL
ZONE A
(RED)
HGV RAMP &
TURNING PLATFORM
SERVICES
BUILDING

APPENDIX 2 – Department of Agriculture Approval

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

An Officer Authorised by the said Minister

Stamp of Competent Authority

Department of Agriculture, Food and the Marine
IRELAND

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

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Map coordinates	E279801 N292082		
Contact details			
Operator	Mr. Shane Thornton	**Title**	Company Director
Phone	01 6235133	**Mobile**	086 8240425
Email	**shane@thorntons-recycling.ie**		

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Product	COMR: Compost after composting
Remarks	This approval is subject to the enclosed Ministerial Conditions together with the conditions set out in the attached document *"CN10 Approval and Operation of Composting Plants Transforming Animal By-Products and Derived Products in Ireland"* and all other relevant EU and National Legislation..
Valid from	16th July 2017 to 15th July 2022

Dated this 6th day of December, 2017

For the Minister for Agriculture, Food and the Marine

Mairéad Broderick

Mairéad Broderick

An Officer Authorised by the said Minister

Department of Agriculture, Food and the Marine

Stamp of Competent Authority

APPENDIX 3 - Site Layout with Monitoring Points

Environmental Monitoring Locations

LEGEND

- DUST MONITORING (D1, D2, D3)
- NOISE MONITORING (N)
- AIR MONITORING (A1, A2, A3)
- BOREHOLE (B1, B2, B3)
- SURFACE WATER (SW1, SW2)

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

APPENDIX 4 – Groundwater Monitoring Results

MONITORING WELL A (BH1): Chemical Analysis of Groundwater.											
PARAMETERS	**UNIT**	**EC Groundwater Regulations 2009**	**09/12/2013**	**09/06/2014**	**02/12/2014**	**22/04/2015**	**13/10/2015**	**30/03/2016**	**03/08/2016**	**02/03/2017**	**17/08/2017 and 03/11/2017**
Meters above Ordnance	**mAoD (malin)**		**80.81**	**80.81**	**80.81**	**80.81**	**80.81**	**80.81**	**80.81**	**80.81**	**80.81**
Ground Water Level	**M**		63.81	71.41	63.31	61.71	64.51	63.11	59.01	77.31	67.61
pH	**pH Units**		7.4	7.8	7.1	7.7	7.3	7.5	7.3	7.4	7.7
Ammonia	**mg/l**	65-175	<0.01	<0.01	0.012	0.01	<0.01	<0.01	<0.01	0.123	0.62
Calcium	**mg/l**		80.2	-	39.08	-	46.73	-	44.12	-	56.9
Chloride	**mg/l**	24-187.5	11.14	7.89	7.68	7.35	7.28	12.3	14.84	21.23	18.6
Nitrate	**mg/l**	37.5	0.52	-	1.02	-	1.88	-	0.6	-	<0.11
Potassium	**mg/l**		4.415	-	6.417	-	6.185	-	19.65	-	14.9
Ortho-Phosphate	**mg/l**		0.096	-	0.067	-	0.18	-	0.068	-	0.1
Sodium	**mg/l**	150	22.71	-	10.04	-	9.133	-	19.56	-	10.2
Sulphate	**mg/l**	187.5	146.85	11.54	11.39	18.6	20.22	34.08	39.04	35.97	45.61
Boron	**mg/l**	0.75	0.2087	-	0.01671	-	0.0192	-	0.1221	-	0.174
Cadmium	**mg/l**	0.00375	0.000148	-	0.00009	-	0.00009	-	0.00009	-	<0.001
Chromium	**mg/l**	0.0375	0.0148	-	0.00214	-	0.00214	-	0.00214	-	<0.003
Copper	**mg/l**	1.5	0.001072	-	0.003247	-	0.006005	-	0.008331	-	0.007
Iron	**mg/l**		0.001863	-	0.1115	-	0.5082	-	0.3488	-	1.97
Lead	**mg/l**	0.01875	0.01141	-	0.002024	-	0.01391	-	0.004569	-	0.022
Magnesium	**mg/l**		26.3	-	2.266	-	2.648	-	4.862	-	8.2
Manganese	**mg/l**		0.3348	-	0.002682	-	0.04614	-	0.01053	-	0.358
Nickel	**mg/l**	0.015	0.002224	-	0.001559	-	0.002388	-	0.005039	-	0.013
Zinc	**mg/l**		0.3535	-	0.02748	-	0.1629	-	0.00041	-	0.241
Faecal Coliforms	**cfu/100ml**		56	-	34	-	87	-	140	-	970
Total Coliforms	**cfu/100ml**		60	-	77	-	260	-	150	-	510
Volatile Organic Compounds	**mg/l**		<0.001	-	<0.001	-	0.005	-	0.005	-	<0.005
Semi volatiles	**mg/l**		<0.0005	-	<0.0005	-	0.0005	-	0.0005	-	0.0005
Pesticides	**mg/l**	0.000375	<0.0001	-	<0.0001	-	0.0001	-	0.0001	-	0.0001

