



ANNUAL ENVIRONMENTAL REPORT

2015

Name: Acorn Recycling Ltd

Address: Ballybeg Composting Facility, Ballybeg, Littleton, Co. Tipperary

Waste Licence: W0249-01

Reporting Period: 01 January 2015 – 31 December 2015

Submitted by

Sam Bowden
Compost Facility Manager

Web: www.acornrecycling.com

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- Environmental Objectives & Targets 2015
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1.0 Introduction

The Ballybeg Composting Facility operated by Acorn Recycling, Ballybeg, Littleton, Co. Tipperary commenced waste acceptance on the 21st June 2010.

The facility is a fully enclosed forced aeration in-vessel composting facility with air extraction and biofiltration.

The facility is licensed by the EPA under waste licence W0249-01 for the acceptance of 45,000 tonnes per annum of a biodegradable wastes.

In accordance with condition 11.12 of the licence this report is the Annual Environmental Report (AER) for 2015. The report covers the period 1st January 2015 to 31st December 2015.

2.0 Waste Activities carried out at the Facility

The facility is licensed to carry out the waste activities listed below in accordance with the third and fourth schedules of the waste management acts 1996 – 2008. The extent to which the waste activity was carried out is detailed for each activity

Third Schedule Activities

- 6. 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 1 to 5 or paragraphs 7 to 10 of this Schedule (Code: D8)

No wastes were accepted for treatment under this activity in 2015

- 13. Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced (Code: D15)

Not carried out during the reporting period

Fourth Schedule Activities

- 2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes) (Code: R3).

35856.05 tonnes of biodegradable wastes was accepted at the facility for composting

- 13. Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced (Code: R13)

Not carried out during the reporting period

3.0 Waste Management Record

3.1 Waste Acceptance

A total of 35866.45 tonnes of waste was accepted at the facility for treatment during the reporting period.

Table 1. below shows the waste types and quantities accepted at the facility during the reporting period.

The most abundant waste type received was Biodegradable Kitchen & Canteen Waste (EWC 200108) which constituted 88.3% of the total waste received (Calculation excludes woodchip material).

Table 1. Waste Accepted 2015

EWC	DESCRIPTION	QUANTITY (t)
020203	MATERIALS UNSUITABLE FOR CONSUMPTION OR PROCESSING	561.40
020204	SLUDGES FROM ON-SITE EFFLUENT TREATMENT (MEAT INDUSTRY)	635.70
020304	MATERIALS UNSUITABLE FOR CONSUMPTION OR PROCESSING (ANIMAL FEED)	130.42
020501	MATERIAL UNSUITABLE FOR CONSUMPTION OR PROCESSING (DAIRY INDUSTRY)	50.96
020502	SLUDGES FROM ON-SITE EFFLUENT TREATMENT (DAIRY INDUSTRY)	275.06
020704	MATERIALS UNSUITABLE FOR CONSUMPTION PROCESSING (DRINKS INDUSTRY)	161.04
020705	SLUDGES FROM ON-SITE EFFLUENT TREATMENT (DRINKS INDUSTRY)	59.28
070599	WASTES NOT OTHERWISE SPECIFIED	12.21
190599	WASTES NOT OTHERWISE SPECIFIED	16.00
190805	SLUDGES FROM TREATMENT OF URBAN WASTE WATER	1304.88
190899	WASTES NOT OTHERWISE SPECIFIED (SPENT CARBON)	15.94
190901	SOLID WASTE FROM PRIMARY FILTRATION AND SCREENINGS	132.59
190904	SPENT ACTIVATED CARBON	37.3
191207	WOOD OTHER THAN THAT MENTIONED IN 191206	1683.09
200108	BIODEGRADABLE KITCHEN AND CANTEEN WASTE	30173.43
200125	EDIBLE OIL AND FAT	470.21
200201	BIODEGRADABLE WASTE	0.88
200304	SEPTIC TANK SLUDGE	7.48
200306	WASTE FROM SEWAGE CLEANING	138.58
	Total	35866.45

3.2 Waste Dispatched

Two waste types were dispatched offsite during the reporting period namely; plastics from the screening of compost (EWC 190501) and Water from the biofilter onsite (190599)

The following quantities of each waste were disposed of in 2015

Table 2. Waste dispatched 2015

EWC	DESCRIPTION	TONNAGE DISPOSED
190501	Plastic 'Overs'	2218.11
190599	Biofilter Water	983.25

In accordance with condition 11.13 of the waste licence a full record is maintained on site which is open to inspection by the agency. This record contains the tonnages, EWC code, description of waste, details of the waste haulier, and details of the disposal destination (including waste licence/permits where appropriate).

