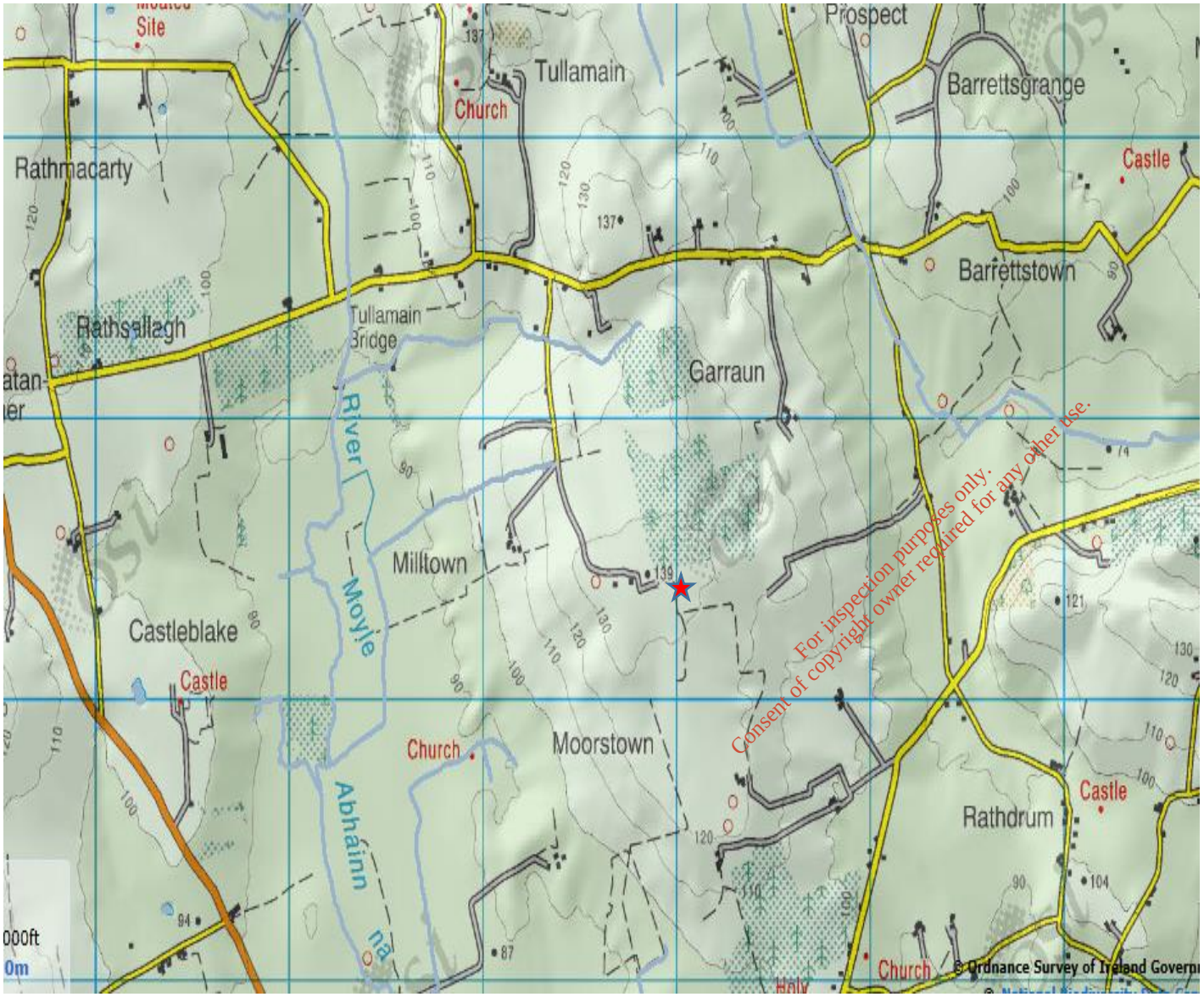
Attachment B.1

Surrounding Area Map



JRE
Environmental Consulting

Legend:

★ Site Location

Notes

1. **Original Drawing in Colour**

REFERENCE DRAWINGS

DWG. NO.	DATE	DESCRIPTION

REVISIONS

REV.	DATE	DESCRIPTION	BY	CHK
0	–	–	–	–

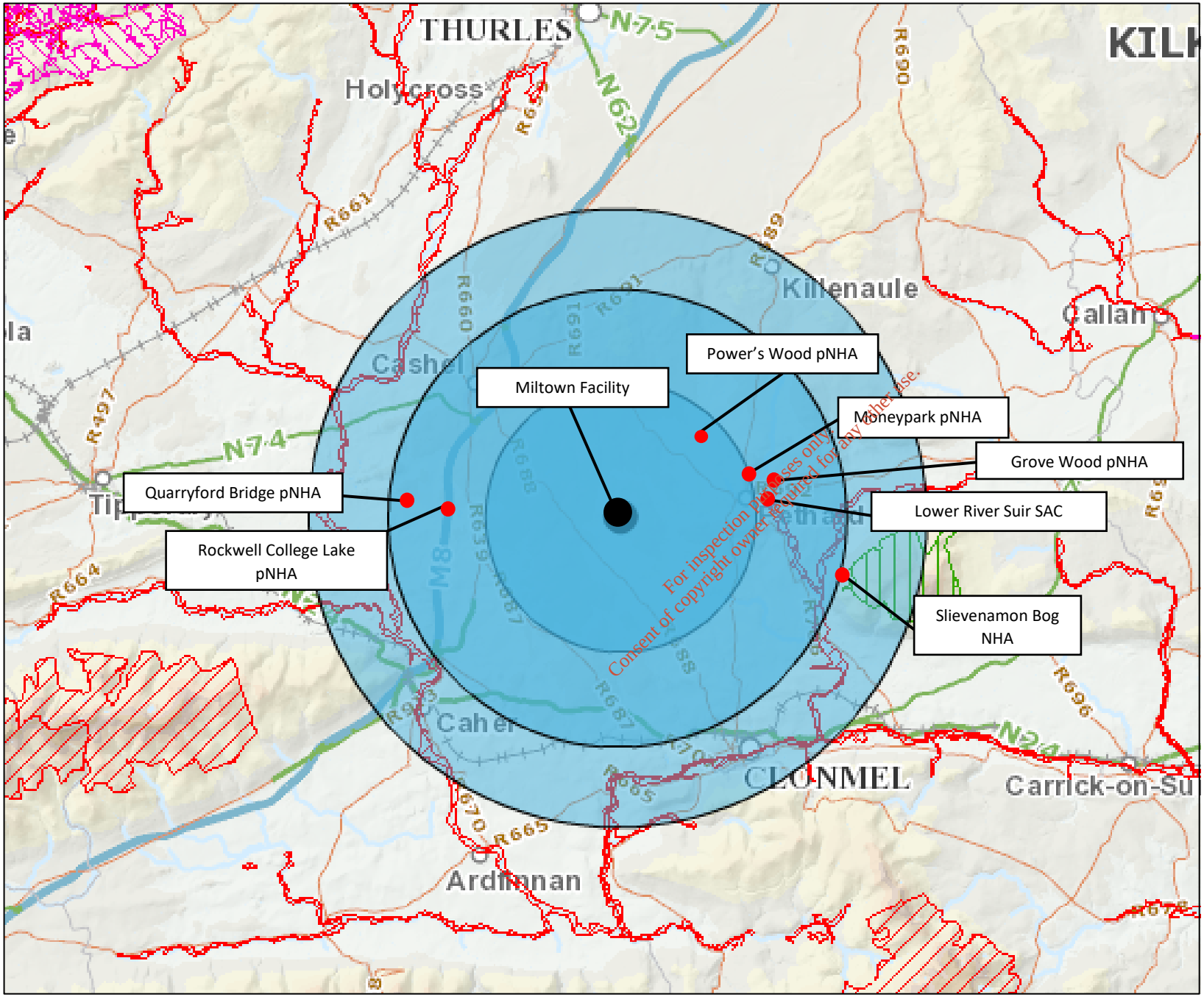
Client Name: Miltown Compost	**Project Location: Miltown Mor, Fethard**