MONITORING WELL B (BH2): Chemical Analysis of Groundwater.											
PARAMETERS	**UNIT**	**EC Groundwater Regulations 2009**	**09/12/2013**	**09/06/2014**	**02/12/2014**	**22/04/2015**	**13/10/2015**	**30/03/2016**	**03/08/2016**	**02/03/2017**	**17/08/2017 and 03/11/2017**
Meters above Ordnance	**mAoD (malin)**		**86.93**	**86.93**	**86.93**	**86.93**	**86.93**	**86.93**	**86.93**	**86.93**	**86.93**
Ground Water Level	**M**		65.43	69.73	64.93	57.63	64.53	62.13	58.03	64.83	64.63
pH	**pH Units**		7.2	7.3	7	7.3	7.1	7.2	7.1	7.2	7.4
Ammonia	**mg/l**	65-175	<0.01	0.014	0.024	0.01	0.013	<0.01	<0.01	<0.01	<0.02
Calcium	**mg/l**		95.18	-	138.4	-	137.3	-	197.8	-	83.5
Chloride	**mg/l**	24-187.5	14.07	14.5	14.13	14.62	14.93	13.35	14.59	13.13	12.4
Nitrate	**mg/l**	37.5	<0.110	-	<0.110	-	<0.110	-	2.53	-	<0.11
Potassium	**mg/l**		2.485	-	2.246	-	1.854	-	1.875	-	1.6
Ortho-Phosphate	**mg/l**		0.031	-	0.005	-	0.017	-	0.065	-	0.01
Sodium	**mg/l**	150	31.38	-	35.18	-	34.38	-	31.11	-	22.5
Sulphate	**mg/l**	187.5	183.8	243.72	141.33	225.66	334.18	166.28	274.42	153.71	147.48
Boron	**mg/l**	0.75	0.169.1	-	0.05473	-	0.04088	-	0.00433	-	0.178
Cadmium	**mg/l**	0.00375	0.00013	-	0.00009	-	0.00009	-	0.00009	-	<0.001
Chromium	**mg/l**	0.0375	<0.00214	-	0.00214	-	0.00214	-	0.00214	-	<0.003
Copper	**mg/l**	1.5	0.01207	-	0.000374	-	0.000781	-	0.00011	-	0.006
Iron	**mg/l**		0.174.7	-	0.007588	-	0.04293	-	0.1446	-	<0.001
Lead	**mg/l**	0.01875	0.004331	-	0.000049	-	0.000231	-	0.0184	-	<0.001
Magnesium	**mg/l**		28.92	-	40.5	-	37.01	-	35.59	-	22.8
Manganese	**mg/l**		0.06978	-	0.6257	-	0.9665	-	0.2514	-	0.055
Nickel	**mg/l**	0.015	0.001199	-	0.00025	-	0.000238	-	0.00014	-	0.005
Zinc	**mg/l**		0.1716	-	0.001671	-	0.01698	-	0.00041	-	0.249
Feacal Coliforms	**cfu/100ml**		14	-	17	-	12	-	28	-	0
Total Coliforms	**cfu/100ml**		20	-	100	-	56	-	170	-	0
Volatile Organic Compounds	**mg/l**		<0.001	-	<0.001	-	0.005	-	0.005	-	0.005
Semivolatiles	**mg/l**		<0.0005	-	0.001787	-	0.0005	-	0.0005	-	0.0005
Pesticides	**mg/l**	0.000375	<0.0001	-	<0.0001	-	0.0001	-	0.0001	-	0.0001