4.0 Resource Consumption Summary

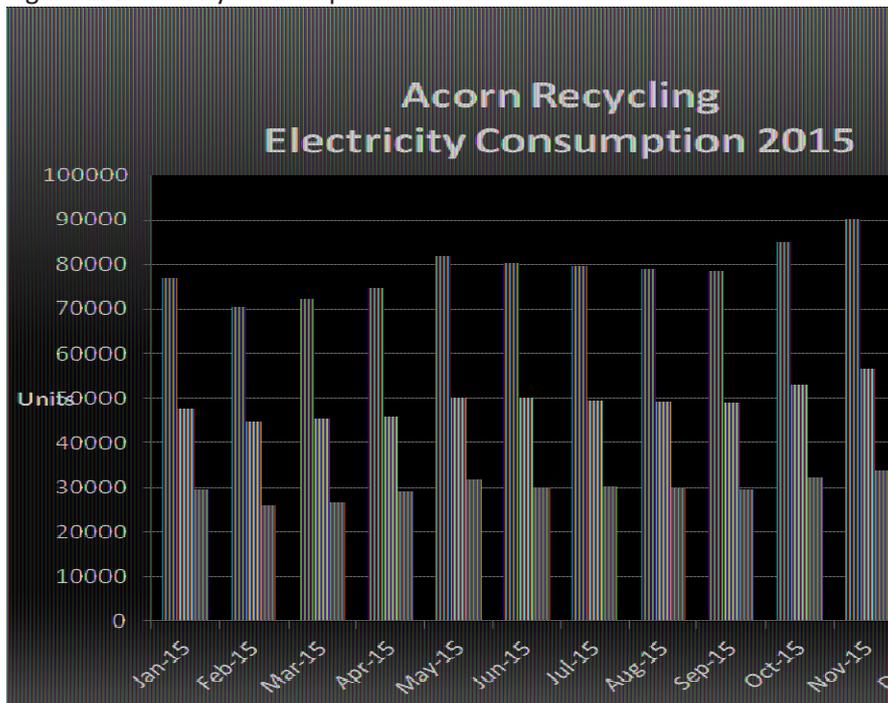
4.1 Electricity Usage

Table 3. and Figure 1. below detail the day and night units of electricity used on site during each month in 2015

Table 3. Electricity Consumption 2015

Electricity Consumption 2015		
Billing Period	Day Units	Night Units
Jan-15	47513	29465
Feb-15	44565	26060
Mar-15	45307	26800
Apr-15	45794	29053
May-15	50193	31689
Jun-15	50058	30133
Jul-15	49342	30357
Aug-15	49118	29938
Sep-15	48990	29738
Oct-15	52982	32163
Nov-15	56420	33783
Dec-15	49967	30580
	590249.00	359759

Figure 1. Electricity Consumption 2015



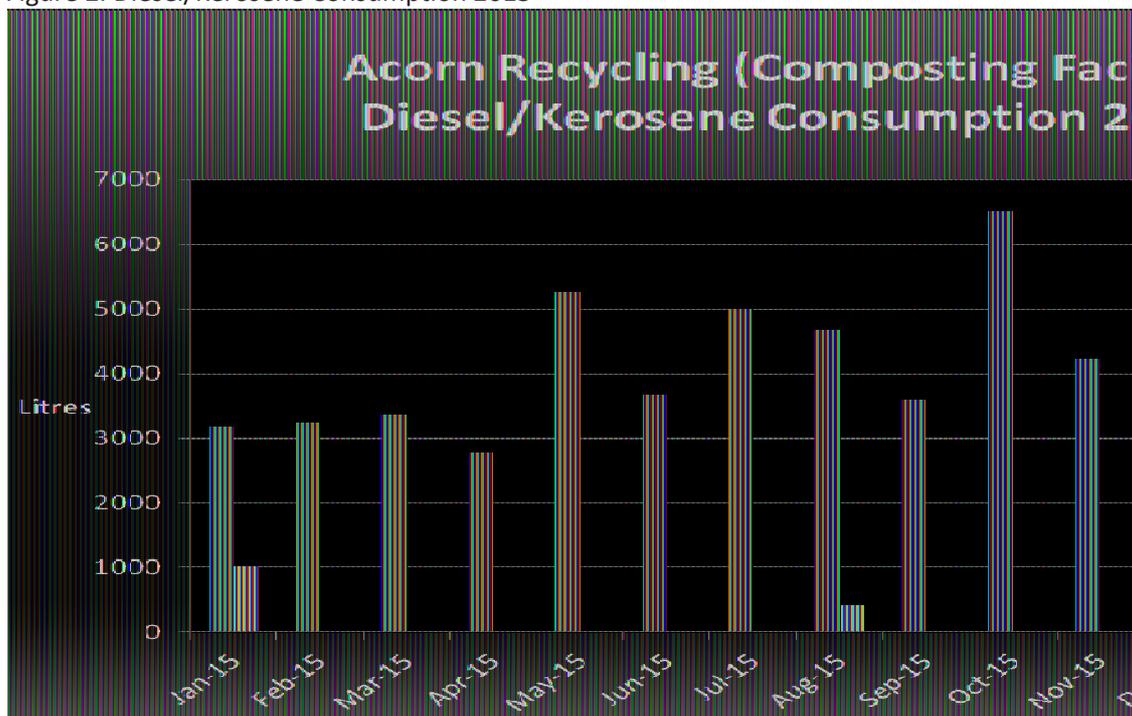
4.2 Diesel Usage

Table 4. and Figure 2. below show diesel and kerosene consumption in 2015. Diesel is used for the three front end loaders on site and kerosene was for the power washer.

