

LIST OF APPENDICES

Appendix 1.1	Consultation Letter Responses
Appendix 2.1	Current Waste Licence
Appendix 2.2	Notes on Infrastructure
Appendix 2.3	Wastewater Treatment System
Appendix 2.4	Annual Environmental Reports
Appendix 2.5	Landscaping Proposal Previously submitted to Meath County Council
Appendix 6.1	Bibliography of the Ecological Assessment
Appendix 6.2	Criteria for assessing Site Evaluation
Appendix 7.1	Southern Pumps Ltd. Borehole Logs
Appendix 7.2	Trial Pit Logs
Appendix 8.1	Waterbody Report for River Dee
Appendix 8.2	Groundwater/Surfacewater Quality Data
Appendix 8.3	Design of Storm Water Attenuation and Table 6.3 of GDSDS
Appendix 9.1	Meteorological File for Dispersion Modelling
Appendix 9.2	Windrose Clones
Appendix 12.1	Reference Sources for the Cultural and Archaeological Heritage Assessment
Appendix 12.2	Details of RMP Sites
Appendix 12.3	Topographical Files
Appendix 13.1	Details of Traffic Survey
Appendix 13.2	Origin/Destination Traffic demand tables
Appendix 13.3	PICADY Results

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APPENDIX 1.1
Consultation Letter Responses

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Comhairle Chontae na Mí

Halla an Chontae, An Uaimh, Contae na Mí

Fón: 046 - 9097000

Cuirtear Fáilte Roimh Chomhfhreagras í nGaeilge



Meath County Council

County Hall, Navan, Co. Meath.

Fax No: 046 - 9097001

eMail: info@meathcoco.ie www.meath.ie

Our Ref: EM/FC/Inf.

Your ref: 5361-01

Infrastructure Section

24th March 2009

**Tobin Consulting Engineers,
Block 10-4,
Blanchardstown Corporate Park,
Dublin 15.**

F.A.O: Emma Delaney

Re: Environmental etc.

Dear Ms. Delaney,

With reference to the above and to your correspondence addressed to the Roads Section of Meath County Council, I wish to acknowledge receipt of same.

The matters raised will be considered and a written response will issue as soon as possible.

Yours sincerely,

**Esther Mulvihill
Staff Officer**

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PROJECT REF	ESTIMATING ENGINEERS
Date Received	27 MAR 2009
ISS TO	
ACTION BY	
DATE	

Comhairle Chontae na Mí

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Fón: 046 - 9097000

Cuirtear Fáilte Roimh Chomhfhreagras í nGaeilge



Meath County Council

County Hall, Navan, Co. Meath.

Fax No: 046 - 9097001

eMail: info@meathcoco.ie www.meath.ie

**Infrastructure Section
25th March 2009**

Our Ref: 5361-01

**Emma Delaney
Project Scientist
Tobin Consulting Engineers
Block 10-4
Blanchardstown Corporate Park
Dublin 15**

TOBIN CONSULTING ENGINEERS		
PROJECT NO:		
LE REF:		
27 MAR 2009		
Date Received	ASSIGNED BY	DATE

Re: Environmental Impact Statement (EIS) for the Proposed Extension of a Composting Facility at Kilmainhamwood, Kells, Co Meath

Dear Emma,

I wish to acknowledge receipt of your letter dated 23rd March 2009 in connection with the above.

I have forwarded your letter to our technical staff for their consideration & will revert to you with a response in due course.

Yours sincerely,

Caroline Reilly
Caroline Reilly
Staff Officer
Water Services Section

Ms Emma Delaney
Tobin Consulting Engineers
Block 10-4
Blanchardstown Corporate Park
Blanchardstown
Dublin 15

Environmental Protection Agency
Regional Inspectorate, McCumiskey House
Richview, Clonskeagh Road, Dublin 14, Ireland
An Ghníomhaireacht um Chaomhnú Comhshaoil
Cigireacht Réigiúnach, Teach Mhic Chumascaigh
Dea-Radharc, Bóthar Cluain Sreach
Baile Átha Cliath 14, Éire
T: +353 1 268 0100
F: +353 1 268 0199
E: info@epa.ie
W: www.epa.ie
LoCall: 1890 33 55 99

26th March 2009

Our Ref: W0195-01 /gc03em

Your Ref: 5361-01

Dear Ms Delaney

Further to your letter dated 23/03/2009 in relation to the proposed application to review the waste licence for Kilmainhamwood Compost facility and the scoping of the EIS, I note the following:

- This facility and its emissions are currently regulated through waste licence register No. W0195-01
- The EIS will be assessed once an application for licence review is submitted to the Agency.
- Following review of the EIS, the Agency may request additional information if it is required.

Please quote the above reference in future correspondence in relation to this matter.

Yours sincerely



Eamonn Merriman
Office of Environmental Enforcement

Stamp: RECEIVED
Stamp: 30 MAR 2009
Stamp: DATE

DATE



31st March, 2009.

Ms. Emma Delaney
Tobin Consulting Engineers
Block 10-4
Blanchardstown Corporate Park
Dublin 15

Your Ref: 5361-01

Re: Environmental Impact Assessment (EIS) for the Proposed Extension of a Composting Facility @ Kilmainhamwood, Kells, Co. Meath.

Dear Ms. Delaney,

I wish to acknowledge the receipt of your recent correspondence with this Department concerning the above proposal. The proposal is now being appraised. I will be in contact with you again when this process has been completed.

Yours sincerely,

Joan Stone
Joan Stone
Environment Section

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JOHN CONSOLE ENGINEERS		
PROJECT NO:		
REF:		
Date Received	DELIVERED BY	DATE
03 APR 2009		
<u>ES</u>		



Eastern Regional Fisheries Board

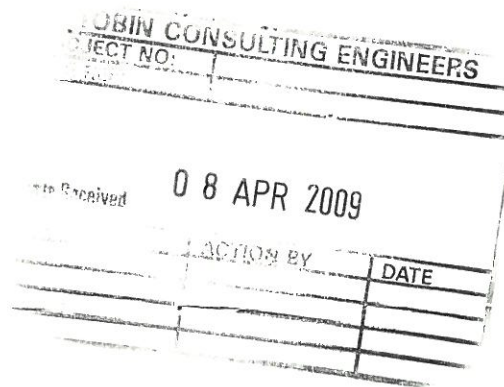
Bord Iascaigh Réigiúnach an Oirthir



Fisheries Ireland

Our Natural Heritage

Emma Delaney,
Tobin Consulting Engineers,
Block 10-4,
Blanchardstown Corporate Park,
Dublin 15.



Our Ref: MK/Dee/1d
Your Ref: 5361-01

7th April, 2009

Re: Environmental Impact Statement (EIS) for the proposed extension of a composting facility at Kilmainhamwood, Kells, Co. Meath – Thornton's Recycling

Dear Ms Delaney,

We refer to your letter dated the 23rd March last in relation to the above mentioned proposal.

Surface water from the site drains towards the River Dee upstream of Newcastle Lough. The River Dee rises near Bailieborough, Co. Cavan and flows in a south easterly direction for approx 50km before entering the sea at Annagassan, Co. Louth. The river holds good stocks of Brown Trout, Sea Trout and Salmon.

The stretch of the river both upstream and downstream of Newcastle Lough contains valuable salmonid spawning and nursery areas. The most recent EPA Biological rating for the river was carried out in 2006. The nearest site is located upstream of the lake near Ervey Crossroads and a Q4 value was recorded.

Salmon migrate through Newcastle Lake to reach spawning areas upstream and to the sea downstream. The lake is a coarse fishery with Pike of specimen size present.

We would be anxious that all surface water from the site is managed in a sustainable manner to minimise any impacts on these valuable fishery habitats.

Please do not hesitate if you require any clarification of the above or further information.

Yours faithfully,

Michaela Kirrane,
Senior Fisheries Environmental Officer

The Eastern Regional
Fisheries Board

15a Main Street
Blackrock
Co. Dublin

T: (01) 278 7022

F: (01) 278 7025

E: info@erfb.ie

www.fishingireland.net



Comhairle Chontae na Mí

Halla an Chontae, An Uaimh, Contae na Mí

Fón: 046 - 9097000

Cuirtear Fáilte Roimh Chomhfhreagras í nGaeilge



Meath County Council

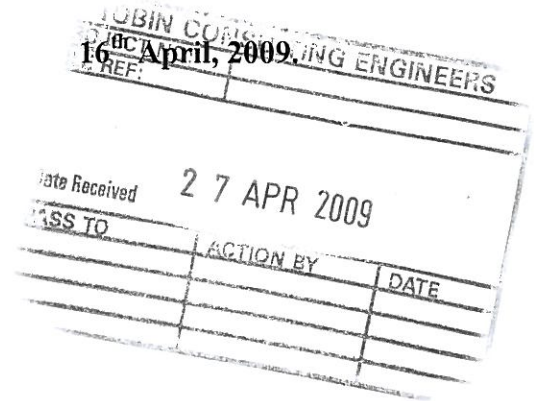
County Hall, Navan, Co. Meath.

Fax No: 046 - 9097001

eMail: info@meathcoco.ie www.meath.ie

Infrastructure Section

Ms. Emma Delaney,
Project Scientist,
Tobin Consulting Engineers,
Block 10-4,
Blanchardstown Corporate Park,
Dublin, 15.



Re: Environmental Impact Statement (EIS) for the Proposed Extension of a Composting Facility at Kilmainhamwood, Kells, Co. Meath.

Dear Ms. Delaney,

Further to your letter dated 23rd March, 2009, regarding the above, the following issues should be noted as part of the preparation of the Environmental Impact Statement:

The EIS should examine the impact of the proposed development on the water supply, foul drainage and surface water drainage of the site and its environs.

Water Supply

Existing water supply

Increased water supply demand which will be brought about by the proposed development

Impact of increased water supply demand on water source

Water supply ameliorative, remedial and reductive measures for both construction and operational phases

Foul Water Drainage

Existing foul water drainage

The receiving environment

Foul water characteristics of the proposed development

Potential/predicted foul drainage impacts during both construction and operational phases

Foul drainage ameliorative, remedial and reductive measures for both construction and operational phases

Surface Water Drainage

Existing surface water drainage

The receiving environment

Surface water characteristics of the proposed development

Potential/predicted surface water drainage impacts during both construction and operational phases

Surface water drainage ameliorative, remedial and reductive measures for both construction and operational phases.

Yours sincerely,



Pat Kinsella,
Senior Executive Engineer.

P.P.

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TAMM CONSULTING ENGINEERS		
PROJECT NO:		
REF:		

1st May, 2009.

Ms. Emma Delaney
Patrick J. Tobin & Co. Ltd
Block 10-4
Blanchardstown Corporate Park
Dublin 15

05 MAY 2009

Date Received

ISS TO	RECEIVED BY	DATE

Your Ref: 5361-01

Re: Environmental Impact Statement (EIS) for the proposed Extension of a Composting Facility @ Kilmainhamwood, Kells, Co. Meath.

Dear Ms. Delaney,

I refer to your correspondence of 23rd March, 2009 concerning an Environmental Impact Statement for the proposed extension of a composting facility at Kilmainhamwood, Kells, Co. Meath.

I suggest that the impact, if any, of the proposed extension on agriculture/agricultural activities in the locality be considered as part of the environment impact assessment conducted for the development. Aspects that should be considered include the following:

- Impact on local water supplies (water quality)
- Impact of increased traffic (safety).
- Impact of noise.
- Impact of vermin (possibility of disease transmission).
- Impact of dust generated.
- Odour impacts.

In order to comply with recent changes to facilities for treatment of animal by-products as required under S.I. No. 252 of 2008 the following should be considered:

- A completed 1st stage application should be submitted together with a site plan of the proposed extended plant detailing the layout, separation areas and flow diagrams for any alteration or extension to the existing Composting Plant.
- The 1st stage application would have to be approved in principle, before any construction work could commence on extending the existing plant.