MONITORING WELL C (BH3): Chemical Analysis of Groundwater.											
PARAMETERS	**UNIT**	**EC Groundwater Regulations 2009**	**09/12/2013**	**09/06/2014**	**02/12/2014**	**22/04/2015**	**13/10/2015**	**30/03/2016**	**03/08/2016**	**02/03/2017**	**17/08/2017 and 03/11/2017**
Meters above Ordnance	**mAoD (malin)**		**86.51**	**86.51**	**86.51**	**86.51**	**86.51**	**86.51**	**86.51**	**86.51**	**86.51**
Ground Water Level	**M**		76.31	64.31	59.51	55.01	71.21	66.41	54.11	75.21	72.51
pH	**pH Units**		7.6	7.5	7.1	7.7	7.5	7.5	7.2	7.5	7.7
Ammonia	**mg/l**	65-175	0.012	0.015	0.039	0.01	0.013	<0.01	<0.01	<0.01	<0.02
Calcium	**mg/l**		80.64	-	85.28	-	87.79	-	76.81	-	84.9
Chloride	**mg/l**	24-187.5	14.13	15.82	19.02	14.68	15.5	15.25	15.03	15.01	13.5
Nitrate	**mg/l**	37.5	0.63	-	0.48	-	0.75	-	1.2	-	0.29
Potassium	**mg/l**		2.422	-	1.983	-	1.563	-	1.826	-	3
Ortho-Phosphate	**mg/l**		0.09	-	0.031	-	0.031	-	0.032	-	0.07
Sodium	**mg/l**	150	18.17	-	20.47	-	13.04	-	10.72	-	16.3
Sulphate	**mg/l**	187.5	117.8	121.66	118.11	111.82	137.9	130.81	132.89	130.52	132.62
Boron	**mg/l**	0.75	0.02878	-	0.03076	-	0.02503	-	0.00433	-	0.421
Cadmium	**mg/l**	0.00375	<0.00009	-	0.00009	-	0.00009	-	0.00009	-	<0.001
Chromium	**mg/l**	0.0375	0.004875	-	0.00214	-	0.00214	-	0.004882	-	<0.003
Copper	**mg/l**	1.5	0.02059	-	0.000188	-	0.000385	-	0.00011	-	0.001
Iron	**mg/l**		0.6908	-	0.000782	-	0.003593	-	0.09	-	0.01
Lead	**mg/l**	0.01875	<0.00002	-	0.00002	-	0.00002	-	0.00002	-	<0.001
Magnesium	**mg/l**		20.32	-	20.16	-	16.47	-	17.24	-	18.4
Manganese	**mg/l**		0.002225	-	0.06702	-	0.01972	-	0.8723	-	0.007
Nickel	**mg/l**	0.015	0.000156	-	0.00014	-	0.00014	-	0.00014	-	0.005
Zinc	**mg/l**		0.01223	-	0.00119	-	0.006881	-	0.00041	-	0.572
Feacal Coliforms	**cfu/100ml**		0	-	0	-	1	-	0	-	0
Total Coliforms	**cfu/100ml**		0	-	0	-	23	-	10	-	0
Volatile Organic Compounds	**mg/l**		<0.001	-	0.001	-	0.005	-	0.005	-	0.005
Semivolatiles	**mg/l**		<0.0005	-	0.0005	-	0.0005	-	0.0005	-	0.0005
Pesticides	**mg/l**	0.000375	<0.0001	-	0.0001	-	0.0001	-	0.0001	-	0.0001