Table 4. Diesel Consumption 2015

Diesel Consumption 2015		
Month	Diesel (litres)	Kerosene
Jan-15	3189	1,011.00
Feb-15	3242	
Mar-15	3353	
Apr-15	2773	
May-15	5279	
Jun-15	3686	
Jul-15	5008	
Aug-15	4689	427
Sep-15	3599	
Oct-15	6509	
Nov-15	4241	
Dec-15	5682	
Total	51,250	1,438.00

Figure 2. Diesel/Kerosene Consumption 2015



4.3 Compost Amendment Materials

1683.09 tonnes of woodchip was accepted at the facility for use in the composting process.

4.4 Water

Water usage on site is minimal. A power washer is used on site to wash vehicles upon exit as well as cleaning equipment on site. Other uses on site include use in the canteen. The water usage when the power washer is operational is estimated at 15l min. Total estimated water usage on site is 450 litres per day.

5.0 Report on the assessment of the efficiency of use of raw materials is processes and the reduction in waste generated.

Total woodchip used was 1683.09 tonnes up from 1542.92 tonnes per annum in 2014. This was in line with the increased quantity of waste processed on site. Woodchip use per tonne of waste received dropped slightly from 0.055t in 2014 to 0.049t in 2015.

The plastics produced for disposal offsite decreased from 11.34% in 2014 to 6.49% in 2015 due to the commencement of further processing of the contaminants to remove wood, compost and other biodegradable material. This involves shredding and rescreening of the material.

6.0 Complaints Summary

There was no complaints made to the facility in 2015

7.0 Reported Incidents Summary

There was one incident in 2015.

A seal at the back of an artic tanker barrel used for removing leachate was faulty and this allowed the discharge of leachate. A portable spill tray/bund was in place but this overflowed allowing leachate to run onto the front concrete yard. The quantity of liquid spilled onto the yard was approx. 100 litres. The leak was noticed by Philip Maher and he immediately used 6inch cam stoppers to block up the two gullies in the vicinity of the spillage to prevent the leachate entering the surface water drains.

8.0 Review of Nuisance Controls

Every effort is made to eliminate nuisance problems on site.

Potential nuisance problems include the following;

Dust: During normal operations dust has not been an issue at the site whatsoever. 3 times per year monitoring will continue and no high levels of dust have been recorded. The potential for dust arise from compost that sometimes can become very dry in the maturation area. When a trailer is being loaded with compost the shed doors must be closed down to prevent any dust emissions.

Odour: The biofilter continued to operate well throughout 2015. Continuous monitoring continues as per licence requirements (See 11.4 Odour & Bioaerosols).

Litter: No litter nuisance has occurred outside the boundary of the site. Good housekeeping has ensured that any litter present within the site is quickly removed. Work practices on site, such as all loads tipped inside the building with doors closed, ensure there is little risk of litter generation outside the building. A member of staff patrols the site to collect any litter at least once a week.

Vermin: A comprehensive pest control programme is in place whereby a specialist pest company puts out bait and monitors activity on site.

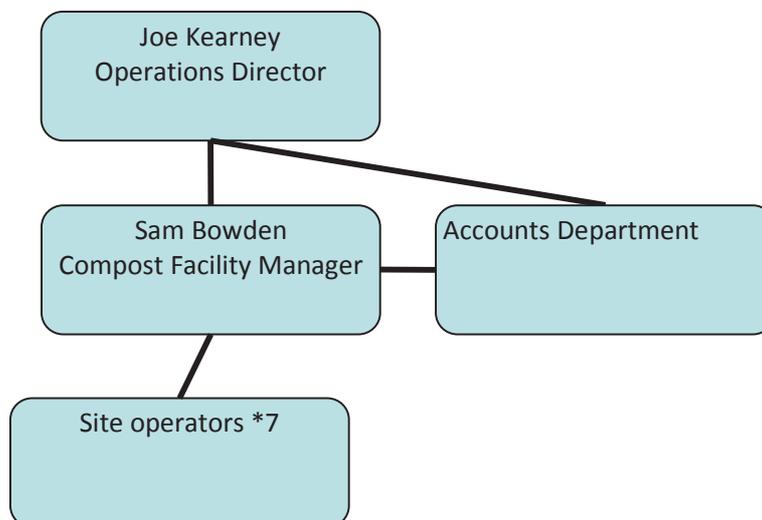
Birds: Birds are not an issue at the site. All waste activities are carried out within the closed building.

Noise: Noise monitoring has shown that no noise levels in excess of licence limits have been caused by noise from the facility at the noise sensitive locations. As all activities are carried out within a closed building this reduces the risk of nuisance caused by noise from the facility. There have been no complaints relating to noise from the facility.