Title: Map of Area

DWN BY: JR	Scale:	Date	Drawing No.
CKD	Plot:		

Attachment B.2

Protected Area Map



JRE Environmental Consulting

Client:	Job No.
Miltown	3201
Drawing No.	**Date:**
3201-021	27/02/2017

Legend:

Map sourced from NPWS online map viewer

Attachment B.3

SOP for Waste Acceptance

MILTOWN COMPOSTING LTD	Title: Waste Acceptance and Characterisation Procedure Code: SOP MC01 Revision: 7 Revised By: DM Date: 09/03/2016 Site Location: Milltownmore, Fethard, Co. Tipperary

WASTE ACCEPTANCE AND CHARACTERISATION PROCEDURE

1. Objectives

- Ensure waste processed on site is suitable for composting and characterised correctly
  Waste unsuitable for composting is identified, isolated, and controlled

2. Responsibility

- Facility Manager
- Weighbridge Operators

3. Procedure

3.1 Before new waste is proposed to enter the site, pre-clearance is sought from the customer which must include; description and origin of the waste, analysis (if requested). The Environmental/Technical manager will determine the EWC code for the waste and its ABP status. An internal Waste Classification form is filled out to classify the waste.

3.2 Any additional information (e.g. analysis) is retained along with the classification form for reference purposes.

3.3 Once preclearance is given, waste is allowed enter the site and is weighed in at the weighbridge.

3.4 All receptacles (trailers/tankers etc.) entering the site must be covered and sealed. Trucks are directed to the waste acceptance area. An operator then signals to the driver when it is clear to tip waste. The load is visually inspected to ensure that it is consistent with the details provided in the waste classification form and ,assuming is consistent, is cleared to process

3.5 If the waste is not cleared to process because of suspected non-conformity with the waste classification form the plant manager is informed immediately. Following an immediate assessment of the suspected non-conforming load the plant manager will either pass the load for processing or direct the load to be reloaded and removed from the site.
All plant and machinery that came in contact with the waste will be thoroughly cleaned.

3.6 Where a load is confirmed to be non-conforming, the non conformance and corrective action record sheet (RS MC07) is filled in and all details and actions taken recorded in same.

3.7 Once acceptance is complete the weighbridge operator directs the driver to the weighbridge. The truck is weighed out and a detailed receipt is given to the driver.

4. Reference Documents

- Waste License: W0270-01
- DAFM, APPROVAL AND OPERATION OF COMPOSTING PLANTS TRANSFORMING ANIMAL BY-PRODUCTS AND DERIVED PRODUCTS IN IRELAND issued the 8th May 2014
- Waste ABP Classification and Acceptance Form
- Process Flow Diagram

Attachment B.4

SOP for Unsuitable Waste

MILTOWN COMPOSTING LTD	Title: Non conformance and corrective action Code: SOP MC07 Revision: 7 Revised by: DM Date: 22/03/2016 Site Location: Miltownmore, Littleton, Co. Tipperary

NON CONFORMANCE AND CORRECTIVE ACTION

1. Objectives

- To ensure all non conformances with licence conditions, DAFF requirements, Miltown Composting procedures etc are recorded.
-To ensure all non conformances are investigated thoroughly and the 'root cause(s)' determined
-To ensure appropriate actions are carried out to prevent the reoccurrence of non conformances.

2 . Responsibility

- Plant Manager
- Deputy Manager

3. Procedure

3.1 Detection

Non conformances will be detected from the following sources;

- Environmental and Product Monitoring results
- Process control procedures
- Audit Findings
- Complaints (Although not necessarily a non compliance any complaint will be recorded and examined using this procedure.

3.2 Corrective Action

- The Plant Manager is informed of the non-conformance. All staff are made aware of all procedures and critical controls relating to their area of work.
- The Plant Manager will investigate the circumstances surrounding the non-compliance (a staff member involved in the area of work may be designated to carry out this investigation and report back to the Plant Manager). The purpose of the investigation is to determine the root cause(s) of the non conformance.
- The Plant Manager will fill out the non conformance and corrective action record sheet. Here the Plant Manager will detail the causes of the non conformance and detail the corrective actions to be taken.
- The Plant Manger will determine whether or not the non-conformance must be brought to the attention of any licensing authority (for example DAFF will need be informed in the event that the compost samples fail microbiological testing).

4. Reference Documents

- Waste License: W0270-01
- Process Flow Diagram
- Conditions for approval and operation of composting plants transforming animal by- products and derived products in Ireland – issued 8th of May 2014

MILTOWN COMPOSTING LTD	Title: Non conformance and corrective action Code: SOP MC07 Revision: 7 Revised by: DM Date: 22/03/2016 Site Location: Miltownmore, Littleton, Co. Tipperary

Non Conformance and Corrective Action Record Sheet

Non Conformance

- ☐ Environmental and Product Monitoring results
- ☐ Process control procedures
- ☐ Audit Findings
- ☐ Complaints
- ☐ Other

Corrective Action

Attachment B.5

2015 AER

ANNUAL ENVIRONMENTAL REPORT

JANUARY 2015
TO
DECEMBER 2015

Licence Number:	**W0270-01**
Licensee:	**Milltown Composting Systems Ltd**
Location of Activity:	**Milltownmore** **Fethard** **Co. Tipperary**
Attention:	**Office of Environmental Enforcement** **EPA Regional Inspectorate Kilkenny** **Seville Lodge** **Callan Road** **Kilkenny**

CONTENTS

SECTION 3: ENVIRONMENTAL MANAGEMENT SYSTEM

SECTION 1

INTRODUCTION

1.1 INTRODUCTION

The following is the Annual Environmental Report (AER) for the period January 2015 to December 2015 at Miltown Composting Ltd.