I would advise that you contact this Department's Animal By-Products Section at Pavilion B, Grattan Business Centre, Portlaoise, Co. Laois – Tel. 057 8694343 regarding these regulations.

Yours sincerely


Michael MacCarthy
Environment Section



APPENDIX 2.1
Current Waste Licence

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This licence was amended on 25th October 2006 under Section 42B(1) for the Waste Management Acts, 1996 to 2005. The details of Amendment A must be read in conjunction with this licence. The amendment document is entitled W0195-01 S42B(1)AmendmentA



Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

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WASTE LICENCE

Waste Licence	195-1
Register No:	
Licensee:	McGill Environmental Systems (Ireland) Limited
Location of Facility:	Ballynalurgan, Kilmainhamwood, Kells, County Meath.

INTRODUCTION

This introduction is not part of the licence and does not purport to be a legal interpretation of the licence.

This licence is for the operation of an indoor composting facility on a Greenfield site at Ballynalurgan, Kilmainhamwood, Kells, Co Meath. McGill Environmental Systems (Ireland) Ltd propose to accept non-hazardous biodegradable wastes (primarily sewage sludge, industrial sludges, household and commercial waste for composting) at this facility.

The quantity of waste to be accepted at the facility is limited to 20,800 tonnes per annum (equivalent to 400 tonnes per week).

Wastes must only be received in fully covered vehicles and can only be unloaded inside the appropriate reception building. All waste will be composted in composting bays with forced aeration from underfloor aeration channels. Air will be extracted from the composting building by means of extraction fans and will be released to the atmosphere via a biofilter system.

The licensee must manage and operate the facility to ensure that the activities do not cause environmental pollution. The licensee is required to carry out regular environmental monitoring and submit all monitoring results, and a wide range of reports on the operation and management of the facility to the Agency.

The licence sets out in detail the conditions under which McGill Environmental Systems (Ireland) Limited will operate and manage this facility.

Table of Contents

	Page No.
DECISIONS AND REASONS FOR THE DECISION	1
INTERPRETATION	1
<i>PART I ACTIVITIES LICENSED</i>	5
<i>PART II CONDITIONS</i>	6
CONDITION 1 SCOPE OF THE LICENCE	6
CONDITION 2 MANAGEMENT OF THE FACILITY	6
CONDITION 3 FACILITY INFRASTRUCTURE	8
CONDITION 4 DECOMMISSIONING	10
CONDITION 5 FACILITY OPERATIONS	10
CONDITION 6 EMISSIONS	12
CONDITION 7 NUISANCE CONTROL	13
CONDITION 8 MONITORING	13
CONDITION 9 CONTINGENCY ARRANGEMENTS	14
CONDITION 10 RECORDS	15
CONDITION 11 REPORTS AND NOTIFICATIONS	16
CONDITION 12 CHARGES AND FINANCIAL PROVISIONS	18
SCHEDULE A : Waste Acceptance	19
SCHEDULE B : Specified Engineering Works	19
SCHEDULE C : Emission Limits	19
SCHEDULE D : Monitoring	20
SCHEDULE E : Standards for Compost Quality	23
SCHEDULE F : Recording and Reporting to the Agency	25
SCHEDULE G : Content of the Annual Environmental Report	26

DECISION & REASONS FOR THE DECISION

Reasons for the Decision

On the basis of the information before it, the Environmental Protection Agency is satisfied that the waste activity, or activities, licensed hereunder in Part I will comply with the requirements of Section 40(4) of the Waste Management Acts, 1996 to 2003.

In reaching this decision the Environmental Protection Agency has considered the application and supporting documentation received from the applicant, all submissions and an objection received from other parties and the reports of its inspectors.

INTERPRETATION

All terms in this licence should be interpreted in accordance with the definitions in the Waste Management Acts, 1996 to 2003, (the Acts), unless otherwise defined in this section.

Aerosol	A suspension of solid or liquid particles in a gaseous medium.
Adequate lighting	20 lux measured at ground level.
Agreement	Agreement in writing.
Annually	At approximately twelve monthly intervals.
Attachment	Any reference to Attachments in this licence refers to attachments submitted as part of the waste licence application.
Application	The application by the licensee for this waste licence.
Appropriate facility	A waste management facility, duly authorised under relevant law and technically suitable.
BAT	Best Available Technique as defined in Waste Management Acts 1996 to 2003.
Bioaerosol	An aerosol of biological particles.
Bi-annually	All or part of a period of six consecutive months.
Biodegradable waste	Any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food, garden waste, sewage sludge, paper and paperboard.
CEN	Comité Européen De Normalisation – European Committee for Standardisation.
Compost	The stable, sanitised and humus-like material rich in organic matter and free from offensive odours, resulting from the composting process of separately collected biodegradable waste, which complies with the quality standards of <i>Schedule E: Standards for Compost Quality</i> , of this licence.
Condition	A condition of this licence.
Consignment Note	All movements of hazardous waste within Ireland must be accompanied by a “C1” consignment note issued by a local authority under the Waste Management (Movement of Hazardous Waste) Regulations (SI No. 147 of 1998). Transfrontier shipment notification and movement/tracking form numbers are required for all exports of waste from, into or through the state under the Waste Management (Transfrontier Shipment of Waste) Regulations (SI No. 149 of 1998).

Construction and Demolition Waste	Wastes that arise from construction, renovation and demolition activities: Chapter 17 of the EWC or as otherwise may be agreed.
Containment boom	A boom which can contain spillages and prevent them from entering drains or watercourses.
Daytime	8.00 a.m. to 8.00 p.m.
Documentation	Any report, record, result, data, drawing, proposal, interpretation or other document in written or electronic form which is required by this licence.
Drawing	Any reference to a drawing or drawing number means a drawing or drawing number contained in the application, unless otherwise specified in this licence.
Emergency	Those occurrences defined in Condition 9.4.
Emission Limits	Those limits, including concentration limits and deposition levels established in <i>Schedule C: Emission Limits</i> of this licence.
European Waste Catalogue (EWC)	A harmonised, non-exhaustive list of wastes drawn up by the European Commission and published as Commission Decision 2000/532/EC and any subsequent amendment published in the Official Journal of the European Community.
Fortnightly	A minimum of 24 times per year, at approximately two week intervals.
Trade Effluent	Drainage from waste processing building, wheelwash, truck wash, ramp, weighbridges vehicle cleaning and ejector trailer parking areas and run-off from hardstanding areas associated with waste processing.
Green waste	Waste wood (excluding processed timber), plant matter such as grass cuttings, and other vegetation.
Hours of Operation	The hours during which the facility is authorised to be operational. The hours of operation of a facility are usually longer than the hours of waste acceptance to facilitate preparatory and completion works, such as the removal and laying of daily cover. Different activities within the facility, such as the civic waste facility, may have different hours of waste acceptance.
Hours of Waste Acceptance	The hours during which the facility is authorised to accept waste. Different activities within the facility, such as the civic waste facility, may have different hours of waste acceptance.
Incident	The following shall constitute an incident for the purposes of this licence: <ul style="list-style-type: none"> a) an emergency; b) any emission which does not comply with the requirements of this licence; c) any exceedence of the daily duty capacity of the waste handling equipment; d) any trigger level specified in this licence which is attained or exceeded; and e) any indication that environmental pollution has, or may have, taken place.
Industrial Waste	As defined in Section 5(1) of the Act.
Inert waste	Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in a way likely to give rise to environmental pollution or harm human health. The total leachability and pollutant content of the waste

and the ecotoxicity of the leachate must be insignificant, and in particular not endanger the quality of surface water and/or groundwater.

Landfill Directive	Council Directive 1999/31/EC.
Licence	A Waste Licence issued in accordance with the Acts.
Licensee	McGill Environmental Systems (Ireland) Ltd.
Liquid Waste	Any waste in liquid form and containing less than 2% dry matter. Any waste tankered to the facility.
Maintain	Keep in a fit state, including such regular inspection, servicing, calibration and repair as may be necessary to adequately perform its function.
Mobile Plant	Self-propelled machinery used for the emplacement of wastes or for the construction of specified engineering works.
Monthly	A minimum of 12 times per year, at approximately monthly intervals.
Municipal waste	As defined in Section 5(1) of the Act.
Night-time	10.00 p.m. to 8.00 a.m.
Noise Sensitive Location (NSL)	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Oil Separator	Device installed according to the draft European Standard prEN 858 (Installations for the separation of light liquids, e.g. oil and petrol).
Recyclable Materials	Those waste types, such as cardboard, batteries, gas cylinders, etc, which may be recycled.
Quarterly	At approximately three monthly intervals.
Sample(s)	Unless the context of this licence indicates to the contrary, samples shall include measurements by electronic instruments.
Sludge	The accumulation of solids resulting from chemical coagulation, flocculation and/or sedimentation after water or wastewater treatment, with greater than 2% dry matter.
SOP	Standard Operating Procedure.
Specified Emissions	Those emissions listed in <i>Schedule C: Emission Limits</i> of this licence.
Specified Engineering Works	Those engineering works listed in <i>Schedule B: Specified Engineering Works</i> of this licence.
Standard Method	A National, European or internationally recognised procedure (eg, I.S. EN, ISO, CEN, BS or equivalent), as in-house documented procedure based on the above references, a procedure as detailed in the current edition of "Standard Methods for the Examination of Water and Wastewater", (prepared and published jointly by A.P.H.A., A.W.W.A & W.E.F), American Public Health Association, 1015 Fifteenth Street, N.W., Washington DC 20005, USA; or, an alternative method as may be agreed by the Agency.
TOC	Total Organic Carbon.

Trigger Level	A parameter value specified in the licence, the achievement or exceedance of which requires certain actions to be taken by the licensee.
Weekly	During all weeks of plant operation, and in the case of emissions, when emissions are taking place; with no more than one measurement in any one week.
White Goods	Refrigerators, cookers, ovens and other similar appliances.
EPA Working Day	Refers to the following hours; 9.00 a.m. to 5.30 p.m. Monday to Friday inclusive.

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Part I Schedule of Activities Licensed

In pursuance of the powers conferred on it by the Waste Management Acts, 1996 to 2003, the Environmental Protection Agency (the Agency), under Section 40(1) of the said Acts hereby grants this Waste Licence to McGill Environmental Systems (Ireland) Ltd. to carry on the waste activities listed below at Ballynalurgan, Kilmainhamwood, Kells, County Meath, subject to conditions, with the reasons therefor and the associated schedules attached thereto set out in the licence.

Licensed Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts, 1996 to 2003

Class 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 10 of this Schedule:
Class 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.

Licensed Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts, 1996 to 2003

Class 2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
Class 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.

PART II CONDITIONS

CONDITION 1 SCOPE OF THE LICENCE

- 1.1 Waste activities at the facility shall be restricted to those listed and described in Part I: Activities Licensed and authorised by this licence.
- 1.2 For the purposes of this licence, the facility is the area of land outlined in red on Drawing No. MESM001 of the application. Any reference in this licence to “facility” shall mean the area thus outlined in red.
- 1.3 This licence is for the purposes of waste licensing under the Waste Management Acts 1996 to 2003 only and nothing in this licence shall be construed as negating the licensee’s statutory obligations or requirements under any other enactments or regulations.
- 1.4 Unless otherwise agreed with the Agency, only the wastes as outlined in *Schedule A: Waste Acceptance* of this licence and as listed under Annex 1 of the EC Working Document ‘Biological Treatment of Biowaste’ (2nd draft), 2001 or subsequent amendments shall be accepted at the facility for the production of compost.
- 1.5 No hazardous wastes or liquid wastes shall be accepted at the facility.
- 1.6 Waste Acceptance Hours and Hours of Operation
 - 1.6.1 Waste shall be accepted at the facility only between the hours of 08:00 to 18:00 Monday to Friday inclusive and 08:00 to 13:00 on Saturdays.
 - 1.6.2 Waste shall not be accepted or handled at the facility on Sundays or on Bank Holidays without the written agreement of the Agency.
 - 1.6.3 Waste shall be handled at the facility only between the hours of 08:00 to 18:00 Monday to Friday inclusive and 08:00 to 13:00 on Saturdays.
- 1.7 Every plan, programme or proposal submitted to the Agency for its agreement pursuant to any Condition of this licence shall include a proposed timescale for its implementation. The Agency may modify or alter any such plan, programme or proposal in so far as it considers such modification or alteration to be necessary and shall notify the licensee in writing of any such modification or alteration. Every such plan, programme or proposal shall be carried out within the timescale fixed by the Agency but shall not be undertaken without the agreement of the Agency. Every such plan, programme or proposal agreed by the Agency shall be covered by the conditions of this licence.
- 1.8 Prior to commencing waste activities the licensee must satisfy the Agency that it has obtained the written consent of the Department of Agriculture and Food to treat animal by-products by composting at the facility. A copy of the consent shall be submitted to the Agency one month before waste activities commence and a copy made available for inspection by authorised persons of the Agency.