9.0 Management and Staffing Structure of the Facility and programme for public information

Table 5. Management of the Facility

Name	Position	Duties and Responsibilities	Experience /Qualifications
Sam Bowden	Compost Facility Manager	Overall Responsibility for maintaining EMS, liaising with licensing authorities, quality control, process optimisation, waste acceptance, Health & Safety	B.Sc. in Environmental Science and Technology, M.Sc. in Environmental, Health and Safety Management Certificate in Compost Facility Operation 9 years waste management experience



Programme for public information

Acorn Recycling have an open door policy for public information. Members of the public are regularly shown around the facility and can access environmental information on site. A copy of the communications programme is available on site EMS ARB06-CP

10.0 Environmental Monitoring

10.1 Noise Monitoring

Day and Night noise monitoring was carried out at the facility by an independent consultants Panther Environmental on 11th August 2015. The results showed no significant noise nuisance being caused by the facility. Daytime and night noise levels at NSL1 & NSL2 above the licence limits were recorded but these were caused by high noise levels at the road and were not caused by the composting facility. There was no noise audible from the compost facility.

NSL1 Daytime

The dominant day-time noise source at this location is road traffic passing along the public road which was almost continuous during the busy monitoring period. Noise from the facility was not audible at this location at any time during the monitoring period.

The Leq10 was high due to this almost continuous traffic during the monitoring period.

The Leq90 which may be used to give an indication of the actual back-ground noise was determined to be 38 dB(A).

Facility noise at this location does not therefore appear to constitute a nuisance, as the dominant noise source is traffic from the main road during day-time periods.

NSL2 Daytime

The dominant day-time noise source at this location is road traffic passing along the public road which was almost continuous during the busy monitoring period.

Noise from the facility was not audible at this location at any time during the monitoring period.

The Leq10 was high due to this almost continuous traffic during the monitoring period.

The Leq90 which may be used to give an indication of the actual back-ground noise was determined to be 50 dB(A).

Facility noise at this location does not therefore appear to constitute a nuisance, as the dominant noise source is traffic from the main road during day-time periods.

NLS1 Night-time

Noise from the facility was not audible at this location at any time during the monitoring period. The Leq10 was high due to the passing traffic during the monitoring period.

The Leq90 which may be used to give an indication of the actual back-ground noise was

determined to be 36 dB(A). Facility noise at this location does not therefore appear to constitute a nuisance, as the dominant noise source is traffic from the main road during day-time periods.

NSL2 Night-time

The dominant night-time noise source at this location is road traffic passing along the public road, although not as frequent as the day-time period. Noise from the facility was not audible at this location at any time during the monitoring period.

The Leq10 was high due to the passing traffic during the monitoring period.

The Leq90 which may be used to give an indication of the actual back-ground noise was

determined to be 50 dB(A). Facility noise at this location does not therefore appear to constitute a nuisance, as the dominant noise is traffic from the main road during day-time periods.

Table 6. Noise Monitoring 2015 (NSL1/NSL2) 11th August 2015

A survey was carried out at each location day & night

NSL	Day dB(A) Laeq (30min)	Day L ₉₀	Night dB(A) Laeq (30min)	Night L ₉₀
NSL1	67	38	52	36
NSL2	66	50	55	50

10.3 Monitoring of Emissions to Water

A review of storm water discharge was carried in 2015 from which a monitoring programme and trigger levels were set. The table below shows analysis results for storm water samples in 2015.

Table 9. Storm Water Monitoring

Date	Sample location	NH3	SS	Lab
14/07/2015	SW1	4.51		ALS
15/07/2015	SW1	2.12		ALS
20/07/2015	SW1	1.81		ALS
22/07/2015	SW1	0.52		ALS
28/07/2015	SW1	0.56		ALS
29/07/2015	SW1	0.55		ALS
29/07/2015	SW1	0.49		ALS
30/07/2015	SW1	0.38		ALS
30/07/2015	SW1	0.24		ALS
31/07/2015	SW1	0.33		ALS
04/08/2015	SW1	1.04		ALS
05/08/2015	SW1	1.44		ALS
06/08/2015	SW1	0.63		ALS
06/08/2015	SW1	0.7		ALS
07/08/2015	SW1	0.44		ALS
10/08/2015	SW1	0.88		ALS
10/08/2015	SW1	0.66		ALS
11/08/2015	SW1	0.52		ALS
12/08/2015	SW1	0.52		ALS
18/08/2015	SW1	0.26		ALS
19/08/2015	SW1	1.4		ALS
20/08/2015	SW1	0.31		ALS
20/08/2015	SW1	0.34		ALS
21/08/2015	SW1	0.32		ALS
21/08/2015	SW1	0.25		ALS

28/08/2015	SW1	0.5		ALS
04/09/2015	SW1	0.15		ALS
07/09/2015	SW1	0.16		ALS
08/09/2015	SW1	0.19		ALS
18/09/2015	SW1	0.68	11	ALS
09/10/2015	SW1	1.15	<10	ALS
12/10/2015	SW1	0.81	<5	ALS
14/10/2015	SW1	0.16	<5	ALS
19/10/2015	SW1	0.39	<20	ALS
22/10/2015	SW1	0.82	<5	ALS
02/11/2015	SW1	1.15	<5	ALS
06/11/2015	SW1	1.78	37	ALS
19/11/2015	SW1	1.82	16	ALS
30/11/2015	SW1	1.66	36	ALS
10/12/2015	SW1	0.99	<5	ALS
15/12/2015	SW1	1.73	49	ALS

10.4 Odour & Bioaerosols

A comprehensive Odour and Bio aerosols monitoring program is carried out on site by independent consultants, Odour Monitoring Ireland Ltd. This program monitors the efficiency of the biofilter on site as well as ambient bioaerosols.