The company was granted an EPA Waste Licence No. W0270-01 on the 9th September 2010. This is the 2015 Annual Environmental Report of Miltown Composting Ltd and detailed within is a summary of all activities on-site during this period that has had an influence on the environmental performance of the company. Current guidance from the Agency requires that the AER is referenced per calendar year.

This AER reflects company's commitment to achieving objectives of a documented ongoing improvement programme at the site.

1.2 SITE DESCRIPTION

Site Location

The site is located in the townland of Milltownmore, approximately 6 km to the east of Fethard and 10 km to the south west of Cashel. The site is accessed by a private road off the Rosegreen to Fethard third class public road.

Layout

The site encompasses approximately 5.9 hectares. It is at an elevation of approximately 139m Ordnance Datum (OD) and slopes gently to the west from a high point in the east.

It is occupied by the three main composting buildings-Sheds 1, 2 and 3- a covered yard, and paved open yards; weighbridge, office; canteen/changing room; storage shed; wetlands, biofilter and former cattle sheds. The base for a proposed lined slurry storage lagoon is located to the west of the cattle sheds and is currently used to store building materials. The area to the north of the shed is undeveloped and formerly used for animal grazing. The rest is a series of constructed wetlands in the south west of the site.

Site History

The site was originally used for agricultural purposes. The cattle sheds and Shed 1 were originally constructed to house pigs, cattle, meat and bone meal and animal feed. In 2004 South Tipperary County Council granted planning permission and a Waste Permit for composting (in-vessel and maturation) to be carried out in Shed 1.

In 2007 Miltown moved the maturation process to Sheds 2 and 3. In January 2008 there was a fire at the site, when the compost turner went on fire. The turner was destroyed and the fabric of Shed 3 was damaged. The Council issued a revised Waste Permit in May 2008 and this is valid until May 2015. In March 2009 the Council granted planning permission for the retention of the offices, canteen/changing room, underground leachate storage tanks, and weighbridge.

Operational & Waste Acceptance Hours

The normal operational hours are 06.00 to 18.00 Monday to Saturday. Materials are accepted between the hours of 08.00 and 18.00.

1.2.1 DESCRIPTION OF ACTIVITY

Overview

The facility is a composting plant that accepts a broad range of compostable materials including source segregated household kitchen waste; catering wastes; non-hazardous industrial and municipal waste water sludges and organic fines generated in the treatment of mixed municipal solid waste (MSW).

The treatment process, depending on the nature of the source material, can involve initial screening to remove contaminants, blending with bulking agents, composting in separate enclosed tunnels and open bays, maturation in windrows and post treatment to remove impurities.

Due to the modular lay-out, the tunnels/bays can be operated independently, which provides flexibility in treating the different organic waste streams. The finished product can, depending on quality, either be used for horticultural and agricultural purposes, or as landfill cover.

Site Layout/Buildings & Hardstanding

Waste reception, blending and in-vessel composting is carried out in Shed No 1, which occupies an area of 1,700 square meters (m^2). Maturation is carried out in Sheds 2 and 3, which occupy 2,840 m^2.

The site office is a portacabin located at the north-west corner of Shed 1. A small canteen/changing room is located to the south west of Shed 1. There is an open fronted shed to the west of the canteen, which is used for the storage of green waste bulking materials and shredded wood. A Container located at the northern side of the canteen is used to store lubricating/hydraulic oil and the power washer.

The covered yard to the east of Shed 1 and the open yards to the west of Shed 1 and west of the cattle sheds are paved with concrete. The biofilter is located on the southern side of Shed 1 and is accessed by an unpaved road running along the southern side of Sheds 1 and 2.

Composting Process

Waste Reception Areas

In the reception area, the MSW fines may, depending on composition be shredded to enhance the composting process. The source segregated household and catering organic waste may be screened to remove contaminants. The wastewater treatment sludges are mixed with a bulking agent e.g. shredded green waste to improve porosity.

Thermophilic Stage

The materials are transferred from the reception area to the vessels using the telescopic loaders. The material placed in each of the vessels is assigned an individual batch number to allow performance monitoring during the treatment stages and ensure the maintenance of accurate records.

Five (5 No.) temperature probes are placed within the waste mass before the sheeting is placed over the top of the vessel. There is a computerised process control system, located in the site office, which records the temperature in each vessel to ensure that optimum composting conditions are maintained. In addition to the constant temperature monitoring, oxygen levels are monitored daily using a hand held probe. The moisture level is assessed either visually or using a hand held moisture meter. In order to comply with the Animal By-Products Regulations a 'two barrier' system is operated in the MSW/kitchen/catering waste processing area. The objective is to ensure a maximum particle size of 40mm and achieve a sustained temperature of 60°C over two separate 48 hour periods.

The MSW fines as delivered typically have a particle size less than 40mm. Large items are manually removed before the materials are composted. Maintaining the temperature at 60°C for the two separate time periods is done by composting the same batch in two different vessels.

In the first vessel, or Barrier 1, the process usually takes one week. When completed, the material is removed to a second vessel-Barrier 2-where it is thoroughly mixed and again composted until the temperature requirements are met. To avoid cross contamination different loaders and buckets are used to move the materials into and out of the vessels.