REASON: *To clarify the scope of this licence.*

CONDITION 2 MANAGEMENT OF THE FACILITY

- 2.1 Facility Management
 - 2.1.1 The licensee shall employ a suitably qualified and experienced facility manager who shall be designated as the person in charge. The facility manager or a nominated, suitably qualified and experienced, deputy shall be present on the facility at all times during its operation.
 - 2.1.2 Both the facility manager and deputy, and any replacement manager or deputy, shall successfully complete both the FAS waste management training programme (or equivalent agreed by the Agency) and associated on site assessment appraisal within twelve months of appointment.

2.1.3 The licensee shall ensure that personnel performing specifically assigned tasks shall be qualified on the basis of appropriate education, training and experience, as required and shall be aware of the requirements of this licence.

2.2 Management Structure

2.2.1 Prior to the commencement of waste activities, the licensee shall submit written details of the management structure of the facility to the Agency. Any proposed replacement in the management structure shall be notified in advance in writing to the Agency. Written details of the management structure shall include the following information.

- a) the names of all persons who are to provide the management and supervision of the waste activities authorised by the licence, in particular the name of the facility manager and any nominated deputies;
- b) details of the responsibilities for each individual named under a) above; and
- c) details of the relevant education, training and experience held by each of the persons nominated under a) above.

2.3 Environmental Management System (EMS)

2.3.1 The licensee shall establish and maintain an EMS. Within eighteen months (shorter period for new facilities) from the date of grant of this licence, the licensee shall submit to the Agency for its agreement a proposal for a documented Environmental Management System (EMS) for the facility. Following the agreement of the Agency, the licensee shall establish and maintain such a system. The EMS shall be updated on an annual basis with amendments being submitted to the Agency for its agreement.

2.3.2 The EMS shall include as a minimum the following elements:

2.3.2.1 Schedule of Environmental Objectives and Targets

The licensee shall prepare a Schedule of Environmental Objectives and Targets. The Schedule shall as a minimum provide for a review of all operations and processes, including an evaluation of practicable options, for energy and resource efficiency, the use of cleaner technology, cleaner production, and the prevention, reduction and minimisation of waste, and shall include waste reduction targets. The Schedule shall include time frames for the achievement of set targets and shall address a five year period as a minimum. The Schedule shall be reviewed annually and amendments thereto notified to the Agency for agreement as part of the Annual Environmental Report (AER).

2.3.2.2 Environmental Management Plan (EMP)

The EMP shall include, as a minimum, the following:

- (i) methods by which the objectives and targets will be achieved in the coming year and the designation of responsibility for targets;
- (ii) any other items required by written guidance issued by the Agency.

2.3.2.3 Corrective Action Procedures

The Corrective Action Procedures shall detail the corrective actions to be taken should any of the procedures detailed in the EMS not be followed.

2.3.2.4 Awareness and Training Programme

The Awareness and Training Programme shall identify training needs, for personnel who work in or have responsibility for the licensed facility.

2.3.2.5 Maintenance Programme

The licensee shall establish and maintain within six months of the date of grant of this licence a structured programme for maintenance based on technical descriptions of equipment. This programme shall be supported by appropriate record keeping systems and diagnostic testing.

2.4 Communications Programme

- 2.4.1 The licensee shall establish and maintain a Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility. This shall be established within six months of the date of grant of this licence.

REASON: *To make provision for the proper management of the activity on a planned basis having regard to the desirability of ongoing assessment, recording and reporting of matters affecting the environment.*

CONDITION 3 FACILITY INFRASTRUCTURE

- 3.1 The licensee shall establish all infrastructure referred to in this licence prior to the commencement of the licensed activities or as required by the conditions of this licence.

3.2 Specified Engineering Works

- 3.2.1 The licensee shall submit proposals for all Specified Engineering Works, as defined in *Schedule B: Specified Engineering Works* of this licence, to the Agency for its agreement at least two months prior to the intended date of commencement of any such works. No such works shall be carried out without the prior agreement of the Agency.
- 3.2.2 All specified engineering works shall be supervised by a competent person(s) and that person, or persons, shall be present at all times during which relevant works are being undertaken.
- 3.2.3 Following the completion of all specified engineering works, the licensee shall complete a construction quality assurance validation, as relevant. The validation report shall be made available to the Agency on request. The report shall include the following information:-
- a description of the works;
 - as-built drawings of the works;
 - any other information requested in writing by the Agency.

3.3 Facility Notice Board

- 3.3.1 The licensee shall provide and maintain a Facility Notice Board on the facility so that it is legible to persons outside the main entrance to the facility. The minimum dimensions of the board shall be 1200 mm by 750 mm.
- 3.3.2 The board shall clearly show:-
- the name and telephone number of the facility;
 - the normal hours of opening;
 - the name of the licence holder;
 - an emergency out of hours contact telephone number;
 - the licence reference number; and
 - where environmental information relating to the facility can be obtained.

3.4 Facility Security

- 3.4.1 Security and stockproof fencing and gates shall be installed and maintained as described in section D. 1a of the application. The security fence and gates shall be at the locations shown on Drawing No. MESM007 of the application. The base of the fencing shall be set in the ground.
- 3.4.2 The licensee shall remedy any defect in the gates and/or fencing as follows:-
- a temporary repair shall be made by the end of the working day; and
 - a repair to the standard of the original gates and/or fencing shall be undertaken within three working days.

- 3.5 Facility Roads and Hardstanding
- 3.5.1 Effective site roads shall be provided and maintained to ensure the safe movement of vehicles within the facility.
- 3.5.2 The facility entrance area, the access road to the Waste Facility shall be paved and maintained in accordance with section D.1 of the application.
- 3.5.3 The licensee shall provide, and maintain an impermeable hardstanding surface in the areas of the facility shown on Drawing No. MESM007 of the application. In addition, the floor of the buildings and hardstanding areas at the facility shall be concreted and constructed to British Standard 8110.
- 3.6 Facility Office
- 3.6.1 The licensee shall provide and maintain an office at the facility. The office shall be constructed and maintained in a manner suitable for the processing and storing of documentation.
- 3.6.2 The licensee shall provide and maintain a working telephone and a method for electronic transfer of information at the facility.
- 3.7 Waste Inspection and Quarantine Areas
- 3.7.1 A Waste Inspection Area and a Waste Quarantine Area shall be provided and maintained at the facility.
- 3.7.2 These areas shall be constructed and maintained in a manner suitable, and be of a size appropriate, for the inspection of waste and subsequent quarantine if required. The waste inspection area and the waste quarantine area shall be clearly identified and segregated from each other.
- 3.7.3 Drainage from the waste quarantine area shall be directed to the effluent collection system.
- 3.8 Weighbridge and Wheel Cleaning
- 3.8.1 The licensee shall provide and maintain a weighbridge and access to appropriate wheel cleaning equipment at the facility.
- 3.9 Waste handling, ventilation and processing plant
- 3.9.1 Items of plant deemed critical to the efficient and adequate processing of waste at the facility (including *inter alia* waste loading vehicles and ejector trailers) shall be provided on the following basis:-
- 100% duty capacity;
 - 20% standby capacity available on a routine basis; and
 - Provision of contingency arrangements and/or back up and spares in the case of breakdown of critical equipment.
- 3.9.2 Within six months from the date of grant of this licence, the licensee shall provide a report for the agreement of the Agency detailing the duty and standby capacity in tonnes per day, of all waste handling and processing equipment to be used at the facility. These capacities shall be based on the licensed waste intake, as per *Schedule A: Waste Acceptance* of this licence.
- 3.9.3 The quantity of waste to be accepted at the facility on a daily basis shall not exceed the duty capacity of the equipment at the facility. Any exceedance of this intake shall be treated as an incident.
- 3.10 Tank and Drum Storage Areas
- 3.10.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein.
- 3.10.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:-
- 110% of the capacity of the largest tank or drum within the bunded area; or
 - 25% of the total volume of substance which could be stored within the bunded area.

- 3.10.3 All drainage from bunded areas shall be diverted for collection and safe disposal.
- 3.10.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.
- 3.10.5 The integrity and water tightness of all the bunds and their resistance to penetration by water or other materials stored therein shall be confirmed by the licensee and shall be reported to the Agency as part of the first AER.
- This confirmation shall be repeated at least once every three years thereafter and reported to the Agency on each occasion.
- 3.10.6 While awaiting collection, mature compost shall be stored indoors protected against uncontrolled run-off and nuisance formation.
- 3.11 Silt Traps and Oil Separators/Interceptors
- 3.11.1 The licensee shall install and maintain silt traps and oil interceptors at the facility to ensure that all surface water discharges from the facility pass through a silt trap and oil interceptor prior to discharge. The interceptors shall be a Class I full retention interceptor and the silt traps and interceptors shall be in accordance with European Standard prEN 858 (installations for the separation of light liquids).
- 3.12 Drainage system, pipeline testing
- 3.12.1 Replacement of Infrastructure
- Monitoring infrastructure which is damaged or proves to be unsuitable for its purpose shall be replaced within three months of it being damaged or recognised as being unsuitable.
- 3.13 The licensee shall provide and maintain an odour abatement system on the facility which satisfies the following requirements:
- Air management system, to ensure no significant escape of odours or dust, including negative pressure throughout the building;
 - A biofilter of appropriate size and structure.

REASON: To provide appropriate infrastructure for the protection of the environment.

CONDITION 4 Decommissioning

- 4.1 Following termination, or planned cessation for a period greater than six months, of use or involvement of all or part of the site in the licensed activity, the licensee shall, to the satisfaction of the Agency, decommission, render safe or remove for disposal/recovery, any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution.

REASON: To provide for the restoration of the facility.

CONDITION 5 FACILITY OPERATIONS

- 5.1 All waste processing shall be carried out inside the waste processing building.
- 5.2 Waste Acceptance and Characterisation Procedures
- 5.2.1 Waste shall only be accepted at the facility, from Local Authority waste collection or transport vehicles or holders of waste permits, unless exempted or excluded, issued under the Waste Management (Collection Permit) Regulations 2001. Copies of these waste collection permits must be maintained at the facility.
- 5.2.2 Waste Acceptance Procedures shall be carried out in accordance with section E3 of the licence application. Such procedures should be documented as part of the EMS as required by Condition 2.