Biofilter Monitoring 2015

Parameter	Q1 (23Mar2015)	Q2 (16Jun2015)	Q3 (25Sept2015)	Q4 (26Nov2015)	Limit
Average Odour OUE/m ³	4256	3649	5363	3649	—
% Odour Removal	94	97	96	97	—
Total Aliphatic Amines (mg/Nm ³)	0.94			0.9	—
Hydrogen Sulphide (mg/Nm ³)	0.01			0.012	<5
Ammonia (mg/Nm ³)	1.87			1.71	<50
Total Mercaptans (mg/Nm ³)	0.08			<0.07	<5
Bed Media pH	7.3			7.1	—
Moisture (% w/w)	50			48	—
Total Viable Counts (CFU/Kg)	6.6*10 ⁵			6.6*10 ⁵	—

Table 11. Bioaerosols Monitoring 2015

Bioaerosols Monitoring (2015)

Location	Asperagillus Fumigatus (CFU m3)	Mesophilic Bacteria (CFU m3)
Loc Bio1	<3	<643
Loc Bio2	<3	<883
Loc Bio3	<3	<368

Table 12. PM10 Monitoring

PM10 Monitoring 2015

Location	(H1) Average Concentration (ug/m3) 23Mar2015	(H2) Average Concentration (ug/m3) 11Nov2015	Limit (ug/m3)
PM1	8	8	50

Ammonia Emissions

The total volume of air extracted through the biofilter is estimated at 55,710m³ per hour.

The total volume of air extracted during the year is 55,710m³/hr * 8760 hrs =

258,048,720m³/year

Average of 2 ammonia samples = 1.66 mg/m³ NH₃

Total ammonia emissions load in 2014 = 1.79mg/m³ * 258,048,720m³

= 461.907 kg/year NH₃

10.5 Dust Deposition Monitoring

Dust deposition monitoring was carried out at the site on three times in 2015 at four monitoring locations. Average dust levels exceeded the licence limit of 350mg/m²/day at DD1 between 23April and 24Jun 2015.

Table 13 Dust Deposition 2015 (mg/m²/day)

Duration	DD1	DD2	DD3	DD4
12/03/2015 - 23/04/2015	8.9	5.5	20.7	6.3
23/04/2015 - 24/06/2015	412	6	18	9
24/06/2015 - 27/08/2015	88.2	68.6	46	106.7

11.0 Procedures developed in 2015 relating to facility operations

Acorn Recycling developed the Standard Operation Procedures listed in Table 13. for operations at the composting facility. These procedures are kept under continuous review and updated during 2015. Full up-to-date effective versions of these procedures are available on site for inspection.

Document Code	Procedure Description
SOP ARB01	Waste Acceptance and Characterisation Procedure
SOP ARB02	Cleaning and Hygiene Procedure
SOP ARB03	Blending/Loading a Bay
SOP ARB04	Screening and Loading/unloading of ABP sanitisation bays
SOP ARB05	Batch Traceability Procedure
SOP ARB06	Handling of Leachate Procedure
SOP ARB07	Compost Sampling Procedure
SOP ARB08	Non Compliance and Corrective Action
SOP ARB09	Fire Safety Protocol
SOP ARB10	Awareness and Training Procedure
SOP ARB11	Emergency Preparedness and Response Procedure
SOP ARB12	Accident Prevention Procedure
SOP ARB13	Documentation Procedure
SOP ARB14	Groundwater Monitoring Procedure
SOP ARB15	Surface Water Monitoring Procedure
SOP ARB16	Dust Deposition Monitoring Procedure
SOP ARB17	Verification of ABP processing temperatures
SOP ARB18	Management of compost in maturation area
SOP ARB19	Testing of compost for physical contaminants
SOP ARB20	Cleaning of yard and gullies procedure

12.0 Environmental Objectives & Targets and Environmental Management Programme report for 2015 and proposal for 2016

See attached separately



ENVIRONMENTAL OBJECTIVES AND TARGETS.