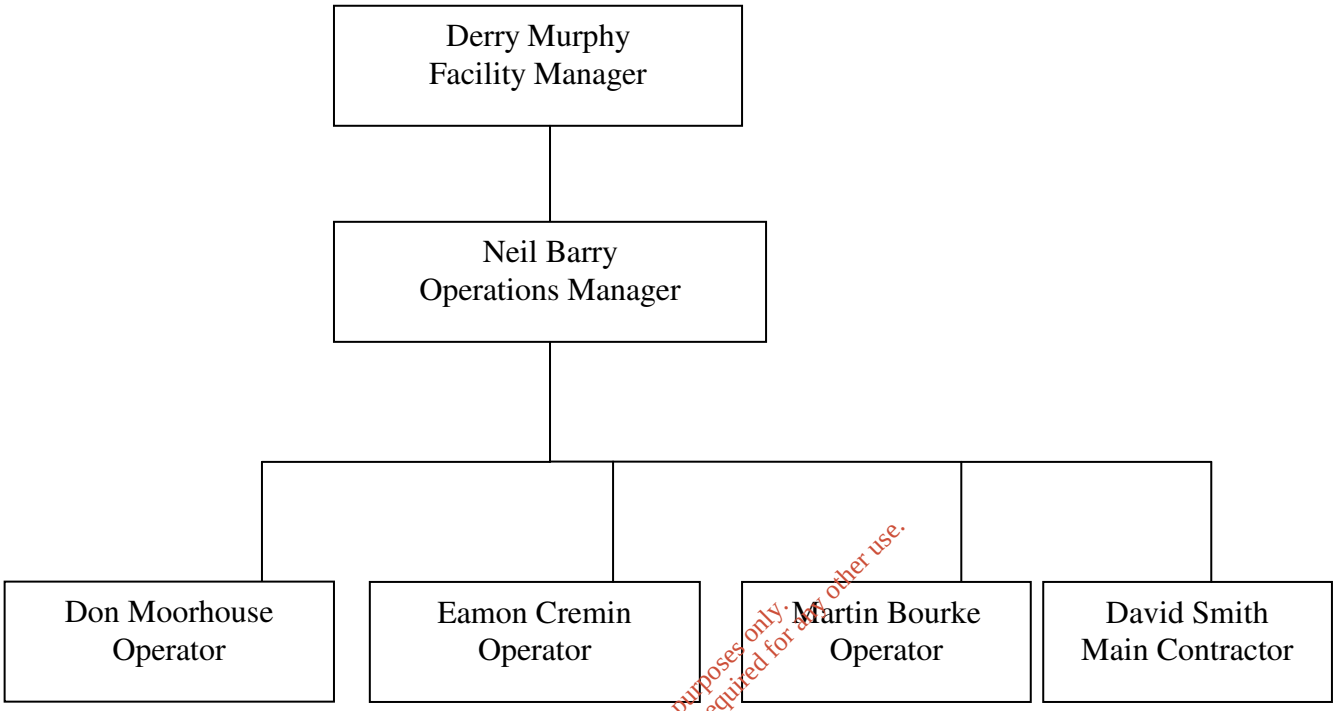
Mesophilic Stage

When the material has completed the thermophilic stage it is removed from the vessel and transferred to Sheds 2 and 3 where it is formed into windrows. Depending on the source of the materials it may be blended with shredded green waste to improve porosity. The windrows are formed using the telescopic loader and are turned as required using either the specialized turner or the loader.

Temperature, oxygen and moisture content are regularly monitored and moisture and the turning regime amended as required to ensure optimum conditions. The mesophilic stage can take up to 6 weeks.

When complete the compost may, depending on the nature of the source material, be screened to remove contaminants. These are stored on-site in Shed 3 pending consignment to off-site disposal/treatment facilities.

1.2.2 Organisational Chart 2015



Section 2

DATA

2.1 WASTE MANAGEMENT

TABLE 2.1.1 – ANNUAL WASTE INTAKE 2015		
Waste Type	EWC Code	2015 Intake Tonnes
Waste from the mechanical treatment of wood waste	19 12 07	118.45
Garden and park waste from municipal sources	20 02 01	387.64
Organic Fines	19 12 12	23924.258
Edible oils and fats	20 01 25	1.12

2.2 ENVIRONMENTAL MONITORING

2.2.1 Groundwater Results 2015

Table 2.2.1 / 2 – Groundwater Analysis Results 2015

2.2.1 GENERAL CHEMICAL ANALYSIS RESULTS			
Parameter	**GW1**	**GW2**	**GW3**
Chloride (mg/l)	75	130	33
Conductivity (uS/cm)	589	799	284
Nitrate (mg/l)	3.14	0.27	8.48
pH	6.8	6.7	6.4
Total Nitrogen (mg/l)	4.1	<1	11.1
Ammonia (mg/l)	0.11	0.088	0.089

TABLE 2.2.2 - VOC ANALYSIS USEPA 524.2			
VOC's (µg/l)	**GW1**	**GW2**	**GW3**
Dichlorodifluoromethane	<10	<10	<10
Chloromethane	<0.5	<0.5	<0.5
Vinyl chloride	<0.5	<0.5	<0.5
Bromomethane	<0.5	<0.5	<0.5
Chloroethane	<0.5	<0.5	<0.5
Trichlorofluoromethane	<0.5	<0.5	<0.5
1,1-Dichloroethene	<0.5	<0.5	<0.5
Dichloromethane	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	<0.5	<0.5	<0.5
1,1-Dichloroethane	<0.5	<0.5	<0.5
2,2-Dichloropropane	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	<0.5	<0.5	<0.5
Bromochloromethane	<0.5	<0.5	<0.5
Chloroform	<1	<1	<1
1,1,1-Trichloroethane	<0.5	<0.5	<0.5
Carbon Tetrachloride	<0.5	<0.5	<0.5
1,1-Dichloropropene	<0.5	<0.5	<0.5
Benzene	<0.1	<0.1	<0.1
1,2-Dichloroethane	<0.1	<0.1	<0.1
Trichloroethene	<0.1	<0.1	<0.1
1,2-Dichloropropane	<0.5	<0.5	<0.5
Dibromomethane	<0.5	<0.5	<0.5
Bromodichloromethane	<2.0	<2.0	<2.0
Toluene	<0.5	<0.5	1
1,1,2-Trichloroethane	<2.0	<2.0	<2.0

TABLE 2.2.2 - VOC ANALYSIS USEPA 524.2 (CONTINUED)			
VOC's (µg/l)	**GW1**	**GW2**	**GW3**
1,1,1,2-Tetrachloroethane	<2.0	<2.0	<2.0
m,p-Xylene	<0.5	<0.5	<0.5
Styrene	<2.0	<2.0	<2.0
Isopropylbenzene	<0.5	<0.5	<0.5
Propylbenzene	<0.5	<0.5	<0.5
2-Chlorotoluene	<0.5	<0.5	<0.5
4-Chlorotoluene	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	<0.5	<0.5	<0.5
P - Isopropyltoluene	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	<0.5	<0.5	<0.5
Naphthalene	<2.0	<2.0	<2.0
1,3-Dichloropropane	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	<2.0	<2.0	<2.0
trans-1,3-Dichloropropene	<2.0	<2.0	<2.0
Dibromochloromethane	<1.0	<1.0	<1.0
Chlorobenzene	<0.5	<0.5	<0.5
Ethyl Benzene	<0.5	<0.5	<0.5
o-Xylene	<0.5	<0.5	<0.5
Bromoform	<1.0	<1.0	<1.0
1,2,3-Trichloropropane	<2.0	<2.0	<2.0
Bromobenzene	<0.5	<0.5	<0.5
Tert-Butylbenzene	<0.5	<0.5	<0.5
Sec-Butylbenzene	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	<0.5	<0.5	<0.5
1,2- Dibromo-3-chloropropane	<2.0	<2.0	<2.0
Hexachlorobutadiene	<5.0	<5.0	<5.0
1,2,3-Trichlorobenzene	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	<0.5	<0.5	<0.5
Tetrachloroethene	<0.1	<0.1	<0.1
n-butylbenzene	<0.5	<0.5	<0.5
Acetone	<2	<2	<2
Methyl Iodide	<0.5	<0.5	<0.5
Carbon disulphide	<0.5	<0.5	<0.5
Allyl Chloride	<0.5	<0.5	<0.5
Nitrobenzene	<0.5	<0.5	<0.5
Propanenitrile	<10	<10	<10
MtBE	<0.5	<0.5	<0.5
2 Butanone	<5	<5	<5
2 Hexanone	<1	<1	<1
Hexacloroethane	<5	<5	<5
1,2,4-Trichlorobenzene	<0.5	<0.5	<0.5

