



Acorn Recycling

Waste Management for the next generation

ANNUAL ENVIRONMENTAL REPORT

2012

Name: Acorn Recycling Ltd

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

Waste Licence: W0249-01

Reporting Period: 01 January 2012 – 31 December 2012

Submitted by *Sam Bowden*
Sam Bowden
Environmental Manager

Web: www.acornrecycling.com

Acorn Recycling Ltd Registered in Ireland: Company No: 384234. VAT No: 6404234F.
Managing Director: Rónán Beasley. Acorn Recycling is a member of the Arlo Group.

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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 2012. The report covers the period 1st January 2012 to 31st December 2012.

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 2012)
- 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).
(19,676.20 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 19,676.20 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 83.53% of the total waste received.

Table 1. Waste Accepted 2011

EWC	DESCRIPTION	QUANTITY (t)
020106	ANIMAL FAECES, URINE AND MANURE (AGRI.)	6.1
020201	SLUDGES FROM WASHING/CLEANING (MEAT INDUSTRY)	0.84
020203	MATERIALS UNSUITABLE FOR CONSUMPTION OR PROCESSING	104.64
020204	SLUDGES FROM ON-SITE EFFLUENT TREATMENT (MEAT INDUSTRY)	31.82
020304	MATERIALS UNSUITABLE FOR CONSUMPTION OR PROCESSING (ANIMAL FEED)	215.54
020501	MATERIAL UNSUITABLE FOR CONSUMPTION OR PROCESSING (DAIRY INDUSTRY)	76.28
020502	SLUDGES FROM ON-SITE EFFLUENT TREATMENT (DAIRY INDUSTRY)	492.6
020704	MATERIALS UNSUITABLE FOR CONSUMPTION PROCESSING (DRINKS INDUSTRY)	40.44
190805	SLUDGES FROM TREATMENT OF URBAN WASTE WATER	1787.22
190901	SOLID WASTE FROM PRIMARY FILTRATION AND SCREENINGS	4.22
190902	SLUDGE FROM WATER CLARIFICATION	86.50
190904	SPENT ACTIVATED CARBON	98.74
200108	BIODEGRADABLE KITCHEN AND CANTEEN WASTE	16435.30
200125	EDIBLE OIL AND FAT	208.84
200201	BIODEGRADABLE WASTE	5.38
200304	SEPTIC TANK SLUDGE	29.36
200306	WASTE FROM SEWAGE CLEANING	52.38
	Total	19,676.20

3.2 Waste Dispatched

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

The following quantities of each waste were disposed of in 2012

Table 2. Waste dispatched 2012

EWC	DESCRIPTION	TONNAGE DISPOSED
190501	Plastic 'Overs'	1146.16
190599	Compost Leachate	505.22
130503*	Diesel spill absorbant	0.2