- 5.2.3 Waste arriving at the facility shall be inspected at the point of entry to the facility and subject to this inspection directed to the Waste Processing Building. Each load of waste arriving at the Waste Processing Building shall be inspected upon tipping within this building. Only after such inspections shall the waste be processed for recovery.
- 5.2.4 Any waste deemed unsuitable for processing at the facility and/or in contravention of this licence shall be immediately separated and removed from the facility at the earliest possible time. Temporary storage of such wastes shall be in a designated Waste Quarantine Area. Waste shall be stored under appropriate conditions in the quarantine area to avoid putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.
- 5.3 Operational Controls
- 5.3.1 Scavenging shall not be permitted at the facility.
- 5.3.2 Gates shall be locked shut when the facility is unsupervised.
- 5.3.3 The licensee shall provide and use adequate lighting during the operation of the facility in hours of darkness.
- 5.3.4 Fuels shall be stored only at appropriately bunded locations on the facility.
- 5.3.5 All tanks and drums shall be labelled to clearly indicate their contents.
- 5.3.6 There shall be no casual public access to the facility.
- 5.3.7 All composting operations and materials storage shall be carried out indoors.
- 5.4 Off-site Disposal and Recovery
- 5.4.1 Waste sent off-site for recovery or disposal shall be conveyed only by a waste contractor agreed by the Agency.
- 5.4.2 All waste transferred from the facility shall be transferred only to an appropriate facility agreed by the Agency.
- 5.4.3 All wastes removed off-site for recovery or disposal shall be transported from the facility to the consignee in a manner which will not adversely affect the environment.
- 5.5 Maintenance
- 5.5.1 All treatment/abatement and emission control equipment shall be calibrated and maintained, in accordance with the instructions issued by the manufacturer/supplier or installer. Written records of the calibrations and maintenance shall be made and kept by the licensee.
- 5.5.2 The licensee shall maintain and clearly label and name all sampling and monitoring locations.
- 5.6 Landscaping
- 5.6.1 Landscaping of the facility as described in Drawing MESM006 of the application shall be carried out within six months of the date of grant of this licence.
- 5.7 Resource Use and Energy Efficiency
- 5.7.1 The licensee shall carry out an audit of the energy efficiency of the site within one year of the date of grant of this licence. The licensee shall carry out the audit in accordance with Agency guidance. The audit programme shall be submitted to the Agency in writing at least one month before the audit is to be carried out. A copy of the audit report shall be available on-site for inspection by authorised persons of the Agency and a summary of the audit findings shall be submitted as part of the Annual Environmental Report. The energy efficiency audit shall be repeated at intervals as required by the Agency.
- 5.7.2 The audit shall identify all opportunities for energy use reduction and efficiency and the recommendations of the audit will be incorporated into the Schedule of Environmental Objectives and Targets under Condition 2 above.
- 5.7.3 The licensee shall identify opportunities for reduction in the quantity of water used on site including recycling and reuse initiatives, wherever possible. Reductions in water usage shall be incorporated into Schedule of Environmental Objectives and Targets.

- 5.7.4 The licensee shall undertake an assessment of the efficiency of use of raw materials in all processes, having particular regard to the reduction in waste generated. The assessment should take account of best international practice for this type of activity. Where improvements are identified, these shall be incorporated into the Schedule of Environmental Objectives and Targets.
- 5.8 Compost Quality
- 5.8.1 Compost produced shall comply with the quality standards as set out in *Schedule E: Standards for Compost Quality* of this licence. Analysis of the compost shall be in accordance with the requirements of *Schedule E*.
- 5.8.2 Any compost not meeting any standard as per *Schedule E: Standards for Compost Quality* may be reused in the process or handled as a waste and details recorded as per Condition 10.
- 5.8.3 A record of the quantity of compost produced per annum shall be maintained on-site and available for inspection and shall be reported in the AER.

REASON: To provide for appropriate operation of the facility to ensure protection of the environment.

CONDITION 6 EMISSIONS

- 6.1 No specified emission from the facility shall exceed the emission limit values set out in *Schedule C: Emission Limits* of this licence. There shall be no other emissions of environmental significance.
- 6.2 The licensee shall ensure that the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
- 6.3 Emission limits for emissions to atmosphere in this licence shall be interpreted in the following way.
- 6.3.1 Non-Continuous Monitoring
- (i) For any parameter where, due to sampling/analytical limitations, a 30 minute sample is inappropriate, a suitable sampling period should be employed and the value obtained therein shall not exceed the emission limit value.
- (ii) For all other parameters, no 30 minute mean value shall exceed the emission limit value.
- (iii) For flow, no hourly or daily mean value shall exceed the emission limit value.
- 6.4 Emissions to Surface Water
- 6.4.1 No trade effluent shall be discharged to surface water.
- 6.5 There shall be no direct emissions to groundwater.
- 6.6 There shall be no clearly audible tonal component or impulsive component in the noise emissions from the activity at the noise sensitive locations.

REASON: To control emissions from the facility and provide for the protection of the environment.

CONDITION 7 NUISANCE CONTROL

- 7.1 The licensee shall ensure that vermin, birds, flies, mud, dust, litter and odours do not give rise to nuisance at the facility or in the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.
- 7.2 The road network in the vicinity of the facility shall be kept free from any debris caused by vehicles entering or leaving the facility. Any such debris or deposited materials shall be removed without delay.
- 7.3 Litter Control
- 7.3.1 The measures and infrastructure as described in section F.5 of the application shall be applied to control litter at the facility.
- 7.3.2 All loose litter or other waste, placed on or in the vicinity of the facility, other than in accordance with the requirements of this licences, shall be removed, subject to the agreement of the landowners, immediately and in any event by 10.00am of the next working day after such waste is discovered.
- 7.3.3 The licensee shall ensure that all vehicles delivering waste to and removing waste and materials from the facility are appropriately covered.
- 7.4 Dust/Odour Control
- 7.4.1 In dry weather, site roads and any other areas used by vehicles shall be sprayed with water as and when required to minimise airborne dust nuisance.
- 7.4.2 The licensee shall install and provide adequate measures for the control of odours and dust emissions, including fugitive dust emissions, from the facility. Such measures shall at a minimum include the following:-
- 7.4.2.1 Dust curtains shall be maintained on the entry/exit points from the waste processing building, all other doors in this building shall be kept closed where possible.
- 7.4.2.2 Provision of 100% duty capacity and 20% stand by capacity, back ups and spares must be provided for the air handling, ventilation and abatement plant.

REASON: To provide for the control of nuisances.

CONDITION 8 MONITORING

- 8.1. The licensee shall carry out such monitoring and at such locations and frequencies as set out in *Schedule D: Monitoring* of this licence. Unless otherwise specified by this licence, all environmental monitoring shall commence no later than two months after the date of grant of this licence.
- 8.2 The licensee shall amend the frequency, locations, methods and scope of monitoring as required by this licence only upon the written instruction of the Agency and shall provide such information concerning such amendments as may be requested in writing by the Agency. Such alterations shall be carried out within any timescale nominated by the Agency.
- 8.3 Monitoring and analysis equipment shall be operated and maintained in accordance with the manufacturers' instructions (if any) so that all monitoring results accurately reflect any emission, discharge or environmental parameter.
- 8.4 The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.
- 8.5 The licensee shall maintain all sampling and monitoring points, and clearly label and name all sampling and monitoring locations, so that they may be used for representative sampling and monitoring.
- 8.6 The licensee shall install on all emission points such sampling points or equipment, including any data-logging or other electronic communication equipment, as may be required by the

Agency. All such equipment shall be consistent with the safe operation of all sampling and monitoring systems.

- 8.7 Within six months of the date of grant of this licence, the following information shall be submitted to the Agency for its agreement: the names, qualifications and a summary of relevant experience of all persons that will carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring. Any proposed changes to the above shall be submitted in writing to the Agency for its agreement.
- 8.8 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the activity is being carried on, unless alternative sampling or monitoring has been agreed, in writing, by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable, and alternative sampling and monitoring facilities shall be put in place. Prior written agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency.
- 8.9 Nuisance Monitoring
The licensee shall, at a minimum of one week intervals, inspect the facility and its immediate surrounds for nuisances caused by litter, vermin, birds, flies, mud, dust and odours.
- 8.10 Bioaerosol Monitoring
Prior to the commencement of waste activities, the licensee shall submit for approval by the Agency, a baseline bioaerosol monitoring study for the site.

REASON: To ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions.

CONDITION 9 CONTINGENCY ARRANGEMENTS

- 9.1. In the event of an incident the licensee shall immediately:-
- identify the date, time and place of the incident;
 - carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising therefrom;
 - isolate the source of any such emission;
 - evaluate the environmental pollution, if any, caused by the incident;
 - identify and execute measures to minimise the emissions/malfunction and the effects thereof;
 - provide a proposal to the Agency for its agreement within one month of the incident occurring to:-
 - identify and put in place measures to avoid reoccurrence of the incident; and
 - identify and put in place any other appropriate remedial action.
- 9.2. The licensee shall, within six months of date of grant of this licence, ensure that a documented Emergency Response Procedure is in place, which shall address any emergency situation which may originate on-site. This Procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary. The licensee shall, within six months of the date of grant of this licence, submit a written Emergency Response Procedure (ERP) to the Agency for its agreement. The ERP shall address any emergency situations which may originate on the facility and shall include provision for minimising the effects of any emergency on the environment. This shall include a risk assessment to determine the requirements at the facility for fire fighting and fire water retention facilities. The Fire Authority shall be consulted by the licensee during this assessment.
- 9.3. The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage at the facility. Once used the absorbent material shall be disposed of at an appropriate facility.

9.4. Emergencies

- 9.4.1. In the event of a complete breakdown of equipment or any other occurrence which results in the closure of the processing building, any waste arriving at or already collected at the facility shall be transferred directly to appropriate landfill sites or any other appropriate facility until such time as the processing building is returned to a fully operational status. Such a breakdown event will be treated as an emergency and rectified as soon as possible.
- 9.4.2. All significant spillages occurring at the facility shall be treated as an emergency and immediately cleaned up and dealt with so as to alleviate their effects.
- 9.4.3. No waste shall be burnt within the boundaries of the facility. A fire at the facility shall be treated as an emergency and immediate action shall be taken to extinguish it and notify the appropriate authorities.
- 9.4.4. In the event that monitoring of local wells indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply this shall be treated as an emergency and the licensee shall provide an alternative supply of water to those affected.
- 9.4.5. The licensee shall provide and maintain a storage tank/interceptor for the temporary storage of liquid runoff/ liquid waste.

9.5. Accident Prevention

- 9.5.1. The licensee shall, within six months of date of grant of this licence, ensure that a documented Accident Prevention Policy is in place which will address 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.

REASON: To ensure compliance with the conditions of this licence by provision of a satisfactory system of monitoring of emissions.

CONDITION 10 RECORDS

10.1 The licensee shall keep the following documents at the facility office:-

- a) the current waste licence relating to the facility;
- b) the current EMS for the facility;
- c) the previous year's AER for the facility; and
- d) all written procedures produced by the licensee which relate to the licensed activities.

10.2 The licensee shall maintain a record for each load of waste arriving at and departing from the facility. The licensee shall record the following:-

- a) the date;
- b) the name of the carrier (including if appropriate, the waste carrier registration details);
- c) the vehicle registration number;
- d) the name of the producer(s)/collector(s) of the waste as appropriate;
- e) the name of the waste facility (if appropriate) from which the load originated including the waste licence or waste permit register number;
- f) a description of the waste including the associated EWC codes;
- g) the quantity of the waste, recorded in tonnes;
- h) the name of the person checking the load; and
- i) where loads or wastes are removed or rejected, details of the date of occurrence, the types of waste and the facility to which they were removed.