2.2.2 Dust Monitoring 2015

TABLE 2.2.3 - DUST RESULTS 2015			
Month	**D1** (mg/m^2/day)	**D2** (mg/m^2/day)	**D3** mg/m^2/day)
July	64	141	184
September	30	40	70
November	112	153	194

2.2.3 Biofilter Monitoring 2015

TABLE 2.2.4 MONITORING RESULTS FROM THE BIOFILTER MEDIA 27/03/15	
Parameter	Result
% Moisture	54.2
pH	8.1
Ammonia (mg/kg)	6.2
Total Viable Counts @ 30ºC (Solid) cfu/g	9.5 x 10^5

TABLE 2.2.5 MONITORING RESULTS FROM THE BIOFILTER MEDIA 29/09/15	
Parameter	Result
% Moisture	74.9
pH	7.7
Ammonia (mg/kg)	132.47
Total Viable Counts @ 30ºC (Solid) cfu/g	640

TABLE 2.2.6 BIOFILTER INLET EMISSION LEVELS 27/03/15		
Parameter	Inlet 1 Concentration (ppm)	Inlet 2 Concentration (ppm)
Hydrogen Sulphide	<0.2	<0.2
Ammonia	20	10
Mercaptans	0.5	<0.5
Amines	Negative	Negative

TABLE 2.2.7 BIOFILTER OUTLET EMISSION LEVELS 27/03/15	
Parameter	Inlet Concentration (ppm)
Hydrogen Sulphide	<0.2
Ammonia	<5
Mercaptan	<0.5
Amines	Negative

TABLE 2.2.8 BIOFILTER INLET EMISSION LEVELS 29/09/15		
Parameter	Inlet 1 Concentration (ppm)	Inlet 2 Concentration (ppm)
Hydrogen Sulphide	<0.2	<0.2
Ammonia	15	20
Mercaptans	0.5	<0.5
Amines	Negative	Negative

TABLE 2.2.9 BIOFILTER OUTLET EMISSION LEVELS 29/09/15	
Parameter	Inlet Concentration (ppm)
Hydrogen Sulphide	<0.2
Ammonia	<5
Mercaptan	<0.5
Amines	Negative

2.2.4 PM10 Monitoring 2015

TABLE 2.2.10 RESULTS OF PM_{10} MONITORING 2015			
Sampling Location	Date	Weight Gain (g)	Concentration ($\mu g/m^3$)
Location 1	03/06/15 - 04/06/15	0.003	0.83
Location 1	14/12/15 - 15/12/15	<0.001	< 0.1

2.2.5 Odour Monitoring 2015

TABLE 2.2.11 METEOROLOGICAL CONDITIONS Q2 / Q4		
Parameter	**Q2 2015**	**Q4 2015**
Wind speed (km/hr)	14-18	18-22
Wind direction	Southerly	South Westerly

TABLE 2.2.12 ODOUR SAMPLING RESULTS Q2 2015		
Locations	**On site observations**	**Results**
OD1 Biofilter	No distinct odour	57 ou_E/m^3
OD2 300m downwind of site	No distinct odour	53 ou_E/m^3

TABLE 2.2.13 CHEMICAL ANALYSIS Q2 2015				
Sample	Hydrogen Sulphide	Ammonia	Mercapten	Amines
OD 01	<0.2	<5	<0.5	Negative
OD 02	<0.2	<5	<0.5	Negative

TABLE 2.2.14 ODOUR SAMPLING RESULTS Q4 2015		
Locations	**On site observations**	**Results**
OD 01 At biofilter unit	No Distinct Odour	69 ou_E/m^3
OD 02 300 meters downwind	No Distinct Odour	45 ou_E/m^3

TABLE 2.2.15 CHEMICAL ANALYSIS Q4 2015				
Sample	Hydrogen Sulphide	Ammonia	Mercapten	Amines
OD 01	<0.2	<5	<0.5	Negative
OD 02	<0.2	<5	<0.5	Negative

2.2.6 Noise Monitoring 2015

TABLE 2.2.16: DAY-TIME NOISE MEASUREMENT RESULTS 15:00 to 17:00					
Location / Measurement No.	Measurement Period (min)	L_{eq} dB(A)	L_{10} dB(A)	L_{90} dB(A)	$L_{F\,Max}$ dB(A)
NSL No1	30	49	53	40	80
NSL No2	30	58	55	43	85
NSL No3	30	47	50	39	74

TABLE 2.2.17: EVENING NOISE MEASUREMENT RESULTS 19:00 to 19:45					
Location / Measurement No.	Measurement Period (min)	L_{eq} dB(A)	L_{10} dB(A)	L_{90} dB(A)	$L_{F\,Max}$ dB(A)
NSL No1	15	35	40	32	46
NSL No2	15	37	44	33	50

2.2.7 Surface Water 2015

Table 2.2.18 - Surface water Results 2015 for SW1			
Sample ID	BOD (mg/l)	Suspended Solids (mg/l)	Ammonia (mg/l)
SW1 28/01/15	<5	<20	0.53
SW1 27/10/15	1	<13	0.36

2.2.8 Non-Compliances 2015

Table 2.2.19 Details of Reported Non-compliance 2015	
Date	**Non-compliance**
25/03/15	On site visit of 25/03/2015 it was noted that the concrete surface of the waste reception yard was cracked in several places and did not appear to be impermeable.
25/03/15	On the site visit of 25/03/2015 it was noted that the above ground contaminated storm water storage tank located in the reception yard was not fitted with a high liquid level alarm. Also the high level liquid alarm fitted to the underground contaminated storm water storage tank adjacent to the on-site oil interceptor was not working on the day of the site visit.
25/03/15	On site visit of 25/03/2015, it was noted the Licensee has not submitted a suitable fire-water risk assessment report to date.