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

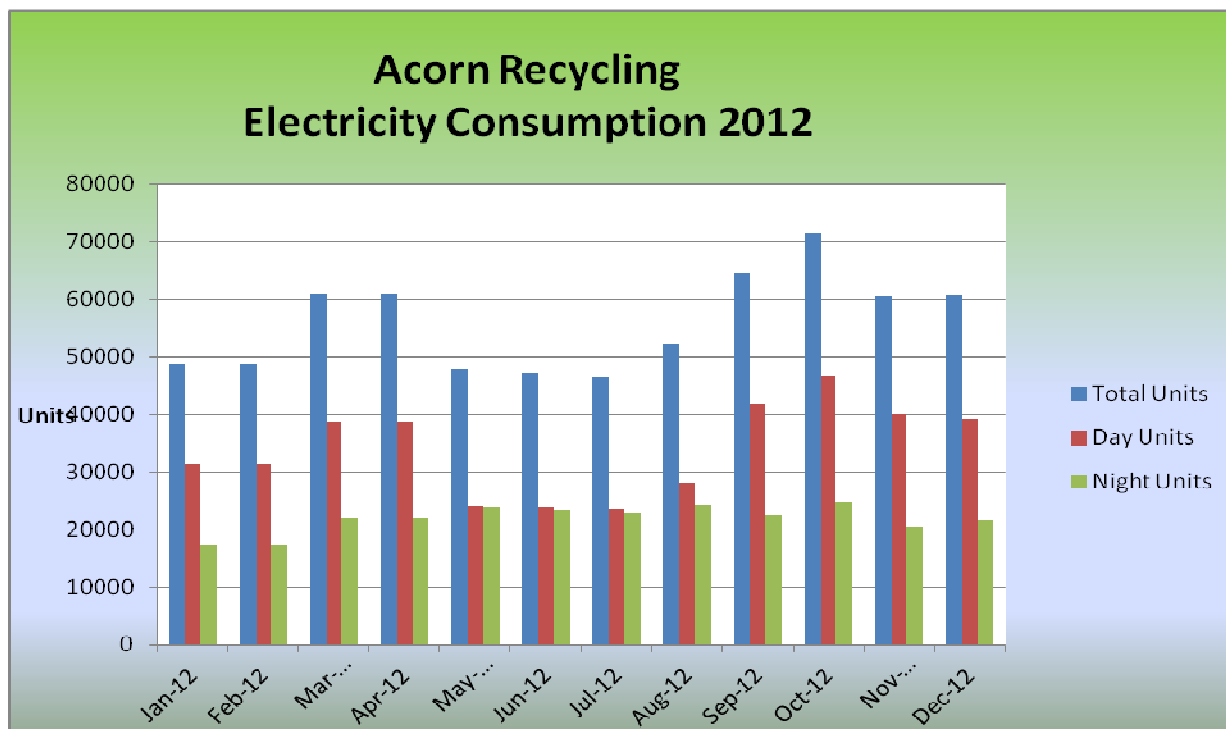
4.1 Electricity Usage

Table 3. and Figure 1. below detail the day and night units of electricity used on site during each 2 month period in 2012

Table 3. Electricity Consumption 2012

Electricity Consumption 2012			
Billing Period	Day Units	Night Units	Total Units
Jan/Feb 2012	62760.00	34680	97440
Mar/Apr 2012	77880.01	43920	121800.01
May/Jun 2012	47772.09	47148.00	94920.09
Jul/Aug 2012	47486.27	47084.00	93850.27
Sep/Oct 2012	88608.00	47532.00	136140.00
Nov/Dec 2012	79234.00	42276.00	121510.00

Figure 1. Electricity Consumption 2012



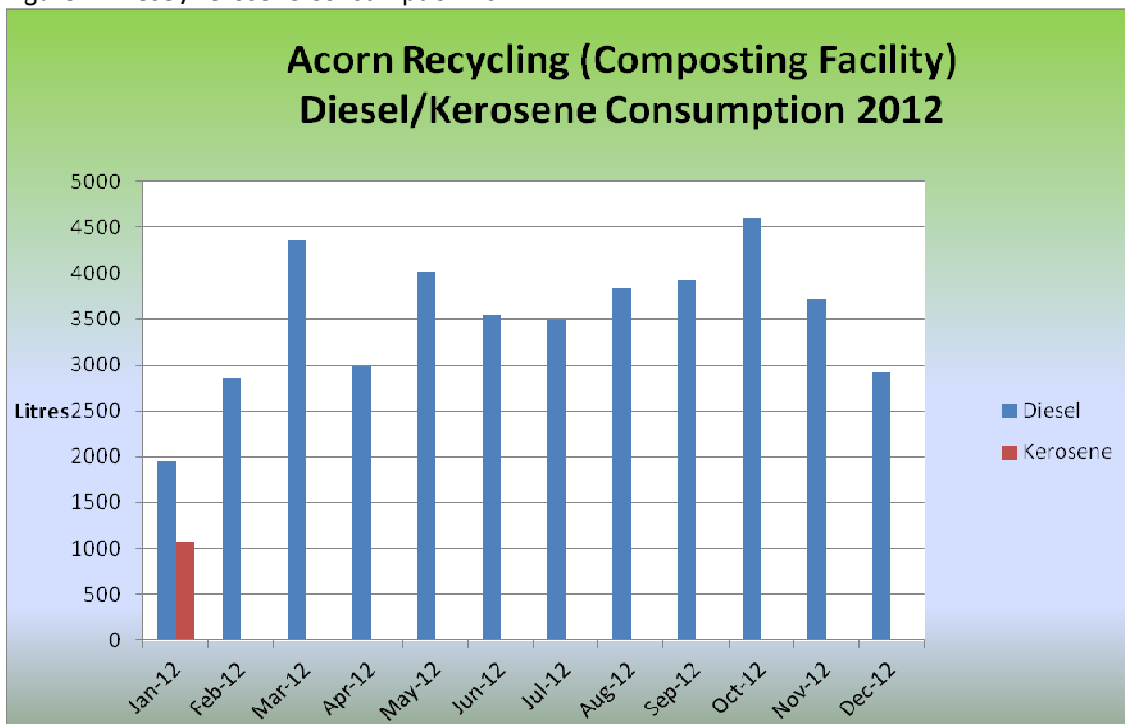
4.2 Diesel Usage

Table 4. and Figure 2. below show diesel and kerosene consumption in 2012. The Diesel consumption remained fairly steady during 2012. The facility was not fully operational in Jan/Feb 2012 which explains the low diesel consumption in these months. In January 2012 kerosene fuelled power washer was installed, 1065 litres of kerosene was delivered to site in Jan 2012 & this lasted 1 full year until Jan 2013.