10.3 The following records shall be maintained by the licensee:-

- a) the types and quantities of waste recovered at the facility each year. These records shall include the relevant EWC Codes;

- b) all training undertaken by facility staff;
 - c) results from all integrity tests of bunds and other structures and any maintenance or remedial work arising from them;
 - d) details of all nuisance inspections; and
 - e) the names and qualifications of all persons who carry out all sampling and monitoring as required by this licence and who carry out the interpretation of the results of such sampling and monitoring.
- 10.4 The licensee shall maintain a record of all complaints relating to the operation of the activity. Each such record shall give details of the following:-
- a) date and time of the complaint;
 - b) the name of the complainant;
 - c) details of the nature of the complaint;
 - d) actions taken on foot of the complaint and the results of such actions; and
 - e) the response made to each complainant.
- 10.5 A record shall be kept at the facility of the programme for the control and eradication of vermin and fly infestations at the facility. These records shall include as a minimum the following:-
- a) the date and time during which spraying of insecticide is carried out;
 - b) contractor details;
 - c) contractor logs and site inspection reports;
 - d) details of the rodenticide(s) and insecticide(s) used;
 - e) operator training details;
 - f) details of any infestations;
 - g) mode, frequency, location and quantity of application; and
 - h) measures to contain sprays within the facility boundary.
- 10.6 Where compost product contains sewage sludge the licensee shall retain the following records on site:
- a) A copy of the notifications to the Local Authority as required under Article 8 (1) and Article 8 (3) of SI 148 of 1998 (Waste Management (Use of sewage sludge in agriculture) Regulations, 1998).
 - b) This shall include *inter alia*; sludge analysis, records of sludge quantities, sludge properties, treatment type and location/name of the recipient of the sludge (sludge meaning compost containing treated sludge).

REASON: To provide for the keeping of proper records of the operation of the facility.

CONDITION 11 REPORTS AND NOTIFICATIONS

- 11.1 No alteration to, or reconstruction in respect of, the activity or any part thereof which would, or is likely to, result in:
- (a) A material change or increase in:
 - The nature or quantity of any emission;
 - The abatement/treatment or recovery systems;
 - The range of processes to be carried out;
 - The fuels, raw materials, products or wastes to be generated or accepted, or
 - b) Any changes in:
 - The site management and control with adverse environmental significance,

shall be carried out or commenced without prior notice to, and without the prior written agreement of, the Agency.

- 11.2 Unless otherwise agreed by the Agency, all reports and notifications submitted to the Agency shall:-
- a) be sent to the relevant regional Agency office (to be advised);
 - b) comprise one original and two copies unless additional copies are required;
 - c) be formatted in accordance with any written instruction or guidance issued by the Agency;
 - d) include whatever information as is specified in writing by the Agency;
 - e) be identified by a unique code, indicate any modification or amendment, and be correctly dated to reflect any such modification or amendment;
 - f) be submitted in accordance to the relevant reporting frequencies specified by this licence, such as in *Schedule E: Standards for Compost Quality* of this licence;
 - g) be accompanied by a written interpretation setting out their significance in the case of all monitoring data; and
 - h) be transferred electronically to the Agency's computer system if required by the Agency.
- 11.3 In the event of an incident occurring on the facility, the licensee shall:-
- a) notify the Agency as soon as practicable and in any case not later than 10.00 am the following working day after the occurrence of any incident;
 - b) submit a written record of the incident, including all aspects described in Condition 9.1 (a-e), to the Agency as soon as practicable and in any case within five working days after the occurrence of any incident;
 - c) in the event of any incident which relates to discharges to surface/sewer water, notify the Sanitary Authority as soon as practicable and in any case not later than 10:00am on the following working day after such an incident; and
 - d) Should any further actions be taken as a result of an incident occurring, the licensee shall forward a written report of those actions to the Agency as soon as practicable and no later than ten days after the initiation of those actions.
- 11.4 Waste Recovery Reports
- The licensee shall as part of the AER submit a report on the contribution by this facility to the achievement of the recovery targets stated in national and European Union waste policies and shall include the following:-
- a) proposals for the contribution of the facility to the achievement of targets for the reduction of biodegradable waste to landfill as specified in the Landfill Directive;
 - b) the separation of recyclable materials from the waste; and
 - c) inert waste to be used for cover/restoration material at the facility.
- 11.5 Vermin and Flies
- 11.5.1. Within three months of the date of this licence, the licensee shall submit to the Agency for its agreement a proposal for the management of vermin and fly infestations at the facility. This proposal should include as a minimum, operator training, details on the rodenticide(s) and insecticide(s) to be used, mode and frequency of application and measures to contain sprays within the facility boundary.
- 11.6 Monitoring Locations
- 11.6.1. Within three months of the date of grant of this licence, the licensee shall submit to the Agency an appropriately scaled drawing(s) showing all the monitoring locations that are stipulated in this licence. The drawing(s) shall include the reference code of each monitoring point.

11.7 Annual Environmental Report

11.7.1 The licensee shall submit to the Agency for its agreement, by 31st March of each calendar year an Annual Environmental Report (AER).

11.7.2 The AER shall include as a minimum the information specified in *Schedule F: Content of Annual Environmental Report* of this licence and shall be prepared in accordance with any relevant written guidance issued by the Agency.

REASON: *To provide for proper reporting and notification of the Agency.*

CONDITION 12 CHARGES AND FINANCIAL PROVISIONS

12.1 Agency Charges

12.1.1 The licensee shall pay to the Agency an annual contribution of €7,626, or such sum as the Agency from time to time determines, having regard to variations in the extent of reporting, auditing, inspection, sampling and analysis or other functions carried out by the Agency, towards the cost of monitoring the activity as the Agency considers necessary for the performance of its functions under Waste Management Acts 1996 to 2003. The first payment shall be a pro-rata amount for the period from the date of commencement of enforcement to the 31st day of December, and shall be paid to the Agency within one month from the date of commencement of enforcement. In subsequent years the licensee shall pay to the Agency such revised annual contribution as the Agency shall from time to time consider necessary to enable performance by the Agency of its relevant functions under the Waste Management Acts, 1996 to 2003, and all such payments shall be made within one month of the date upon which demanded by the Agency.

12.1.2 In the event that the frequency or extent of monitoring or other functions carried out by the Agency needs to be increased the licensee shall contribute such sums as determined by the Agency to defraying its costs in regard to items not covered by the said annual contribution.

REASON: *To provide for adequate financing for monitoring*

SCHEDULE A : Waste Acceptance

A.1 Waste Acceptance

Table A.1 Waste Categories and Quantities

WASTE TYPE ^{note 1}	MAXIMUM (TONNES PER ANNUM)
Non-hazardous waste for composting including industrial and sewage biosolids, separated household and catering waste and other non-hazardous biodegradable material household waste	20,800
TOTAL	20,800

Note 1: or other compatible wastes to be agreed in advance by the Agency.

SCHEDULE B : Specified Engineering Works

Specified Engineering Works
Installation of waste handling, recycling/recovery infrastructure Any other works notified in writing by the Agency.

SCHEDULE C : Emission Limits

C.1 Noise Emissions: (Measured at the monitoring points indicated in Drawing MESM009 of the application).

Day dB(A) L_{eq} (30 minutes)	Night dB(A) L_{eq} (30 minutes)
55	45

C.2 Dust Deposition Limit: Measured at the monitoring points indicated in Drawing MESM009 of the application.

Level (mg/m^2 /day) ^{Note 1}
350

Note 1: 30 day composite sample with the results expressed as mg/m^2 /day.

SCHEDULE D : Monitoring

Monitoring to be carried out as specified below.

D.1 Monitoring Locations

Monitoring locations shall be those as set out in Drawing MESM009 of the application.

Table D.1.1 Noise and surface water Monitoring Locations

NOISE	Dust	Air	Groundwater
STATIONS	STATIONS		
N	D1	A1	B1
	D2	A2	B2
	D3	A3	B3

Table D.1.2 Emissions to Atmosphere Monitoring Locations

MICRO-ORGANISMS
STATIONS
Exhaust vent from the processing building and other locations as may be specified by the Agency

D.2 Noise

Table D.2.1 Noise Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
L(A) _{EQ} [30 minutes]	Quarterly	Standard ^{Note 1}
L(A) ₁₀ [30 minutes]	Quarterly	Standard ^{Note 1}
L(A) ₉₀ [30 minutes]	Quarterly	Standard ^{Note 1}
Frequency Analysis(1/3 Octave band analysis)	Quarterly	Standard ^{Note 1}

Note 1: "International Standards Organisation. ISO 1996. Acoustics - description and Measurement of Environmental noise. Parts 1, 2 and 3."

D.3 Surface Water Emissions

Table D.3.1 Surface water Monitoring Frequency and Techniques

Parameter	Monitoring Frequency	Analysis Method/Technique
pH	Quarterly	Electrometry
Ammonia (as NH ₄)	Quarterly	Standard Methods ^{Note 1}
Suspended Solids	Quarterly	Standard Methods ^{Note 1}
Mineral Oils	Quarterly	Standard Methods ^{Note 1}
Chloride	Quarterly	Standard Methods ^{Note 1}

Note 1: "Standards Methods for the Examination of Water and Wastewater", (prepared and published jointly by A.P.H.A., A.W.W.A & W.E.F) 20th Ed., American Public Health Association, 1015 Fifteenth Street, Washington DC 20005, USA.

D.4 Groundwater Monitoring

Table D.4.1

Parameter ^{Note 1}	Ground water Monitoring Frequency
Groundwater Level (wells)	Biannual
Ammoniacal Nitrogen	Biannual
Chloride	Biannual
PH	Biannual
Sulphate (SO ₄)	Biannual
Metals / non metals ^{Note 2}	Annually
List I/II organic substances (Screen) ^{Note 3}	Annually
Nitrate	Annually
Total P/orthophosphate	Annually
Faecal Coliforms	Annually
Total Coliforms	Annually

Note 1: All the analysis shall be carried out by a competent laboratory using standard and internationally accepted procedures.

Note 2: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.

Note 3: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).

D.5 Emissions from Biodegradable Waste Building & Air Quality Monitoring

Table D.5.1 Dust, and Micro-organisms Monitoring Frequency and Technique

Parameter ^{Note 1}	Monitoring Frequency	Analysis Method/Technique
Dust (mg/m ² /day)	Quarterly ^{Note 2}	Standard Method ^{Note 3}
Bacteria	Annually	Grab sample ^{Note 4}
Aspergillus fumigatus	Annually	Grab sample ^{Note 4}

Note 1: Meteorological monitoring to be carried out concurrently with all above monitoring.

Note 2: Twice during the period May to September, or as otherwise specified in writing by the Agency.

Note 3: Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute)

Note 4: Enumeration of colonies to be carried out as described in 'Standardised Protocol for the Sampling and Enumeration of Airborne Micro-organisms at composting Facilities' the Composting Association 1999.

Table D.5.2 Emissions to Atmosphere: Abatement/Treatment Control at Biodegradable Waste Composting Plant

Control Parameter	Monitoring Required	Monitoring Equipment
Biofilter		
Inlet and Outlet Gas		
Ammonia	Monthly	Colorimetric Indicator Tubes Note 1
Hydrogen sulphide	Monthly	Colorimetric Indicator Tubes Note 1
Mercaptans	Monthly	Colorimetric Indicator Tubes Note 1
Bed Media		
Odour Assessment	Daily	Subjective Impression
Condition and depth of biofilter Note 2	Daily	Visual Inspection
Moisture content	Monthly	Standard laboratory method Note 1
pH	Bi-annually	
Ammonia	Bi-annually	Standard laboratory method Note 1
Total viable counts	Bi-annually	Standard laboratory method Note 1
General		
Sprinkler System	Check operation Daily	Visual Inspection
Fan	Check operation Daily	Visual Inspection
Negative Pressure	Monthly	Air Current Tubes

All measurements shall be made at peak bed loading.

Note 1: Or an equivalent method acceptable to the Agency.

Note 2: The biofilter shall be examined to ensure that no channelling is evident. Turning, restructuring and the addition of supplementary bed materials, or total bed replacement shall be carried out, as required, subject to bed performance.

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SCHEDULE E :Standards for Compost Quality

Unless otherwise agreed in writing by the Agency, the following criteria are deemed a quality standard for the use of compost as a soil improver and should not be deemed as criteria for fertiliser. In addition N, P, K, NH₄-N, NO₃-N, pH and dry matter content should also be measured.

Compost shall be deemed unsatisfactory if more than 10% of samples fail the criteria below. No sample shall exceed 1.2 times the quality limit values set.