2.3 RESOURCE USAGE

The summary details of energy and water usage at the plant for the period January 2015 to December 2015 is detailed in Table 2.31 below.

Resources	Quantities
Diesel	59715 L
Electricity	154700 KwH
Hydraulic, Transmission & Engine Oil	1800 L
Detergent	20 L
Anti Freeze	100 L

2.4 ENVIRONMENTAL INCIDENTS AND COMPLAINTS

2.4.1 Incidents report for the period January 2015 to December 2015.

Incident	Incident Category	Start date	Finish date	Likely Cause
Exceedance of trigger level for S.S @ SW1	1	5/11/15	6/11/15	Inadequate Infrastructure
Exceedance of trigger level for Ammonia	1	26/11/15	1/12/15	Inadequate Infrastructure

2.4.2 There were no complaints to report for the period January 2015 to December 2015.

2.5 ENVIRONMENTAL SPENDING

The itemised spend on environmental issues at Miltown Composting Limited is listed below.

January 2015 – December 2015	**€**
EPA Fee's	9700
Waste Licence management	27,978
Planning Fees and Expenses	18,864
Total Spend	56,542

2.6 ENVIRONMNETAL TRAINING

Copy of environmental training record included in Attachment 2.

Environmental Management Programme for 2016.

Review of Objectives and Targets for the period January to December 2015

Tables EMP 1.1 to 1.5 reviews the Objectives and Targets set for 2015. A number of the listed Objectives and their subsequent targets are cyclical as the company attempts to achieve continuous environmental improvement.

Tables EMP 2.1 to 2.5 set out the Objectives and Targets for 2016. A number of the listed Objectives and their subsequent targets are cyclical as the company attempts to achieve continuous environmental improvement.

MILTOWN COMPOSTING LTD
ENVIRONMENTAL OBJECTIVES AND TARGETS 2016

Item No	OBJECTIVE	TARGET	RESPONSIBLE PERSON
1	Water Management	• Maintain checklist for alarms and daily records • Carry out construction of covering for final unroofed yard • Update application for fire water retention facility following RFI in 2015	D.Murphy
2	Energy Management	• Carry out Energy Audit. • Investigate potential for Anaerobic Digestion (AD) Plant. • Study possibility of installing a CHP plant in conjunction with AD plant.	D.Murphy
3	E.M.S	• Maintain EMS documentation. • Update procedures to reflect operational and control change. • Maintain EMP by means of Bi-annual assessment.	D.Murphy
4	Licence Management	• Undertake a desktop Hydrogeological Study. • Assess nuisance control procedures and practices. • Undertake all environmental monitoring as per licence.	D.Murphy
5	Fugitive Emissions	• Assess all flanges and valves used to transport material other than water. • Determine scope of catchment system for any leaks identified in assessment	D.Murphy

Water Pollution Prevention EOT 1.1

Objective	Target	Target Date	2015 Review	Person Responsible
Water Management	Maintain checklist for alarms and daily records	Continuous 2015	Complete	Derry Murphy
	Prepare planning application for covering final unroofed yard	Q1 2015	Complete Planning granted on 16/09/15	Derry Murphy
	Prepare application for fire water retention facility	Q1 2015	Complete EPA have requested further information	Derry Murphy

Energy management EOT 1.2

Objective	Target	Target Date	2015 Review	Person Responsible
Energy Management	Carry out Energy Audit	Q2 2015	Energy records maintained move audit to 2016	Derry Murphy - OCM
	Investigate potential for Anaerobic Digestion (AD) Plant.	2015	On-Going Site management are continuing to asses potential for AD plant	Derry Murphy
	Study possibility of installing a CHP plant in conjunction with AD plant.	2016	Not due until 2016	Derry Murphy

Environmental Management System EOT 1.3

Objective	Target	Target Date	2015 Review	Person Responsible
E.M.S	Maintain EMS documentation.	2015	Complete	Derry Murphy
	Update procedures to reflect operational and control change.	Continuous 2015	Complete	Derry Murphy
	Maintain EMP by means of Bi-annual assessment.	June / Dec 2015	Complete	Derry Murphy

Licence Management EOT 1.4

Objective	Target	Target Date	2015 Review	Person Responsible
Licence Management	Prepare proposal for and finalise Hydrogeological Study.	2015	Move to 2016	Derry Murphy
	Assess nuisance control procedures and practices.	Continuous 2015	On-Going	Derry Murphy
	Undertake all environmental monitoring as per licence.	2015	Complete	Matrix Env

Incoming waste / Finished product EOT 1.5

Objective	Target	Target Date	2015 Review	Person Responsible
Incoming waste / Finished product	Investigate new waste types for inclusion in compost process	2015	No new wastes added in 2015	Derry Murphy
	Research new sustainable outlets for the finished products	2015	Continuously researching new outlets during 2015	Derry Murphy

Water Pollution Prevention EOT 2.1

Objective	Target	Target Date	Method
Water Pollution Prevention	Maintain checklist for alarms and daily records	Continuous 2016	Fill in the daily checklist and site alarms
	Carry out construction of covering for final unroofed yard	Q2 /Q3 2016	Construct roof over final uncovered yard
	Update application for fire water retention facility following RFI in 2015	Q1 2016	Send on RFI details to EPA.

Energy Management EOT 2.2

Objective	Target	Target Date	Method
Energy Management	Carry out Energy Audit	Q3 2016	Undertake Energy Audit as per EPA requirements.
	Investigate potential for Anaerobic Digestion (AD) Plant.	2016	Carry out a review of AD plants and the feasibility of installing a plant at the Milltown Compost Site Also assess renewable heat incentives
	Study possibility of installing a CHP plant in conjunction with AD plant.	2016	Further to the review of the AD plant a further review of a CHP plant to be carried out.

Environmental Management System EOT 2.3

Objective	Target	Target Date	Method
E.M.S	Maintain EMS documentation.	Q2 2016	Review all EMS procedures
	Update procedures to reflect operational and control change.	Continuous 2016	Continuous review of procedures to reflect any changes which occur in terms of site operations or processes.
	Maintain EMP by means of Bi-annual assessment.	June / Dec 2016	Assess biannually to ensure targets are achieved.