Table 4. Diesel Consumption 2012

Month	Diesel (litres)	Kerosene
Jan-12	1951	1065
Feb-12	2860	
Mar-12	4369	
Apr-12	2990	
May-12	4027	
Jun-12	3547	
Jul-12	3494	
Aug-12	3845	
Sep-12	3930	
Oct-12	4606	
Nov-12	3724	
Dec-12	2918	
Total	42261	1065

Figure 2. Diesel/Kerosene Consumption 2012



4.3 Compost Amendment Materials

950.98 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.

A review of water usage on site was carried out. Following this review a new pressure washer on site was purchased. The water usage when operational is 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.

Specific changes in operations resulted in cleaner/drier overs produced resulting in reduced woodchip use compared with 2011.

Total woodchip used was 950.98 tonnes down from 1203.38 tonnes per annum in 2011. In proportion to the quantity of waste received for processing the use of woodchip was reduced from 86kg per tonne of waste received in 2011 to 48kg per tonne of waste received in 2012.

The plastics produced for disposal offsite was down from 5.94% in 2011 to 5.75% in 2012 despite an increased proportion of brown bin waste in the waste received. A slight improvement in the quality of feedstock supplied by waste collectors as well as increased process efficiency resulted in this downward trend. We expect an increase in plastics production in 2013 however due to a higher volume of brown bin throughput.

6.0 Complaints Summary

There was 1 complaint made to the facility in 2012 which related to odour. A neighbour complained of experiencing odour in the vicinity of the site on 06Sept2012. Full details of all complaints are detailed in the complaints log on site.

7.0 Reported Incidents Summary

There were no incidents in 2012

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 2012. Continuous monitoring continues as per licence requirements (See 11.4 Odour & Bioaerosols).

As part of our environmental objectives and targets a full assessment of the biofilter will be carried out in 2013 with a view to establishing when the biofilter media will be replaced and what the methodology will be.

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 every day.

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

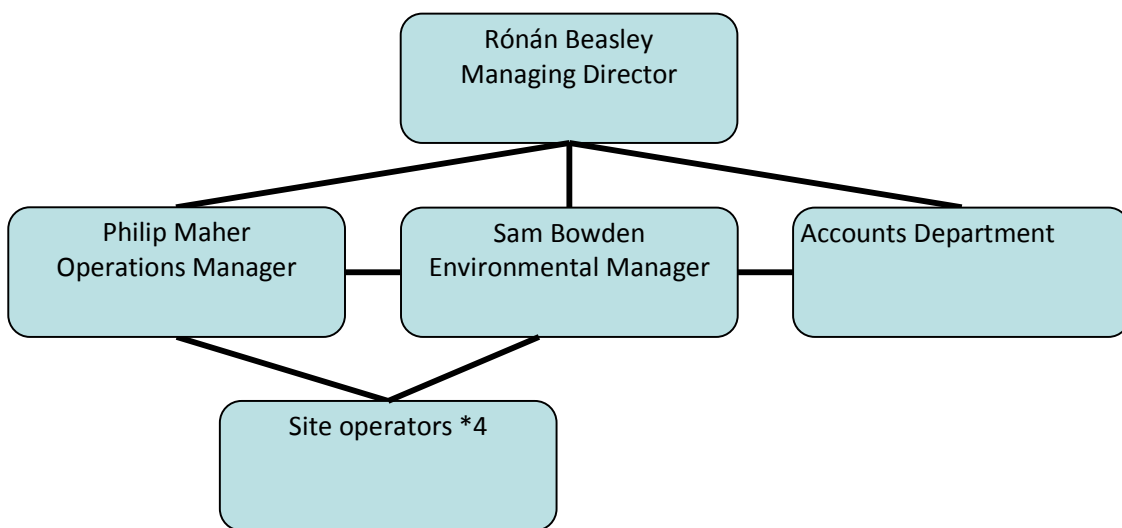
Birds: Birds are not an issue at the site. All waste activities are carried out within the closed building.