1. Maturity

Compost shall be deemed to be mature if it meets two of the following requirements:

- C/N ratio ≤ 25
- oxygen uptake rate ≤ 150 mg O₂/kg volatile solids per hour; and
- germination of cress (*Lepidium sativum*) seeds and of radish (*Raphanus sativus*) seeds in compost must be greater than 90 percent of the germination rate of the control sample, and the growth rate of plants grown in a mixture of compost and soil must not differ more than 50 percent in comparison with the control sample.
- Elimination of the following test organisms (used to evaluate composting system efficiency in removing plant pathogens and weed seeds during the composting process): Plasmodiophora brassicae, tobacco-mosaic-virus (TMV) and tomato seeds.

Guidance on test may be obtained from the German document LAGA M10 'Quality Criteria and Application Recommendations for Compost'.

2. Foreign Matter

Compost must not contain any sharp foreign matter measuring over a 2 mm dimension that may cause damage or injury to humans, animals and plants during or resulting from its intended use.

Foreign matter content as a percentage of oven-dried mass	≤1.5
Foreign matter, maximum dimensions, in mm	25

3. Trace Elements

Maximum Trace Element Concentration Limits for Compost^{Note 2}

Trace Elements	(mg/kg, dry mass)
Arsenic (As) ^{Note 1}	15
Cadmium (Cd)	1.5
Chromium (Cr)	100
Copper (Cu)	100
Mercury (Hg)	1
Molybdenum (Mo) ^{Note 1}	5
Nickel (Ni)	50
Lead (Pb)	150
Selenium (Se) ^{Note 1}	2
Zinc (Zn)	350

Note 1: Monitoring of these parameters required if waste from an industrial source.

Note 2: The above alone should not be taken as an indication of suitability for addition to soil as the cumulative metal additions to soil should be first calculated.

4. Pathogens

Pathogenic organism content must not exceed the following limits:

- the quantity of faecal coliforms must be < 1,000 Most Probable Number (MPN)/g of total solids calculated on a dry weight basis; and
- there can be no salmonellae present (< 3 MPN/4g total solids).

5. Monitoring

The licensee shall submit to the Agency for its agreement, prior to commencement of compost operations, details of methods of analyses, methods of sampling and sample numbers.

The analyses shall be carried out:

- (a) every six months for plants producing more than 500 and up to 1 000 tonnes of treated biowaste per year;
- (b) at intervals of at least every 1 000 tonnes of treated biowaste produced or every 3 months, whichever comes first, for plants producing more than 1 000 and up to 10 000 tonnes of treated biowaste per year;
- (c) every month for plants producing more than 10 000 tonnes of treated biowaste per year.

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SCHEDULE F : Recording and Reporting to the Agency

Recurring Reports

Annual Environment Report (AER)	Annually	By 31 st March of each year.
Record of incidents	As they occur	Within five days of the incident.
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Monitoring of Surface Water Quality	Quarterly	Ten days after the end of the quarter being reported on.
Dust Monitoring	Quarterly	Ten days after the end of the quarter being reported on.
Noise Monitoring	Quarterly	Ten days after the end of the quarter being reported on.
Any other monitoring	As they occur	Within ten days of obtaining results.

Note 1: Unless altered at the request of the Agency.

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SCHEDULE G : Content of the Annual Environmental Report

Annual Environmental Report Content

Reporting Period.
Waste activities carried out at the facility.
Quantity and Composition of waste recovered, received and disposed of during the reporting period and each previous year (relevant EWC codes to be used).
Summary report on emissions.
Summary of results and interpretations of environmental monitoring, including a location plan of all monitoring locations.
Resource and energy consumption summary.
Development / Infrastructural works in place and planned, to process waste quantities projected for the following year (including plant operating capacity, provision of adequate standby capacity and provision of contingency, backup and spares in the case of breakdown).
Schedule of Environmental Objectives and Targets for the forthcoming year.
Report on the progress towards achievement of the Environmental Objectives and Targets contained in previous year's report.
Full title and a written summary of any procedures developed by the licensee in the year which relates to the facility operation.
Tank, drum, pipeline and bund testing and inspection report.
Reported Incidents and Complaints summaries.
Review of Nuisance Controls.
Reports on management and staffing structure of the facility, and a programme for public information.
Quantity of Compost Produced per annum.
Any other items specified by the Agency.

Note 1 Content to be revised subject to the agreement of the Agency after cessation of waste acceptance at the facility.

Sealed by the seal of the Agency on this the 21st day of July, 2005

**PRESENT when the seal of the Agency
was affixed hereto:**

Larry Stapleton, Director/Authorised Person



Headquarters
P.O. Box 3000
Johnstown Castle Estate
County Wexford
Ireland

TECHNICAL AMENDMENT A
TO
WASTE LICENCE

(IN PURSUANCE OF SECTION 42B(1) OF THE WASTE MANAGEMENT ACTS
1996 TO 2005)

Licence Register Number:	W0195-01
Licensee:	Padraig Thornton Waste Disposal Limited
Location of Facility:	Ballynalurgan, Kilmainhamwood, Kells, Co Meath.

Reason for the Decision

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of licence Reg. No. W0195-01 granted on the 21/07/2005, as well as any amendments noted herein, any emissions from the activity will comply with and not contravene any of the requirements of Section 40(4) of the Waste Management Acts 1996 to 2005.

Technical Amendment of Conditions

In pursuance of the powers conferred on it by Section 42B(1)(c) of the Waste Management Acts 1996 to 2005, the Agency amends Licence Reg. No. W0195-01, granted to Padraig Thornton Waste Disposal Limited for a facility located at Ballynalurgan, Kilmainhamwood, Kells, Co. Meath.

Henceforth, Waste Licence Register No. W0195-01 (granted 21/07/2005) shall be read in conjunction with the amendments set out below.

This technical amendment is limited to the following Glossary of Terms/Conditions/Schedule of Licence Reg. No. W0195-01:

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Amendments

The Location of Facility address is replaced by the following:

Location of Facility:	Killmainhamwood Compost, Ballynalurgan, Killmainhamwood, Kells, Co Meath.
-----------------------	---

Glossary

The following terms shall be inserted into the Glossary:

Composting	The autothermic and thermophilic biological decomposition of separately collected biowaste in the presence of oxygen and under controlled conditions by the action of micro- and macro-organisms in order to produce compost.
Mechanical/Biological Treatment	The treatment of residual municipal waste, unsorted waste or any other biowaste unfit for composting or anaerobic digestion in order to stabilise and reduce the volume of the waste.
Separate Collection	The collection of biowaste separately from other kinds of waste in such a way as to avoid the different waste fractions or waste components from waste being mixed, combined or contaminated with other potentially polluting wastes, products or materials.
Stabilised Biowaste	The waste resulting from the mechanical/biological treatment of unsorted waste or residual municipal waste as well as any other treated biowaste which does not comply with the environmental quality classes 1 or 2 of <i>Schedule E: Standards for Compost Quality</i> , of this licence.

The following shall replace the existing glossary interpretation:

Licensee	Padraig Thornton Waste Disposal Limited, Killmainhamwood Compost, Ballynalurgan, Killmainhamwood, Kells, Co Meath.
-----------------	--

New Conditions

- 3.14 The licensee shall provide and maintain a Wastewater Treatment system at the facility for the treatment of sanitary effluent arising on-site. Any percolation area shall satisfy the criteria set out in the Wastewater Treatment Manual, Treatment Systems for Single Houses, published by the Agency.

Insert after Condition 3.13 of the existing licence.

12.2 Environmental Liabilities

The licensee shall as part of the AER provide an annual statement as to the measures taken or adopted at the site in relation to the prevention of environmental damage, and the financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure) or accidents/incidents, as may be associated with the carrying on of the activity.

Insert after Condition 12.1.2 of the existing licence.

Reason: *To provide for adequate financing for monitoring and financial provisions for measures to protect the environment*

Amended Conditions

Condition 1.4 is replaced by the following:

- 1.4 Unless otherwise agreed with the Agency, the wastes as outlined in *Schedule A: Waste Acceptance* of this licence and as listed under Annex 1 of the EC Working Document 'Biological Treatment of Biowaste' (2nd draft), 2001 or subsequent amendments shall only be accepted at the facility for the production of compost or stabilised biowaste.

Condition 3.11.1 is replaced by the following:

- 3.11.1 The licensee shall install and maintain silt traps and oil interceptor at the facility to ensure that all storm water discharges from the facility pass through a silt trap and oil separator in advance of discharge. The interceptor shall be a Class I by-pass interceptor and the silt traps and separator shall be in accordance with I.S. EN 858-2:2003 (separator systems for light liquids).

Condition 5.2.1 is replaced by the following:

- 5.2.1 Waste shall only be accepted at the facility, from Local Authority waste collection or transport vehicles or holders of waste collection permits, unless exempted or excluded, issued under the Waste Management (Collection Permit) Regulations 2001. Copies of these waste collection permits must be maintained at the facility.

Condition 5.8 is replaced by the following:

- 5.8 Compost and Stabilised Biowaste Quality
- 5.8.1 Stabilised biowaste shall be treated as a waste.
 - 5.8.2 Compost and stabilised biowaste shall comply with the quality standards as set out in *Schedule E: Standards for Compost Quality* of this licence. Analysis of the compost and stabilised biowaste shall be in accordance with the requirements of *Schedule E*.
 - 5.8.3 Composted material not meeting the standard for stabilised biowaste as per *Schedule E: Standards for Compost Quality* may be reused in the process or handled as a waste and details recorded as per Condition 10.
 - 5.8.4 Outlet sites for stabilised biowaste shall be submitted in advance to the Agency for its agreement.

- 5.8.5 A record of the quantity of compost and stabilised biowaste produced per annum shall be maintained on-site and available for inspection and shall be reported in the AER.

Schedule Amendments

Schedule E: Standards for Compost Quality is replaced by the following:

SCHEDULE E: Standards for Compost Quality

Unless otherwise agreed in writing by the Agency, the following criteria are deemed a quality standard for the use of compost as a soil improver and should not be deemed as criteria for fertiliser. In addition N, P, K, NH₄-N, NO₃-N, pH and dry matter content should also be measured.

Compost shall be deemed unsatisfactory if more than 10% of samples fail the criteria below. No sample shall exceed 1.2 times the quality limit values set.

1. Maturity

Compost shall be deemed to be mature if it meets two of the following requirements:

- C/N ratio ≤ 25
- oxygen uptake rate ≤ 150 mg O₂/kg volatile solids per hour; and
- germination of cress (*Lepidium sativum*) seeds and of radish (*Raphanus sativus*) seeds in compost must be greater than 90 percent of the germination rate of the control sample, and the growth rate of plants grown in a mixture of compost and soil must not differ more than 50 percent in comparison with the control sample.
- Elimination of the following test organisms (used to evaluate composting system efficiency in removing plant pathogens and weed seeds during the composting process): Plasmodiophora brassicae, tobacco-mosaic-virus (TMV) and tomato seeds.

Guidance on test may be obtained from the German document LAGA M10 'Quality Criteria and Application Recommendations for Compost'

2. Trace Elements (Compost and Stabilised Biowaste) ^{Note 1, 2 & 3}

Maximum Trace Element Concentration Limits ^{Note 4}

Parameter (mg/kg, dry mass)	Compost Quality Standards ^{Note 5}		Stabilised Biowaste ^{Note 5}
	Class 1	Class 2	
Cadmium (Cd)	0.7	1.5	5
Chromium (Cr)	100	150	600
Copper (Cu)	100	150	600
Mercury (Hg)	0.5	1	5
Nickel (Ni)	50	75	150
Lead (Pb)	100	150	500
Zinc (Zn)	200	400	1500
Polychlorinated Biphenyls (PCB's)	-	-	0.4
Polycyclic Aromatic Hydrocarbons (PAH's)	-	-	3
Impurities >2mm ^{Note 6}	<0.5%	<0.5%	<3%
Gravel and Stones >5mm ^{Note 6}	<5%	<5%	-

Note 1: These limits apply to the compost and stabilised biowaste just after the composting phase and prior to mixing with any other materials.