Licence Management EOT 2.4

Objective	Target	Target Date	Method
Licence Management	Undertake desk-top Hydrogeological Study.	Q1 2016	Carry out a desktop hydrogeological study.
	Assess nuisance control procedures and practices.	Continuous 2016	Review procedures. Ensure 6 weekly visits of nuisance control company occurs.
	Undertake all environmental monitoring as per licence.	2016	1 x Noise Survey 2 x Odour Assessment 3 x Dust Monitoring 2 x Biofilter Analysis 1 x Bioaerosol Study 2 x PM10 Survey

Fugitive Emissions EOT 2.5

Objective	Target	Target Date	Method
Fugitive emissions	Assess all flanges and valves used to transport material other than water	Q2 2016	Visually assess all flanges and valves on site used
	Determine scope of catchment system for any leaks identified in assessment	Q4 2016	Base on finding of leak assessment

Appendix 1

PRTR Scans

Environmental Protection Agency

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2015

1. FACILITY IDENTIFICATION

Parent Company Name	Miltown Composting Systems Limited
Facility Name	Miltown Composting Systems Limited
PRTR Identification Number	W0270
Licence Number	W0270-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Miltownmore
Address 2	Fethard
Address 3	
Address 4	
	Tipperary
Country	Ireland
Coordinates of Location	-7.76889 52.45236
River Basin District	IESE
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Derry Murphy
AER Returns Contact Email Address	derry@miltowncomposting.ie
AER Returns Contact Position	Site manager
AER Returns Contact Telephone Number	0874125625
AER Returns Contact Mobile Phone Number	0874125625
AER Returns Contact Fax Number	
Production Volume	0.0
Production Volume Units	
Number of Installations	1
Number of Operating Hours in Year	3648
Number of Employees	5
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?	
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE Guidance on waste imported/accepted onto site

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

4.1 RELEASES TO AIR

Link to previous years emissions data

| PRTR# : W0270 | Facility Name : Miltown Composting Systems Limited | Filename : Copy of W0270_2015.xls | Return Year : 2015 | 29/3/2016 15:14

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						
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	M	OTH	Dreager Tubes	0.0	0.0	0.0	0.0
220	**Mercaptans**	M	OTH	Dreager Tubes	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

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: Miltown Composting Systems Limited

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	

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	19 05 99	No	16796.36	stabilised wastes other than those mentioned in 19 03 04	R10	M	Weighed	Offsite in Ireland	Bord na Mona Drehid landfill,W0203-03	Killinagh Lower Upper,"","Carbury,Co. Kildare,Ireland		
Within the Country	**19 05 99**	**No**	4152.02	wastes not otherwise specified	R10	M	Weighed	Offsite in Ireland	Monaghan CoCo Scotch Corner landfill,W020-02	Letterbane,Annyalla,Castlebl aney,Co. Monaghan,Ireland		

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

Appendix 2

Training Records

Final Version

Task/Work Practice	**Specific Training Provided** *(In-House/Outside Agency/Date)*	**Name of Employee**
Emergency Response Procedure update awareness with staff	In House with Facility Manager DERRY MURPHY 9/1/2015	Martin Bourke Neil Brady Don Murphy Eamonn Cremin.
Compost Facility Management Course	CRE Feb/March 2015	David Smith
Anaerobic Digestion 'Practical digester biology'	Aberystwyth University Dundee (IBBE) 6-8 July 2015	Derry Murphy
Staff Refresher of License Requirements SOP's MC01 – MC13	In House with Facility Manager DERRY MURPHY 21st & 22nd July 2015.	Martin Bourke Neil Brady Don Murphy Eamonn Cremin.
Emergency Response Procedure update awareness with All staff	In House with Facility Manager DERRY MURPHY 28/8/2015	Martin Bourke Neil Brady Don Murphy Eamonn Cremin
Staff Refresher on License Requirements SOPs MC01–MC13	In House with Facility Manager DERRY MURPHY 10/11/2015	Martin Bourke Neil Brady Don Murphy Eamonn Cremin.

Attachment B.6

Odour Management Plan

Odour Management Plan

The measures to mitigate odours at the site are:

1. **Operational measures;**
2. **Management of complaints;**
3. **Monitoring of odour emissions**

1. Operational measures

Effective operational management, including monitoring and control of key process parameters help control the formation of odours and reduce emissions of odour

- Control of waste input characteristics (e.g. C:N ratio, particle size);
- Control of water content;
- Control of air diffusion through the waste;
- Control of temperature

The above criteria are controlled through the Standard Operating Procedures (SOP's) listed below

- Standard Operating Procedure #1: Waste Acceptance
- Standard Operating Procedure #2: Feedstock Preparation
- Standard Operating Procedure #3: Pre-composting
- Standard Operating Procedure #4: ABP Processing
- Standard Operating Procedure # 8: Hygiene, Cleaning & Maintenance
- SOP MC 03 CLEANING AND HYGEINE PROCEDURE
- SOP MC04 LOADING/UNLOADING OF ABP SANITISATION BAYS
- SOP MC06 LEACHATE HANDLING PROCEDURE

2. Management of Complaints

Complaints are managed through:

- CORRECTIVE ACTION PROCEDURES (Cap-1)
- NON CONFORMANCE AND CORRECTIVE ACTION MC07

Which in the case of a single odour emission events includes:

o name, address and telephone number of the complainant;
o date and time of the complaint;
o subject of the complaint;
o operations carried out at the time of the complaint;
o weather conditions (e.g. temperature, wind direction, rainfall);

o operational measures due to the complaint;
o communication with the complainant: an immediate reply is given to the complainant.

3. Monitoring of odour emissions

Monitoring of odour emissions includes the frequency and location of the measurements as well as the measurement method.

In relation to the monitoring of emissions to air and odour monitoring at the facility the Agency has agreed to the following:-

- Odour monitoring at the biofilters by olfactometric measurement on a bi-annual basis, instead of quarterly as required in Table C.1.2 of the licence.
- Odour impact assessment at the facility in accordance with Air Guidance Note 5 (AG5) on a quarterly basis;
- Odour assessment of the bed media on a daily basis in accordance with Table C.1.3 of the licence (recorded by site operators in the Daily Inspection Log)
- Monitoring of biofilter inlet and outlet gas on a bi-annual basis in accordance with Table C.1.3 of the licence.

Attachment B.7

Accident Prevention Procedure

MILTOWN COMPOSTING LTD	Title: Accident Prevention Procedure Code: APP Issue Date: 8th July 2016 Issued by: DM Revision: 0 Revised by: Date: Site Location: Miltownmore, Fethard, Co. Tipperary

Accident Prevention Procedure (APP)

APP Requirement

9.2 The licensee shall ensure that a documented Accident Prevention Procedure is in place that addresses the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.

1. Objectives

The APP shall identify all hazards and risks on site and ensure the necessary measures are taken to prevent accidents with a possible adverse impact on the environment and to limit their consequences when accidents do occur.