Environmental Objective and Targets (Primary Objectives over the period)			
Objective No.	Objective		
1.0	To implement and maintain an EMS in order to ensure all requirements of the waste licence is being adhered to.		
2.0	To ensure compliance with environmental monitoring and emission limits in the licence and to improve these parameters beyond the requirements of the licence where practicable.		
3.0	To continually improve energy efficiency and resource use at the site		
4.0	To continually improve the quality of the products and residues produced on site destined for reuse, recovery and recycling, and to minimise the quantity of products sent for disposal.		
5.0	To enhance our relationship with the local community through communication, transparency, nuisance avoidance, and provision of services		

ACORN RECYCLING LTD



Title: Environmental Objectives and Targets & EMP 2016

Code: ARB EO&T2016

Revision: 0

Date: 25/03/2016

Site Location: Ballybeg Composting Facility

ENVIRONMENTAL MANAGEMENT PROGRAMME 2016

Objective 1.0: To implement and maintain an EMS in order to ensure all requirements of the waste licence is being adhered to

Objective No.	Target	Plan	Timescale	Responsibility	Status
1.1	To ensure all relevant employees are made aware of the requirements of the EMS and waste licence	Identify Environmental Training needs of all employees Schedule appropriate training Provide environmental awareness training	Deadline 31.12.2016	Environmental Manager (SB) H & S co-ordinator (SB)	


ENVIRONMENTAL MANAGEMENT PROGRAMME 2016

Objective 2.0: To ensure compliance with environmental monitoring and emission limits in the licence and to improve these parameters beyond the requirements of the licence where practicable.

Objective No.	Target	Plan	Timescale	Responsibility	Status
2.1	To carry out all environmental monitoring as agreed with the agency	develop and implement monitoring schedule. Change as per agreements with Agency liaise with contractors Collate data	Deadline 31.12.2016	Environmental Manager (SB)	
2.2	Monitor life span of biofilter and methodology for replacement of media when required	Continue to monitor. Plan established for removal and restocking biofilter. Re-examine biofilter Mar – Aug 2016 Remove layer of media to increase air flow through the biofilter Monitor performance Investigate sources of media Develop methodology for removal and replacement of media. Carry out replacement of at least one section of the biofilter .	Deadline 30.08.2016	Environmental Manger (SB)	
2.3	Improvements to management of surface water onsite to ensure only clean surface water is discharge	Stringently enforce site procedures with regard washing of vehicles upon exit from the building. Particular focus on clean side of building. Compost truck must be washed thoroughly. Loader must be washed thoroughly when leaving building to fill with diesel or for repairs & maintenance. New signage to be installed	Deadline 01.06.2016	Environmental Manger (SB)	Ongoing.

**ENVIRONMENTAL MANAGEMENT PROGRAMME 2016****Objective 3.0: To continually improve energy efficiency and resource use at the site**

Objective No.	Target	Plan	Timescale	Responsibility	Status
3.1	Maintain Electricity consumption per waste received at <35units per tonne received.	Continuous monitoring of electricity usage via scada system. Extraction & aeration fans to be adjusted to reflect operations. Awareness to turn off lights when not in use.	Dec 2016	Environmental Manager	.
3.2	To review on a continuous basis the compost quality results obtained from the testing as required under the licence.	Review results as received for conformity to the compost quality requirements	Continuously Deadline 31.12.2016	Environmental Manager	


ENVIRONMENTAL MANAGEMENT PROGRAMME 2016

Objective 4.0: To continually improve the efficiency of the materials flow through the operations with a view to improving the quality of the products and residues produced on site destined for reuse, recovery and recycling, and to minimise the quantity of products sent for disposal

Objective No.	Target	Plan	Timescale	Responsibility	Status
4.1	Carry out an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated	Continued monitoring of batches to enhance process efficiency. Achieve at least 20% reduction on plastics to landfill through shredding and rescreening of material.	Deadline 31.12.2016	Environmental Manager	
4.2	Increase number of sustainable outlets for compost use. Addition of at least 3 new farms.	Sales team to focus on a 30km radius of farms. Use established customer base to help draft new farms. Improve transportation methods for compost.	August 2016	Environmental Manager	

ENVIRONMENTAL MANAGEMENT PROGRAMME 2016

Objective 5.0: To enhance our relationship with the local community through communication, transparency, nuisance avoidance, and provision of services

Objective No.	Target	Plan	Timescale	Responsibility	Status
5.1	Review Public Awareness and Communication Programme	Provide tours of facility to local schools, CIWM, Macra Na Feirne etc. Cre	31.12.2016	Environmental Manager (SB)	
5.2	Improve visual appearance site.	Improve visual appearance site. New gravel to be laid in car park and	07.08.16	Environmental Manager (SB)	



	<p>New gravel to be laid in car park and around site perimeters.</p> <p>Wild flowers to be planted and maintained at east of site.</p> <p>Lawn to be maintained along driveway.</p>	<p>around site perimeters.</p> <p>Lawn to be maintained along driveway.</p> <p>New welfare cabins and fence at car park</p>			
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ENVIRONMENTAL OBJECTIVES AND TARGETS.