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
Rónán Beasley	Managing Director	Overall Management of Company	B.Sc in Environmental Science Environmental Manager of McGill Environmental 2001 to 2006
Sam Bowden	Environmental Manager	Responsibility 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
Philip Maher	Operations Manager	Day to day management of staff and operations on site. Responsibility for implementing procedures on site Maintenance of equipment	Cré - Institute of Technology, Sligo - FÁS Certificate in Compost Facility Operation Experience in managing composting facility.



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 3rd Aug 2012. 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 L_{eq10} was high due to this almost continuous traffic during the monitoring period.

The L_{eq90} which may be used to give an indication of the actual back-ground noise was determined to be 44 dB(A) during both surveys.

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 L_{eq10} was high due to this almost continuous traffic during the monitoring period.

The L_{eq90} which may be used to give an indication of the actual back-ground noise was determined to be 43 and 45 dB(A) during both surveys.

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 L_{eq10} was high due to the passing traffic during the monitoring period.

The L_{eq90} which may be used to give an indication of the actual back-ground noise was determined to be 39 and 40 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 L_{eq10} was high due to the passing traffic during the monitoring period.

The L_{eq90} which may be used to give an indication of the actual back-ground noise was determined to be 38 and 39 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 2012 (NSL1/NSL2) 03rd Aug 2012.

A survey was carried out twice at each location day & night

NSL	Day dB(A) Laeq (30min)	Day L ₉₀	Night dB(A) Laeq (30min)	Night L ₉₀
NSL1	63, 62	44, 44	57, 56	39, 40
NSL2	62, 63	43, 43	55, 53	39, 38

10.2 Groundwater Monitoring

As per Table C.2.3 of the waste licence groundwater on site was sampled and tested on 18thDec for the parameters below.

Table 8. Groundwater Monitoring Results (Sampling Date: 18 Dec 2012)

Parameter	GW1	GW2**	GW3
pH	7.4	7.7	6.9
Total Ammonia	3.81	5.42	2.02
Total Nitrogen	13	7.7	15
Conductivity	459	299	759
Chloride	14.1	15.1	9.1
Organic Compounds	Not detected*	Not detected*	Not detected*

10.3 Monitoring of Emissions to Water

Two samples were taken from storm water discharging from the site at SW1 during the reporting period.

Table 9. Storm Water Monitoring

Parameter	22Aug2012	23Nov2012
Ammonia (mg/l)	18.61	3.91
Suspended Solids (mg/l)	40	<20

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.

Table 10. Biofilter Monitoring 2012

Parameter	Q1 (15Mar2012)	Q2 (09Jul2012)	Q3 (11Aug2012)	Q4 (26Nov2012)	Limit
Average Odour OUE/m ³	4256	3941	3649	4597	—
% Odour Removal	92	93	94.6	93	—
Total Aliphatic Amines (mg/Nm ³)	0.98		0.84		—
Hydrogen Sulphide (mg/Nm ³)	0.025		0.01		<5
Ammonia (mg/Nm ³)	2.5		1.4		<50
Total Mercaptans (mg/Nm ³)	<0.1		< 0.09		<5
Bed Media pH	6.8		6.8		—
Moisture (% w/w)	50		46		—
Total Viable Counts (CFU/Kg)	6.3*10 ⁵		5.2*10 ⁵		—

Table 11. Bioaerosols Monitoring 2012

Location	Aspergillus Fumigatus (CFU m ³)	Mesophilic Bacteria (CFU m ³)
Loc Bio1	11	45
Loc Bio2	21	134
Loc Bio3	17	91

Table 12. PM10 Monitoring
PM10 Monitoring 2012

Location	(H1) Average Concentration (ug/m ³) (09Jul2012)	(H2) Average Concentration (ug/m ³) (26Nov2012)	Limit (ug/m ³)
PM1	12	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 = 1.95 mg/m³ NH₃

Total ammonia emissions load in 2012 = 1.95mg/m³ * 258,048,720m³

= 503.195 kg/year NH₃

10.5 Dust Deposition Monitoring

Dust deposition monitoring was carried out at the site on three times in 2012 at four monitoring locations. Average dust levels did not exceed the licence limit of 350mg/m²/day in 2012.