- Note 2:** Incoming sludges (other than sewage sludges) shall be monitored quarterly (on a client by client basis) for the parameters outlined in this table in addition to Selenium (Se) and Molybdenum (Mo).
- Note 3:** Monitoring of Arsenic (As) is required if waste timber is used in the composting process.
- Note 4:** The above alone should not be taken as an indication of suitability for addition to soil as the cumulative metal additions to soil should be first calculated.
- Note 5:** Normalised to 30% organic matter content.
- Note 6:** Compost must not contain any sharp foreign matter measuring over a 2 mm dimension that may cause damage or injury to humans, animals and plants during or resulting from its intended use.

3. Pathogens

Pathogenic organisms content must not exceed the following limits:

- Escherichia coli $\leq 1,000$ CFU/g fresh weight; and
- Salmonella species absent in 25 g sample.

4. Monitoring

The licensee shall submit to the Agency for its agreement, prior to commencement of compost operations, details of methods of analyses, methods of sampling and sample numbers.

The analyses shall be carried out:

- (a) every six months for plants producing more than 500 and up to 1,000 tonnes of treated biowaste per year;
- (b) at intervals of at least every 1,000 tonnes of treated biowaste produced or every 3 months, whichever comes first, for plants producing more than 1,000 and up to 10,000 tonnes of treated biowaste per year;
- (c) every month for plants producing more than 10,000 tonnes of treated biowaste per year.

Schedule E above replaces Schedule E .of the existing licence.

This technical amendment shall be cited as Amendment A (in pursuance of Section 42B(1) of Waste Management Acts 1996 to 2005) to Waste licence Reg. No. W0195-01 which was granted on 21/07/2005.

Sealed by the seal of the Agency on this the 25th day of October, 2006.

**PRESENT when the seal of the Agency
was affixed hereto:**

Padraic Larkin, Director/Authorised Person

APPENDIX 2.2
Notes on Infrastructure

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Notes on Infrastructure

Extension to Composting Facility, Thornton Recycling,
Ballynalurgan, Kilmainhamwood, Co. Meath.

Date: July '09 Revised 01/10
Location: Kilmainhamwood, Co. Meath
Client: Thornton Recycling
Job: D1201

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Burke Jenkins
Consulting Engineers
Unit G3
Calmount Park
Ballymount
Dublin 12
01 4500694 tel
01 4264340 fax

The subject proposal involves both front & rear extensions to the existing composting facility. All services and drainage exists on site therefore the inclusion of the extensions will result in only minor adjustments to the existing drainage. The existing entrance is to be adjusted by setting back the existing fence in order to achieve 240m sightlines. Therefore access sightlines remain as detailed in the previous planning application for the facility.

Water Supply:

The existing watermain on site will remain unaltered. The existing source of water is from an on site well pumped through a 100 diameter watermain supplying the facility. It is proposed to treat this water by filtration and chlorination at the point of entry to the office building and to use this treated well water as the water supply. Test samples of the water generally comply with the requirements of the EC drinking water directive.

Foul Sewer:

The existing temporary portacabin offices will be replaced by the office/staff facilities detailed within this application. The existing treatment plant on site was designed with a total flow of 720 l/day.

The proposed office building is designed to serve both office staff and staff directly working at the composting process. The maximum number of persons on site will be 10.

As per the E.P.A. Guidelines for Treatment Systems for Small Communities, Business, Leisure Centres and Hotels – Table 3, the estimated loading rate per person for Industrial Office without canteen is 30 l/day. There will be no food preparation or cooking carried out on site.

$10 \text{ persons} \times 30 \text{ l/person/day} = 300 \text{ l/day}$ This is less than the design flow of 720l/day

Therefore the existing treatment plant and associated percolation area is more than adequate to serve the subject proposal as detailed in the attached documents.

Surface Water:

The existing facility is served by two networks of surface water pipes, the first collecting roof water and the second collecting runoff from the yard. The yard runoff passes through a petrol interceptor and discharges to an adjacent stream. As the yard has only had a minor increase in area the existing 300 diameter headwall and pipe and petrol interceptor will remain adequate and in use.

The roof water currently has a separate outfall to the adjacent stream.

The existing facility has a roof area of 4850m²

The proposed front extension has a roof area of 965m²

The proposed rear extension has a roof area of 1040m²

The additional 2005m² will be served by the existing 225 diameter surface water drain, some of which will be relocated to facilitate the new footprint of the proposed building.

Existing 300 diameter surface water outfall capacity: 78 l/sec

Existing flow from the facility:	48.5 l/sec
Proposed additional flow from the rear extension:	10.4 l/sec
Proposed additional flow from the front extension:	9.65 l/sec
Total:	68.55 l/sec

This is less than the capacity of the 300mm diameter outfall

The above flows are based on rainfall intensity of 36mm/hr. The existing surface water pipework has capacity for the flows relating to both proposed extensions.

At the request of Meath Co. Council it is proposed to provide stormwater attenuation for the entire extended facility. An existing forested area has been identified to act as a detention basin for the 1in 100 year storm subject to a flow restriction equal to the 1 in 1 year greenfield run off rate. The two streams of rainwater will be combined upstream of the flow control which will then discharge through the existing 300mm Diameter outfall. The yard water will be treated through a silt trap and a petrol interceptor.

The existing petrol interceptor is a class 1 Bypass interceptor, Type CP10BP by Carlow Precast Tanks. A copy of the detail is submitted. This has a nominal flow rate of 10l/sec and a storm flow rate of 100l/sec.

Currently the yard area draining through this interceptor is 5918Sq mrs and after extension is increased to 6073 Sqmrs. Based on a storm flow rate of 100 l/sec this equates to a storm rainfall rate of 59mm/hr. The design flow rate based on BS EN 752-4 is 1 year return. This is a flow rate of 25mm/hr based on the Met office data. On this basis the petrol interceptor is satisfactory and the storm events that exceed 59mm/ hr are highlighted on the attached rainfall profile.

The silt trap is a Carlow Precast grit trap of 1.6 Cumr capacity, detail attached, there are no particular design requirements for this item. It is inspected periodically and emptied as required.

Both of these items, silt trap and petrol interceptor are inspected and maintained regularly. Records of inspections and maintenance are kept on site in accordance with the terms of the EPA Waste licence.

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Extreme Rainfall Return Periods

Location: Newtownforbes, Co. Longford (USED FOR KILMAINHAMWOOD)
 Average Annual Rainfall: 980

Maximum rainfall (mm) of indicated duration expected in the indicated return period.

Duration	Return Period (years)								
	1/2	1	2	5	10	20	50	100	
1 min				1.7	2.1	2.5	3.1	3.6	
2 min				2.9	3.7	4.3	5.4	6.2	
5 min				5.2	6.6	7.9	9.8	11.3	
10 min				7.5	9.5	11.4	14.4	16.7	
15 min	5.1	6.4	7.2	9.8	12.1	14.6	18.6	22	
30 min	6.8	8.5	9.8	12.9	15.7	18.8	24	28	
60 min	8.9	11.0	12.9	16.5	19.9	24	30	35	
2 hour	11.7	14.2	15.9	20.9	25	30	36	42	
4 hour	15.8	19.1	21.0	27	32	36	44	51	
6 hour	19.1	22.9	25	32	37	43	51	59	
12 hour	24.4	29	32	40	47	53	64	72	
24 hour	30	36	39	48	56	64	75	85	
48 hour	37	43	47	58	67	76	89	100	
96 hour									

RAINFALL EVENTS
 OUTSIDE CAPACITY OF
 PETROL INTERCEPTOR.

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Notes: Larger margins of error for 1, 2, 5 and 10 minute values and for 100 year return periods
 M560: 19.1 M52d: 55 M560/M52d: 0.30

RAINFALL
 USED FOR
 ATTENUATION
 DESIGN.
 100 YEAR.

CARLOW PRECAST

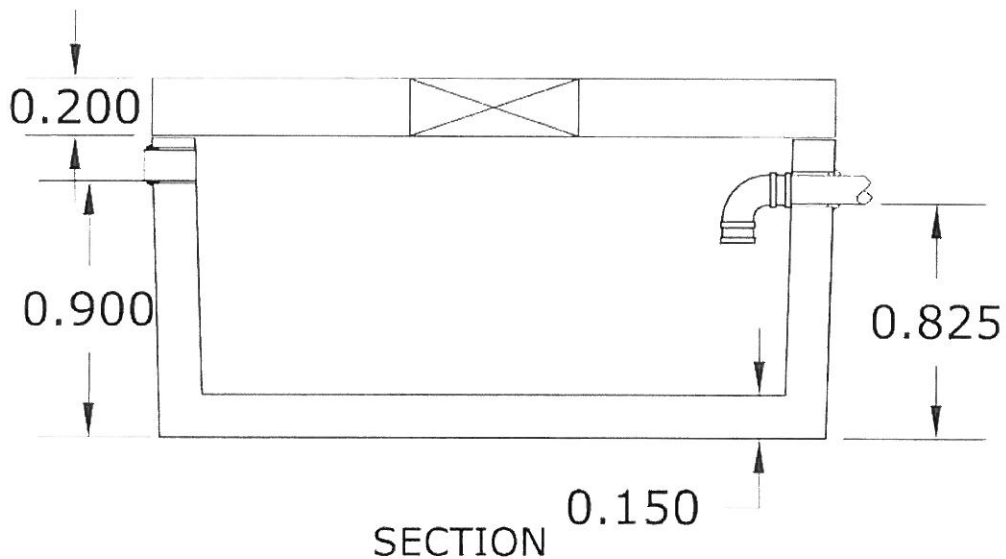
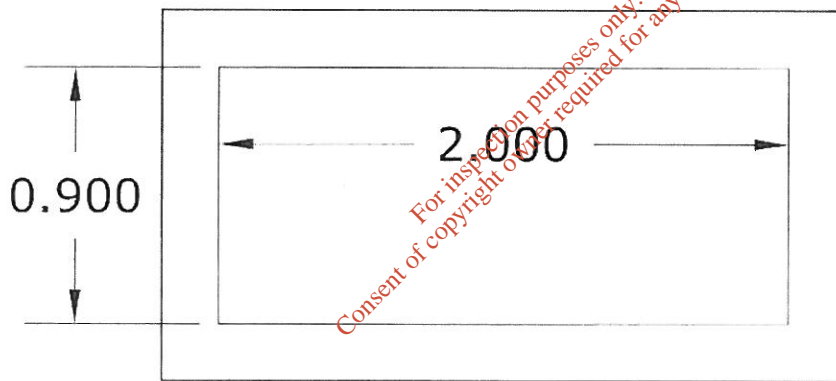
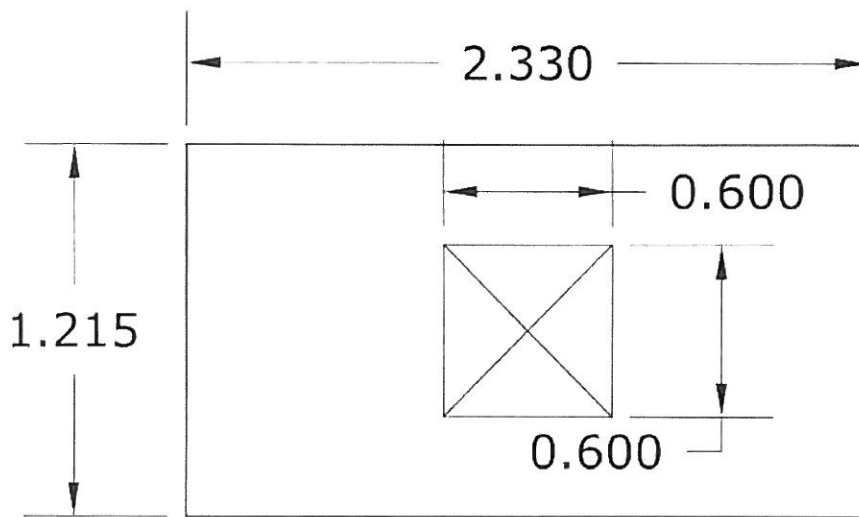
Concrete Engineering