Environmental Objective and Targets for period 2011 – 2015 (Primary Objectives over the period)			
Objective No.	Objective		
1.0	To implement and maintain an EMS in order to ensure all requirements of the waste licence is being adhered to.		
2.0	To ensure compliance with environmental monitoring and emission limits in the licence and to improve these parameters beyond the requirements of the licence where practicable.		
3.0	To continually improve energy efficiency and resource use at the site		
4.0	To continually improve the quality of the products and residues produced on site destined for reuse, recovery and recycling, and to minimise the quantity of products sent for disposal.		
5.0	To enhance our relationship with the local community through communication, transparency, nuisance avoidance, and provision of services		

ACORN RECYCLING LTD



Title: Environmental Objectives and Targets & EMP 2015
Code: ARB EO&T2015
Revision: 0
Date: 25/03/2015
Site Location: Ballybeg Composting Facility

ENVIRONMENTAL MANAGEMENT PROGRAMME 2015

Objective 1.0: To implement and maintain an EMS in order to ensure all requirements of the waste licence is being adhered to

Objective No.	Target	Plan	Timescale	Responsibility	Status
1.1	To ensure all relevant employees are made aware of the requirements of the EMS and waste licence	Identify Environmental Training needs of all employees Schedule appropriate training Provide environmental awareness training	Deadline 31.12.2015	Environmental Manager (SB) H & S co-ordinator (SB)	Completed


ENVIRONMENTAL MANAGEMENT PROGRAMME 2015

Objective 2.0: To ensure compliance with environmental monitoring and emission limits in the licence and to improve these parameters beyond the requirements of the licence where practicable.

Objective No.	Target	Plan	Timescale	Responsibility	Status
2.1	To carry out all environmental monitoring as agreed with the agency	develop and implement monitoring schedule. Change as per agreements with Agency liaise with contractors Collate data	Deadline 31.12.2015	Environmental Manager (SB)	Completed
2.2	Monitor life span of biofilter and methodology for replacement of media when required	Continue to monitor. Plan established for removal and restocking biofilter. Re-examine biofilter in Sept 2015	Deadline 31.08.2015	Environmental Manger (SB)	Completed
2.3	Improvements to management of surface water onsite to ensure only clean surface water is discharge	Installation of new Acco channels in front of roller doors to prevent washwater and condensation running onto clean yard. Channels to be cut inside each roller door to ensure pooling is prevented. This will prevent washed trucks carrying out dirty wash water upon exiting the building. Installation of new Acco channels along front of building to prevent any condensation dripping onto clean yard. Acco channels will also enable us to wash the front of the building regularly and keep clean Diversion of back concrete yard to biofilter sump so that any condensation from extraction ducting does not enter the storm water discharge.	Deadline 01.06.2015	Environmental Manger (SB)	Completed



ENVIRONMENTAL MANAGEMENT PROGRAMME 2014					
Objective 3.0: To continually improve energy efficiency and resource use at the site					
Objective No.	Target	Plan	Timescale	Responsibility	Status
3.1	Track changes in diesel use in 2015. Maintain 2014 Diesel consumption levels in 2015.	Implement training of loader operators to ensure efficient loader operation	Dec 2015	Environmental Manager/Operations Manager	Completed
3.2	Maintain Electricity consumption per waste received at <35units per tonne received.	Continuous monitoring of electricity usage via scada system. Extraction & aeration fans to be adjusted to reflect operations. New extraction ducting to suck air from apex of primary processing area will increase electricity usage by 10-15% Awareness to turn off lights when not in use.	Dec 2015	Environmental Manager	Electricity usage per tonne of waste received reduced
3.7	To review on a continuous basis the compost quality results obtained from the testing as required under the licence.	Review results as received for conformity to the compost quality requirements	Continuously Deadline 31.12.2015	Environmental Manager	Completed

**ENVIRONMENTAL MANAGEMENT PROGRAMME 2014**

Objective 4.0: To continually improve the efficiency of the materials flow through the operations with a view to improving the quality of the products and residues produced on site destined for reuse, recovery and recycling, and to minimise the quantity of products sent for disposal

Objective No.	Target	Plan	Timescale	Responsibility	Status
4.1	Carry out an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated	<p>Continued monitoring of batches to enhance process efficiency.</p> <p>Examine methods for improving the quality of the plastic recovered.</p> <p>Investigate feasibility of connecting storage bay and bay 10 in secondary processing bay to primary processing bay. Currently there is excess storage capacity in the secondary processing area. Increase aerated floor capacity in primary processing area would allow plastics to be stored and re-screened on site allowing drier and cleaner plastics being disposed to landfill.</p> <p>Approval to change internal layout would need to be sought from EPA and Dept of Ag. Alternations would not</p>	Deadline 31.12.2015	Environmental Manager	<p>Completed.</p> <p>Bays 9B and 10 moved to primary processing area. Additional room allows for storage, shredding and rescreening of large overs 'plastics' to reduce biodegradable content going to landfill.</p> <p>Over 50% reduction in waste to landfill has occurred because of this.</p>

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Title: Environmental Objectives and Targets & EMP 2015
 Code: ARB EO&T2015
 Revision: 0
 Date: 25/03/2015
 Site Location: Ballybeg Composting Facility

		change any processes on site.			
4.2	Increase number of sustainable outlets for compost use and distribution. Increase use of local options reduces fuel, increases sustainability of compost use.	Sales team to focus on a 30km radius of farms. Use established customer base to help draft new farms. Improve transportation methods for compost. New Tipping trailer which allows greater accessibility to farms. Also high sided skip may be used.	August 2015	Environmental Manager	Completed. Additional farms have allowed more compost to be used locally, reducing transport emissions