APPENDIX 5 – Schedule of Objectives and Targets 2018

PM03- F01 Management Programme 2018

COMPLETED		ON HOLD CARRY FORWARD TO 2019			ON HOLD			
Ref Numbe	**Date**	**Type**	**Objective and Target**	**Location**	**Responsibility**	**Method**	**Time Frame**	**Status**
EP 01	May-17	Environmental	Changeover to 14001 new standard	All sites	GC	1. Gap analysis carried out by external consultant. 2. Create context spreedsheet. 3. Training managers and staff. 4. Review ISO layout. 5. Re certification	May-18	
EP 03	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	On Hold awaiting EPA contact firstly
EP 04	Jan-18	Environmental	Replacement of WIMS with ISYS across the company	All Sites	DD	1. Sub group within Thorntons representing each department set up to implement the changeover	Jun-18	
EP 08	Jan-18	Environmental	Replacement of trommel in Kilmainhamwood	Kilmainhamwood	ER	1. Removal of existing trommel. 2. Installation of new trommel. 3. Review of Aspects register	Feb-18	

APPENDIX 6 – Review of Objectives and Targets 2017

PM03- F01 Management Programme 2017

COMPLETED		ON HOLD CARRY FORWARD TO 2018			ON HOLD			
Ref Numbe	**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	Pump installed and completed.
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	Completed- High level liquid alarms installed.
EP 15	May-17	Environmental	Changeover to 14001 new standard	All sites	GC	1. Gap analysis carried out by external consultant. 2. Create context spreedsheet. 3. Training managers and staff. 4. Review ISO layout. 5. Re certification	Dec-17	Ongoing- due for completion in Q2 of 2018
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	On Hold awaiting EPA contact firstly

APPENDIX 7 – Summary of Insurance

30th June 2017

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 2017 to 30 June 2018
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 Executive
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 8 – Environmental Aspects

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** (Hazardous, 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. Weighbridge Checks 4. Driver checks 5. Yard Checks 6. PM06 Emergency Response	Brown Bin Awareness	1. Monthly KPIs 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 borne pathogens	A	x					2	2	1	2	3	1	1	**12**	1. All lorries carrying green waste and brown bin waste are covered. 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 aerosol monitoring as per waste licence 2. Waste Licence compliance
		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

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	
		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 Monitoring and Calibration procedure in place.	n/a	1. Dust monitoring and reporting carried out as per the waste license conditions. 2. EP03 Monitoring 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 emergency. 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

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	
		Toxic gases (Ventilation system failure, build up of Hydrogen Sulphide or Ammonia)	E	x					2	3	1	2	1	1	1	**11**	1. Odour control system in place to control air emissions from the process.	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 Monitoring 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	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

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	
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 stabilised.	n/a	Internal Audit
5	Pasteurisation	**Improper Pasteurisation (**failure of equipment may result in improper pasteurisation)	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

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	
		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	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 Scrubber	**Environmental pollution**	N	x	x	x			2	2	1	1	3	1	3	**13**	1. Acid Scrubber reduces ammonia in air going to Biofilters. 2. Odour abatement Maintenance Procedure. 3. Fully bunded area. 4. SCADA controlled system. 5. Check sheets. 6. PM06 Emergency Response.	n/a	Internal Audit and check sheets.

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	
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. Firefighting equipment on site to include extinguishers, 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 9 – Pollutant Release and Transfer Register (PRTR) 2017

#N/A

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2017

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	Eimear Reilly
AER Returns Contact Email Address	Eimear@thorntons-recycling.ie
AER Returns Contact Position	Environmental Officer
AER Returns Contact Telephone Number	01 6235133
AER Returns Contact Mobile Phone Number	086 7911688
AER Returns Contact Fax Number	01 6235131
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	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) ?	

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

4.1 RELEASES TO AIR Link to previous years emissions data #N/A 07/02/2018 10:57

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	0.0365	0.066978	0.052925	0.156403	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 #N/A 07/02/2018 10:57

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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 #N/A 07/02/2018 10:57

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 #N/A 07/02/2018 10:57

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 #N/A 07/02/2018 10:57

Please enter all quantities on this sheet in Tonnes 0

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	2193.97	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	19 05 01	No	214.05	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

Link to previous years waste data
Link to previous years waste summary data & percentage change
Link to Waste Guidance