Table 13 Dust Deposition 2012 (mg/m²/day)

Duration	DD1	DD2	DD3	DD4
23/03/2012 - 08/05/2012	23.9	28.4	13	59.8
13/06/2012 - 08/08/2012	173.3	53.7	28.7	<5
08/08/2012 - 03/10/2012	141	44.7	57.6	98.6

11.0 Procedures developed in 2012 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 2012, including 2 new procedures. 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 and non-compliance
SOP ARB08	Non Compliance and Corrective Action
SOP ARB10	Awareness and Training Procedure
SOP ARB11	Emergency 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

12.0 Environmental Objectives & Targets and Environmental Management Programme report for 2012 and proposal for 2013

See attached separately

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		

ENVIRONMENTAL MANAGEMENT PROGRAMME 2011

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 31.12.2012	Environmental Manager (SB) H & S co-ordinator (SB)	Achieved & Ongoing

ENVIRONMENTAL MANAGEMENT PROGRAMME 2011

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 31.12.2012	Environmental Manager (SB)	Achieved & Ongoing



ENVIRONMENTAL MANAGEMENT PROGRAMME 2011

Objective 3.0: To continually improve energy efficiency and resource use at the site

Objective No.	Target	Plan	Timescale	Responsibility	Status
3.1	12% Decrease in electrical power consumption on aeration and extraction fan use	To be developed	Dec 2012	Environmental Manager	Achieved Acorn implemented strict control over electricity usage in 2012. Achieved 27.85% reduction in units of electricity used per tonne of waste processed. 34.08 units, down from 47.24.
3.2	Diesel Fuel use: track changes in consumption against 2011	To be developed	Dec 2012	Environmental Manager	Achieved Diesel usage was down in 2012 from 47179litres in 2011 to 42261 in 2012 mainly due to use of diesel mobile screening plant in 2011.
3.3	Calculate power Kw of individual light systems and install programme to minimise lighting	To be developed	Dec 2012	Environmental Manager	Use of lighting is minimised on site by awareness training. Lights are turned off when not required.
3.4	Establish most efficient of air con system	To be developed	Dec 2012	Environmental Manager	Discontinued
3.5	Install a programme for loader operators for working the loaders more efficiently	To be developed	Dec 2012	Environmental Manager	Ongoing project.
3.6	Achieve a 10% reduction in diesel consumption in 2012 relative to equivalent loader use in 2011	To be developed	Dec 2012	Environmental Manager	Achieved >10% reduction per tonne of waste received.
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	Environmental Manager	Achieved. Compost quality improved through 2012 with reduction in heavy metal levels in the compost



ENVIRONMENTAL MANAGEMENT PROGRAMME 2011

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 (Pre-screen operation)</p> <p>Investigate possibility of installing wind-sifter to extract light plastics from the recycled overs' fraction.</p> <p>Examine quality of waste received on site. Ensure any contamination with plastics, glass etc is reported to waste companies.</p>	Deadline 31.12.2012	Environmental Manager	<p>Reviewed Jan/Feb 2013 Ongoing project.</p> <p>Huge overall process efficiency achieved in primary processing of waste in 2012. Waste ratio and height of material placed in bay reduced resulting in more rapid drying of compost. Increase capacity of primary processing bays as processing time per batch reduced. Cleaner/drier overs produced resulting in reduced woodchip use compared with 2011.</p> <p>Detailed feasibility of installing windsifter to be carried out in 2013.</p> <p>Quality of waste received has improved over 2012.</p>

ENVIRONMENTAL MANAGEMENT PROGRAMME 2011

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.	31.12.2012	Environmental Manager (SB)	Achieved. Hosted tour from local authority course on wastewater treatment
5.2	Provide onsite pick up service for compost to the general public	Investigate feasibility of pick up system for compost. Bulk users Small users	31.12.2012	Environmental Manager (SB)	Car trailer loads of compost advertised & sold to public. Very small in scale. Drop of point for green waste considered but decided against due to health & safety concerns (traffic mgt issue)

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		

ENVIRONMENTAL MANAGEMENT PROGRAMME 2011

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 31.12.2013	Environmental Manager (SB) H & S co-ordinator (SB)	Continual Review

ENVIRONMENTAL MANAGEMENT PROGRAMME 2011

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 31.12.2013	Environmental Manager (SB)	ongoing
2.2	Establish life span of biofilter and methodology for replacement of media when required	1) Assess biofilter including assessment of the following parameters; Bacteria count Particle size Removal efficiency Bed & back pressure Trial pits for assessment to be dug 2) Establish budget & methodology for removal of biofilter (diversion of extraction during replacement, equipment, source of replacement woodchip etc)	Deadline 31.08.2013	Environmental Manger & Managing Director	Ongoing

ENVIRONMENTAL MANAGEMENT PROGRAMME 2011

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 2013. Reduce diesel consumption per tonne waste processed by 5%	Implement training of loader operators to ensure efficient loader operation	Dec 2013	Environmental Manager/Operations Manager	Review Jan/Feb 2014
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 Awareness to turn off lights when not in use.	Dec 2013	Environmental Manager	Review Jan/Feb 2014
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 31.12.2013	Environmental Manager	Review Jan/Feb 2014