2. Responsibility

- Plant Manager
- Site Operators

3. Procedure - identify all hazards and risks

1. **Fire – Waste storage**
2. **Fire – Plant**
3. **Fire - Electrical**
4. **Spillage – Leachate and Contaminated Water Management**

3.1 Fire - Waste Storage

- Inspect composting and curing piles to ensure adequate moisture – record in Daily Inspection log
- Ensure adequate separation of compost, oversized, erratic and woodchip piles – record in weekly inspection log
- Inspect Static Piles/Windrow's to ensure compost, oversized and erratic piles are not compacted – see SOP MC04 and ABP SOP #5 (*Never drive on the maturing compost when turning the piles to prevent compaction)*, see also the **Safety Statement, 3. Fire Hazards** Check erratic's weekly ensuring material is not compacted, remove the longest stored material first, Never drive on erratic's and turn at least monthly. Record in weekly inspection log.

3.2 Fire – Plant

- Ensure safe storage of combustible and flammable materials as per Weekly inspection Log
- Ensure the Prevention of mobile sources of ignition in areas with combustible and flammable materials – see Safety Statement - 5. Electrical equipment / tools
- Ensure Loaders, tractor and compressor are cleaned and maintained as per Cleaning and Maintenance Log.
- Ensure all fan's/blowers are working properly and free of debris as per Weekly Inspection Log
- Ensure the screener is inspected daily and cleaned as necessary as per Cleaning and Maintenance Log
- Ensure Fire extinguishers are in place and operational as per Weekly Inspection Log and Fire Safety Register

3.3 Fire – Electrical

- Ensure Co2 fire extinguisher is in place and operational as per Weekly Inspection Log and Fire Safety Register

3.4 **Spillage – Leachate and Contaminated Water Management**

- Ensure All pumps sumps, storage tanks from which spillage of environmentally significant materials might occur are fitted with high liquid level alarms and checked weekly - see Weekly Inspection Log
- Ensure the underside and wheels of vehicles delivering waste or other materials into the reception area shall be washed and disinfected upon departure from the building - See SOP MC03 Cleaning and Hygiene Procedure and signed off by the driver – see Raw Material Intake Log :
- Ensure the Integrity of contaminated water over-ground pipes – see Weekly Inspection Log
- Ensure the Integrity of Bunds for the Screener motor and hydraulic hoses– see Weekly Inspection Log
- Ensure an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility – see Weekly Inspection Log
- Ensure Only Skilled operatives operate pumps, Tractors and Slurry tankers, Never leave operating machinery unattended - See Safety Statement and Cleaning and Maintenance Log

4. Any accidents/incidents that do occur on site should be fully investigated. The investigation should include the following:

- Documentation of what occurred
- The root cause of the event
- A summary of the response actions taken
- A summary of the impact on the environment
- Identification of lessons regarding prevention of reoccurrence and in terms of response to future events.
- The APP should be reviewed after any accident/incident to ensure it is still fit for purpose

5. In the event that an emergency situation or accident is also a notifiable incident

Refer to the **Incident Notification Procedure**

And the **EMERGENCY RESPONSE PROCEDURE**

Reference Documents

- Waste licence W0270-01
- **EPA 2016 Guidance to Licensees on the Preparation of Accident Prevention Procedures and Emergency Response Procedures**
- EPA Guidance to Licensees/COA holders on the Notification, Management and Communication of Environmental Incidents
- Safety Statement 2016-2018
- Weekly inspection Log
- Cleaning and Maintenance Log.
- Daily Inspection log
- Fire Safety Register
- SOP MC04 : Leachate Handling Procedure
- SOP MC03 Cleaning and Hygiene Procedure
- SOP #5: Quarantine, Maturation & Screening
- Raw Material Intake Log

Attachment B.8

Emergency Response Procedure

EMERGENCY RESPONSE PROCDURE

MILTOWN COMPOSTING SYSTEMS
MILLTOWNMORE, FETHARD, CO. TIPPERARY
EPA LICENCE NO W0270-01
Phone 052-613 0815 / 087 4125625 / 086 7707372

In the event of any emergency situation developing on site which may create an environmental risk, make contact with the following;

DERRY MURPHY (Facility Manager)	**087 4125625**
NEIL BARRY (Deputy Facility Manager)	**086 7707372**

In the event of an incident at the facility with the potential to impact surface water discharges, direct runoff to the leachate tanks, if full redirect the runoff to the contaminated water tanks, if further storage is needed, Call Tom Shanahan of Spotless Drains, Chris Molloy of Molloy Waste and Martin Lehane of Lehane Environmental who will provide vacuum tankers as a temporary storage measure in order to contain all runoff, until such time as the collected runoff can be transported to the nearest waste water treatment plant.

<u>If vacuum tanker equipment is required contact</u>

TOM SHANAHAN (Spotless Drains)	**Phone 086 2550144**
Chris Molloy (Molloy Waste)	**Phone 087 9794237**
MARTIN LEHANE (Lehane Environmental)	**Phone 021 4351020**

In the event of a breakdown of the air abatement system which could cause emissions to air contact Redwood Systems at

Monique O Brien	**086 0460774**
Fergus O Brien	**086 2460006**
Liam O Brien	**01 4596756**

MEDICAL ASSISTANCE; Dr CARMEL CONDON;	**052 613 1631**
FIRE BRIGADE;	**999 or 112**
GARDA SIOCHANA;	**052 613 1202**

EMERGENCY RESPONSE PROCDURE

If Excavating machinery are required, make contact with

DAVE SMITH **Phone;** **086-300 6953**

If Loaders are required to move feedstock, overs or compost contact

NEIL BARRY **Phone;** **086-7707372**

If Structural damage has occurred to any building on site, contact

MICHAEL McENIRY **Phone;** **086-250 0332**

As per condition 11.6 of licence and SOP MC11 Incident Notification Procedure

1.NOTIFY THE ENVIRONMENTAL PROTECTION AGENCY (EPA)

By phone and through EPA portal EDENIRELAND (Report Incident)
Kilkenny; Phone; 056 779 6700
Phone Lo Call; 1890 335599

2. NOTIFY TIPPERARY COUNTY COUNCIL

During Office Hours ; Phone 0761065000 Fax 067 33134
Outside office hours ; Phone 1890 923948

3. NOTIFY THE DEPT. OF AGRICULTURE, FOOD & MARINE

Phone ; 062 34900 **Fax ; 062 31406**

4. NOTIFY INLAND FISHERIES IRELAND, CLONMEL

Phone ; 052 6180055 **frank.odonoghue@fisheriesireland.ie**

5. NOTIFY THE HEALTH AND SAFETY AUTHORITY

Phone ; 1890 289389 **Fax ; 01 6147125**

IN THE EVENT OF ACTIONS UNDERTAKEN TO RESOLVE ANY OF THE ABOVE, YOU ARE TO RECORD SUCH ACTION UNDER THE HEADING "EMERGENCY ACTION REPORTS" IN THE DAILY REGISTER KEPT IN THE FACILITY OFFICE.