ENVIRONMENTAL MANAGEMENT PROGRAMME 2014**Objective 5.0: To enhance our relationship with the local community through communication, transparency, nuisance avoidance, and provision of services**

Objective No.	Target	Plan	Timescale	Responsibility	Status
5.1	Review Public Awareness and Communication Programme	Provide tours of facility to local schools, CIWM, Macra Na Feirne etc. Cre	31.12.2015	Environmental Manager (SB)	Completed
5.2	Improve visual appearance site. New gravel to be laid in car park and around site perimeters. Wild flowers to be planted and maintained at east of site. Lawn to be maintained along driveway.	Improve visual appearance site. New gravel to be laid in car park and around site perimeters. Wild flowers to be planted and maintained. Lawn to be maintained along driveway.	07.08.15	Environmental Manager (SB)	Completed. Wild flowers didn't take root. Area to side of building to be cut as a lawn.

ACORN RECYCLING LTD



Title: Environmental Objectives and Targets & EMP 2015

Code: ARB EO&T2015

Revision: 0

Date: 25/03/2015

Site Location: Ballybeg Composting Facility

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

| PRTR# : W0249 | Facility Name : Ballybeg Composting Facility | Filename : W0249_2015.xls | Return Year : 2015 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

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

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0249 | Facility Name : Ballybeg Composting Facility | Filename : W0249_2015.xls | Retu

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SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
					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			
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
					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



[Guidance to completing the PRTR workbook](#)

PRTR Returns Workbook

Version 1.1.15

REFERENCE YEAR 2015

1. FACILITY IDENTIFICATION

Parent Company Name	Acorn Recycling Limited
Facility Name	Ballybeg Composting Facility
PRTR Identification Number	W0249
Licence Number	W0249-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Ballybeg
Address 2	Lilleton
Address 3	
Address 4	
Country	Tipperary
Country	Ireland
Coordinates of Location	7.72020004905 52.614212
River Basin District	IESE
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Sam Bowden
AER Returns Contact Email Address	sam@acornrecycling.com
AER Returns Contact Position	Compost Facility Manager
AER Returns Contact Telephone Number	050433721
AER Returns Contact Mobile Phone Number	0861071231
AER Returns Contact Fax Number	
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	8
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption?	No
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)?	Yes
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This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : W0249 | Facility Name : Ballybeg Composting Facility | Filename : W0249_2015.xls | Return Year : 2015 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASERS TO AIR		METHOD			QUANTITY			
POLLUTANT		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

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

SECTION B : REMAINING PRTR POLLUTANTS

RELEASERS TO AIR		METHOD			QUANTITY			
POLLUTANT		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
06	Ammonia (NH3)	C	ESTIMATE			461.907	461.907	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)

RELEASERS TO AIR		METHOD			QUANTITY			
POLLUTANT		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
215	Hydrogen sulphide	C	ESTIMATE			2.838	2.838	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: Ballybeg Composting Facility

Please enter summary data on the quantities of methane flared and / or utilised

	T (Total) kg/Year	M/C/E	Method Used		Facility Total Capacity m3 per hour
			Method Code	Designation or Description	
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

SECTION A : PRTR POLLUTANTS

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

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

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

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
			Method Code	Designation or Description			
					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#: W0249 | Facility Name : Ballybeg Composting Facility | Filename : W0249_2015.xls | Return Year : 2015 |

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Please enter all quantities on this sheet in Tonnes

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Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Haz Waste : Name and Licence/Permit No of Recover/Disposer	Non Haz Waste: Address of Recover/Disposer		
Within the Country	19 05 01	No	2218.11	non-composted fraction of municipal and similar wastes	D1	M	Weighed	Offsite in Ireland	Drehid Waste Management Facility,W0201-03	Killinagh Upper,Carbury,Co. Kildare,,Ireland		
Within the Country	19 05 03	No	0.0	off-specification compost	D1	M	Weighed	Offsite in Ireland	Drehid Waste Management Facility,W0201-03	Killinagh Upper,Carbury,Co. Kildare,,Ireland		
Within the Country	19 05 99	No	15.18	wastes not otherwise specified	R10	M	Weighed	Offsite in Ireland	Irish Water - Limerick Main Drainage,D0013-01	Dock Road,,Limerick ,,Ireland		
Within the Country	19 05 99	No	794.79	wastes not otherwise specified	R10	M	Weighed	Offsite in Ireland	Irish Water - Ringsend WWTP,D0034-01	Pigeon House Road,,Dubin,,Ireland		
Within the Country	19 05 99	No	173.28	wastes not otherwise specified	R10	M	Weighed	Offsite in Ireland	Irish Water - Leixlip WWTP,D0004-01	Leixlip,,Co. Kildare,,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](#)