Title: Environmental Objectives and Targets & EMP 2013
 Code: ARB EO&T2013
 Revision: 1
 Date: 11/03/2013
 Site Location: Ballybeg Composting Facility

ENVIRONMENTAL MANAGEMENT PROGRAMME 2011

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. Examine methods for improving the quality of the plastic recovered (Pre-screen operation) Investigate possibility of installing wind-sifter to extract light plastics from the recycled overs' fraction. Examine quality of waste received on site. Ensure any contamination with plastics, glass etc is reported to waste companies.	Deadline 31.12.2013	Environmental Manager	Review Jan/Feb 2013

ENVIRONMENTAL MANAGEMENT PROGRAMME 2011

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.	31.12.2012	Environmental Manager (SB)	
5.2	Review biofilter (See 2.2)				



**Archerstown Industrial Estate
Thurles
Co. Tipperary**



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www.acornrecycling.com

Acorn Recycling

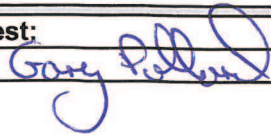
Fuel Storage Bund Integrity Testing

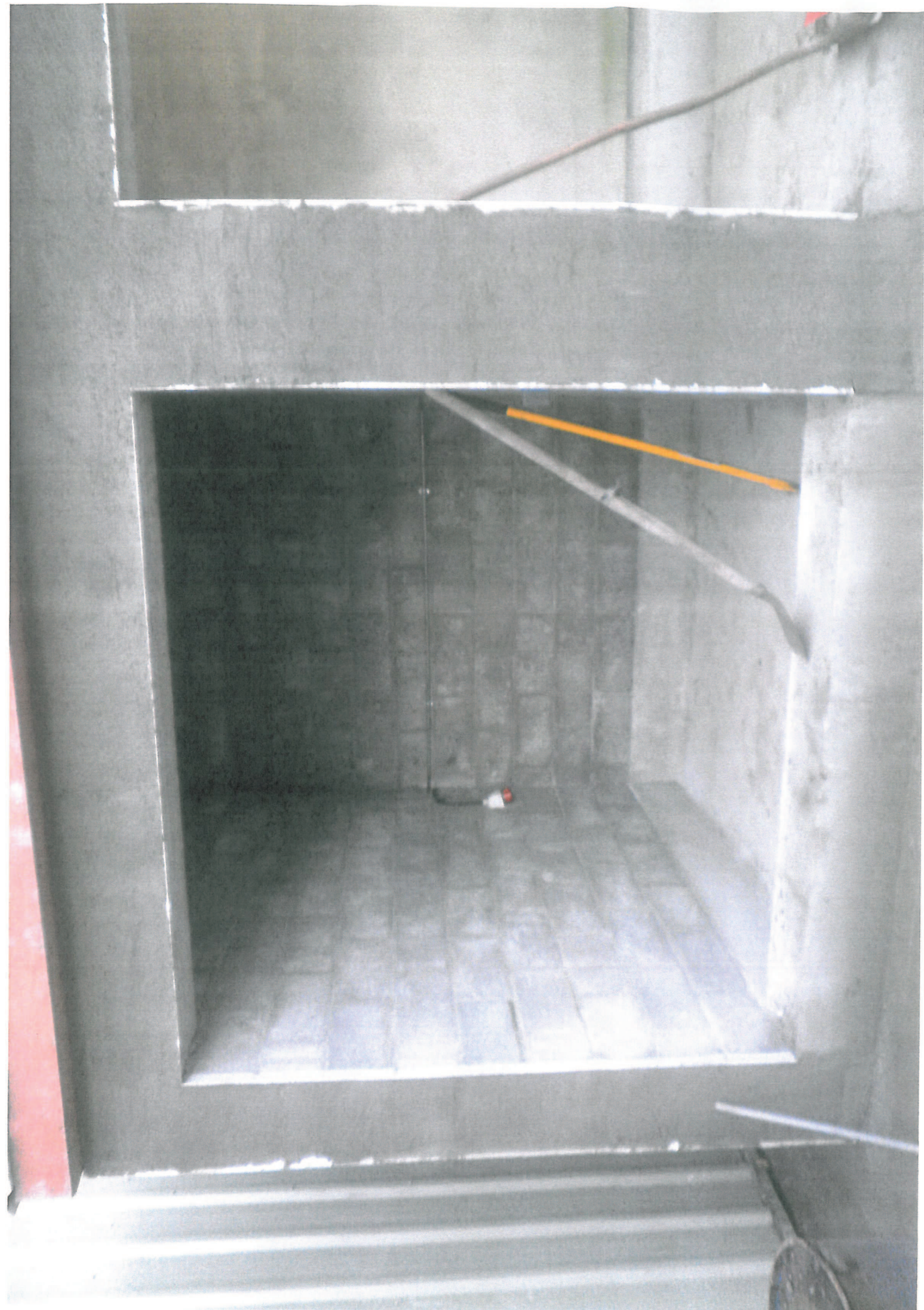
January 2012

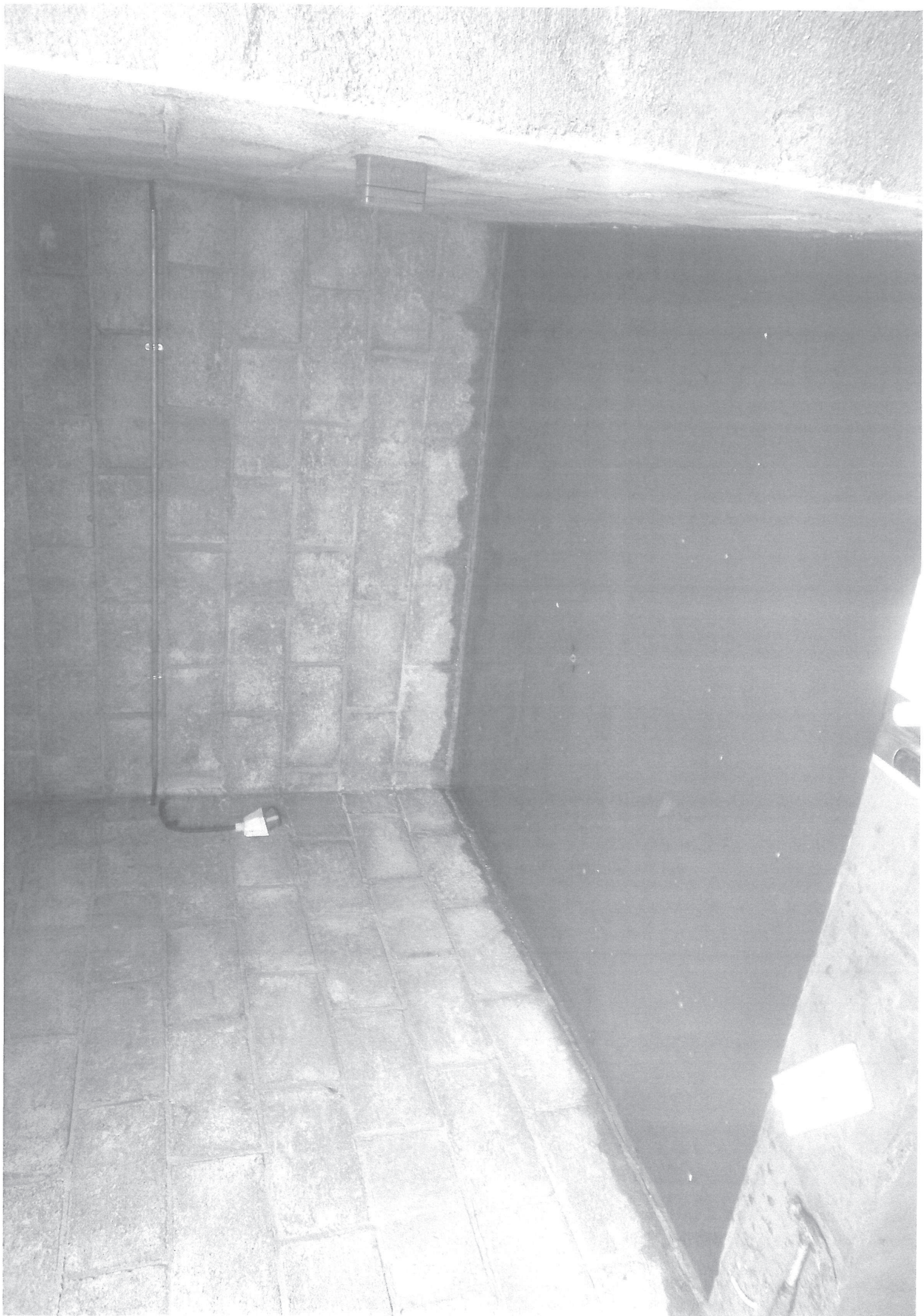


AQS Environmental Solutions
 Archerstown Industrial Estate
 Thurles
 Co. Tipperary
 Tel: 050457800
 Fax: 050457801
 Email: gary@aqssolutions.ie
 Web: www.aqsenvironmentalsolutions.ie



Record Sheet for Tank Testing	
Surveyors: AQS Environmental Solutions	Waste License No: W0249-01
Client / Site: Acorn Recycling, Littleton Composting Plant	IPC Category:
Bund Ref No: Fuel Storage Bund	Tank Type: Holding Tank
Bund Location: Over Ground	Tank Classification: Fuel storage
Bund Dimensions: 3.420m wide x 2.320m long x 0.30m deep	Bund Capacity: 2.38 cubic metres
Bund Construction Materials: Concrete	Tank Total Capacity within Bund: 1.115 + 0.9 = 2.015 cubic metres
Bund Lining Materials: None	Weather Conditions: Dry
Bund inlets /Connections: No	Inlet Diameters: N/A
Deemed practicable / safe to conduct hydrostatic test? If no or shortened periods of time, give reasons:	Yes
Date of Hydrostatic Test: 19.01.2012 - 20.01.2012	Time scale of test: 24 hour
Description and Results of Hydrostatic Test: Tank was filled to 0.29m from bund floor level. Estimated rainfall in the area, over test period was 0mm.	
Description and Results of Visual Inspection: Okay No drop in test water level was recorded.	
Recommendations N/A	
Pass / Fail of Hydrostatic Test:	Pass
Signed - Gary Pollard BEng 	Date: 21.01.2012





[PRTR# : W0249 | Facility Name : Ballybeg Composting Facility | Filename : W0249_2012.xls | Return Year : 2012]



[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.16

REFERENCE YEAR 2012

1. FACILITY IDENTIFICATION

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

Waste or IPPC Classes of Activity	
No.	class_name
4	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)

Address 1	Ballybeg
Address 2	Littleton
Address 3	
Address 4	Co. Tipperary
Country	Tipperary
	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@acomrecycling.com
AER Returns Contact Position	Environmental Manager
AER Returns Contact Telephone Number	054639721
AER Returns Contact Mobile Phone Number	0861071231
AER Returns Contact Fax Number	
Production Volume	0.0
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	6
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)

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

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities)?	
---	--

Guidance on waste imported/accepted onto site

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 Ref: W0249 | Facility Name: Biology Composting Facility | Filename: W0249_2012.xls | Return Year: 2012 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS									
RELEASES TO AIR									
No. Annex II	Pollutant	Name	METHOD			QUANTITY			
			M/C/E	Method Code	Description or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
C							0.0	0.0	0.0
							0.0	0.0	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									
No. Annex II	Pollutant	Name	METHOD			QUANTITY			
			M/C/E	Method Code	Description or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
06		Ammonia (NH3)	C	ESTIMATE		503.195	503.195	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									
Pollutant No.	Pollutant	Name	METHOD			QUANTITY			
			M/C/E	Method Code	Description or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
215		Hydrogen sulphide	C	ESTIMATE		0.451	0.451	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) emissions to the environment under "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	Method Used		Facility Total Capacity m3 per hour
	M/C/E	Method Code	
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

5. ONSITE TREATMENT & OFF-SITE TRANSFERS OF WASTE

[PRTR# : W0249 | Facility Name : Ballybeg Composting Facility | Filename : W0249_2012.xls | Return Year : 2012 |

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Please enter all quantities on this sheet in Tonnes

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste Name and Licence/Permit No of Next Destination Facility 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 99	No	505.22	wastes not otherwise specified non-composted fraction of municipal and	R10	M	Weighted	Offsite in Ireland	Tralee WWTP, D0040-01	Lohercanon, Tralee, Co. Kerry, Ireland		
Within the Country	19 05 01	No	22.24	similar wastes	R12	M	Weighted	Offsite in Ireland	Greenstar, W0188-01	Greenogue, ..., Dublin, Ireland		
Within the Country	19 05 01	No	1123.92	non-composted fraction of municipal and similar wastes	D1	M	Weighted	Offsite in Ireland	Drehid Waste Managment Facility, W0201-03	Killnagh Upper, Carbury, Co. Kildare, ..., Ireland		

* Select a row by double-clicking the Description of Wastes then click the delete button
Drehid Waste Managr Killnagh Upper, Carbury, Co. Kildare, ..., Ireland

[Link to previous years waste data](#)

[Link to previous years waste summary data & percentage change](#)