DRAWING TITLE: Drawn By: C. Cleary

HEAVY DUTY GRIT
TRAP & PRECAST
CONCRETE LID.
GENERAL LAYOUT

Date: 15/12/09

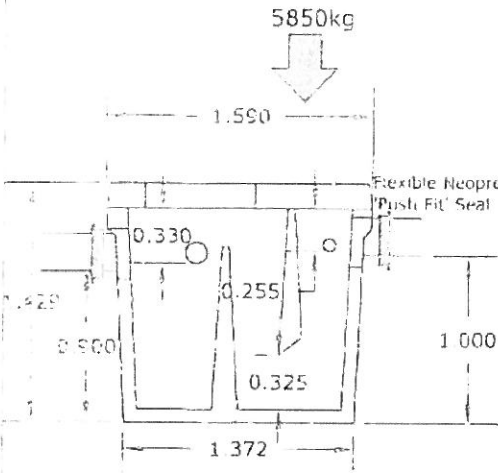
Revision: 0



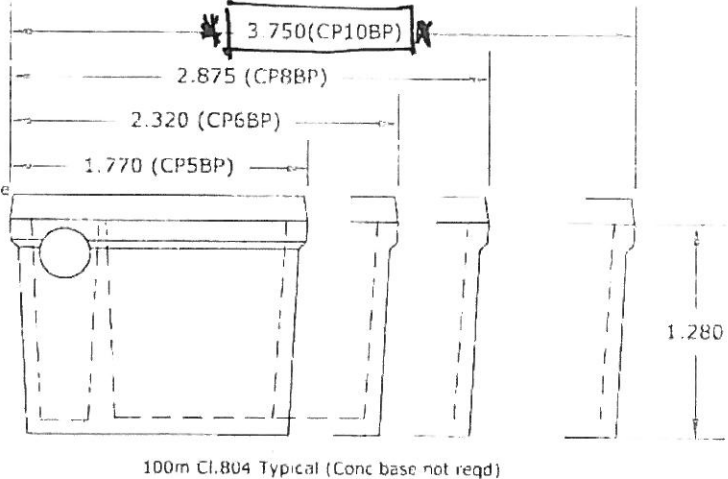
CARLOW PRECAST TANKS LTD

Market Place, Co. Carlow Tel: 05991 59202 Fax: 05991 59202 E-mail: sales@carlowprecasttanks.com
 Range of Tanks of 500L and 1000L from Pump Chambers, Reservoirs, Interceptors and Special Products

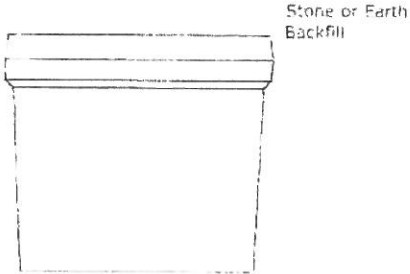
Range of types of tanks are CP5BP, CP6BP, CP8BP & CP10BP
 (also CP11 to CP15BP)



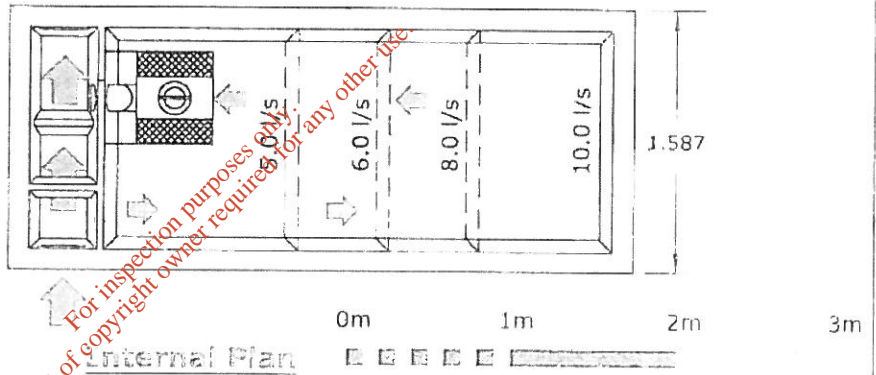
5850kg
 Top Section (9")



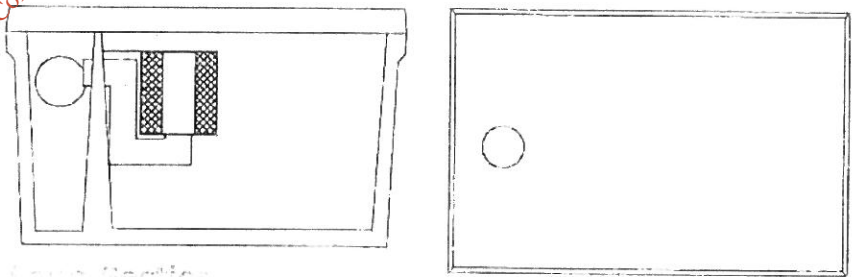
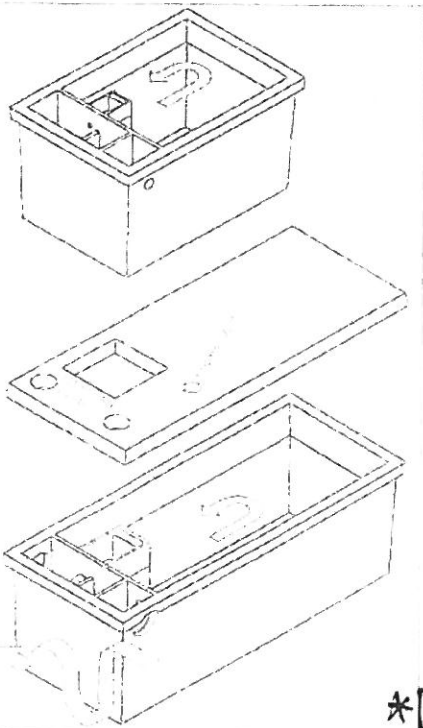
Side Elevation



Front Elevation



Internal Plan



Long Section

	Minimal Flow	Storm Flow	Area Drains	Standard 1m x 1m	Crossfall	Invert to Base	1m Invert	1m Oil Storage
CP5BP	5.0 l/s	50 l/s	0.281 a	110 Dia	75mm	1115mm	500mm	500 l
CP6BP	6.0 l/s	60 l/s	0.35 a	150 Dia	75mm	1075mm	500mm	575 l
CP8BP	8.0 l/s	80 l/s	0.45 a	225 Dia	100mm	1000mm	500mm	1200 l
CP10BP	10.0 l/s	100 l/s	0.50 a	300 Dia	100mm	950mm	500mm	1450 l

APPENDIX 2.3
Wastewater Treatment System

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Oakstown, Trim
 Co. Meath
 Tel: 046 - 943 - 1389
 Fax: 046 - 943 - 7054

E: info@oreillyoakstown.com
 W: www.oreillyoakstown.com
 V.A.T. Reg. No.: IE 6401624D
 Company Reg. No.: 381624



Date: 30th November 2006

Applicant Name: Thornton Recycling

Site Address: Ballynalurgan, Kilmainhamwood, Co. Meath.

Design Capacity: Maximum number of residents: 4 PE

A representative of *O'Reilly Oakstown Ltd* has assessed the Soil Test Report and confirms the suitability of their BAF Sewage Treatment System to treat effluent being discharged from the above proposed dwelling based on the residential demands submitted to us above.

Percolation:

The percolation area designed must conform to the requirements of Table 13 of EPA Wastewater Treatment Manual – Treatment Systems for Single Houses “Details of a Typical Percolation Trench”.

The percolation area requirements are as follows:

- P-value: - as per Site Characterisation Form.
- Depth from ground surface to water table: 1.3m BGL (mottling @ 0.6m BGL)
- Depth from ground surface to bed rock: >2.2m BGL.
- Length of percolation trench: 64 linear meters.
- Percolation Trenches must be covered in 25-40mm drainage stone.
- These trenches must be covered in geo-textile cover then in topsoil.
- Percolation area to be excavated to a depth of 0.6m or the level of the soil mottling and replaced with soil having a “t” value of 15-30 to a level of 0.8m above existing ground level.

Design Parameters used in Secondary Treatment of the Oakstown BAF Sewage Treatment System

Maximum Organic Load Applied:	0.45 BOD/day
Operating Loading Rate:	0.1
Operating MLSS (Typical Maximum Value):	3,000 mg/litre
Required Aeration Tank Volume:	1,500 litres
Aeration Capacity Provided:	1,865 litres
Additional Capacity Provided:	365 litres
Amount of Oxygen Provided:	2.3kg/day
Air Volume Adequate to provide 02:BOD ration of:	5:1



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W: www.oreillyoakstown.com
V.A.T. Reg. No.: IE 6401624D
Company Reg..No.: 381624



Typical Waste Water Quality after Secondary Treatment of the Oakstown BAF Sewage Treatment System

Volume:	2,000litres/day
pH – similar to pH of drinking water & usually:	6.0 to 8.5
Biochemical Oxygen Demand, (BOD) as O:	< 20mg/litre
Suspended Solids, w/v:	< 30mg/litre
Ammonia as N:	< 10mg/litre
Nitrate as N:	5 – 10 mg/litre

The maximum number of persons in a single dwelling served by an Oakstown BAF Sewage Treatment System is 10.

The above site would be suitable for our BAF Treatment System providing the above recommendations are adhered to and O'Reilly Oakstown Limited installs the unit.

Maintenance:

O'Reilly Oakstown Ltd. undertakes to maintain the system free of charge for the first year and thereafter, we provide a maintenance contract (copy attached) to service and inspect the system twice a year at a rate of €150 annually. On each serviced visit a detailed Maintenance Report Form is completed.

Please do not hesitate to contact us if there are any further queries.

Yours sincerely

Colleen Mc Cabe



this reduction the micro-organisms themselves require an adequate supply of oxygen. Aeration is provided by an air pump which pumps air through fine bubble diffusers thus raising the dissolved oxygen level in the chamber and distributes the liquid through the bio-media. The treated liquid then passes into the second chamber which is the clarification section.

The sides of this chamber or Clarifier are sloped at an angle of 60° to enable the collection of settled sludge in the centre of the chamber from where it is removed by air-lift pump to be returned to the primary settling tank. After settlement the treated liquid passes by displacement into the third chamber which is fitted with a submersible pump. This pump is fitted with a float switch which is activated when the treated water level reaches a pre-determined level in the chamber. The pump operates automatically in response to the rise and fall in liquid level in the discharge chamber. The pump has a low power rating of 600 watts, and is expected to operate for periods of about 10 minutes every 4-5 hours (approximately) each day.

Once activated it pumps the treated water to the percolation area. The process of returning the settled sludge to the primary treatment tank will enhance the nitrogen reduction capacity of the Oakstown BAF System by facilitating de-nitrification of some treated water as it passes through the primary treatment tank.

The cover of the discharge chamber has an inspection point for sampling purposes.

The disposal method can be by a conventional subsurface percolation system, or a raised (or mound) percolation system.

Table 1: Oakstown BAF Sewage Treatment System – basic information

Total System Capacity (litres)	2x4000
Aeration (twin zone) (litres)	1260
Clarifier (litres)	1040 l
No. of tanks	2
Population served	10
Tank weights (kg)	1x 3500 & 1x 3500
Inlet invert pipe depth	560mm on entry of sewer pipe
Tank bottom	1530 mm below invert
Overall width (mm)	1470 / tank
Overall length (mm)	2740 / tank
Overall height (mm)	1780 / tank
Discharge pump rating (kW)	0.6
Aeration pump (W)	85

TWO CHAMBER PRIMARY HOLDING TANK

THREE CHAMBER BAF UNIT

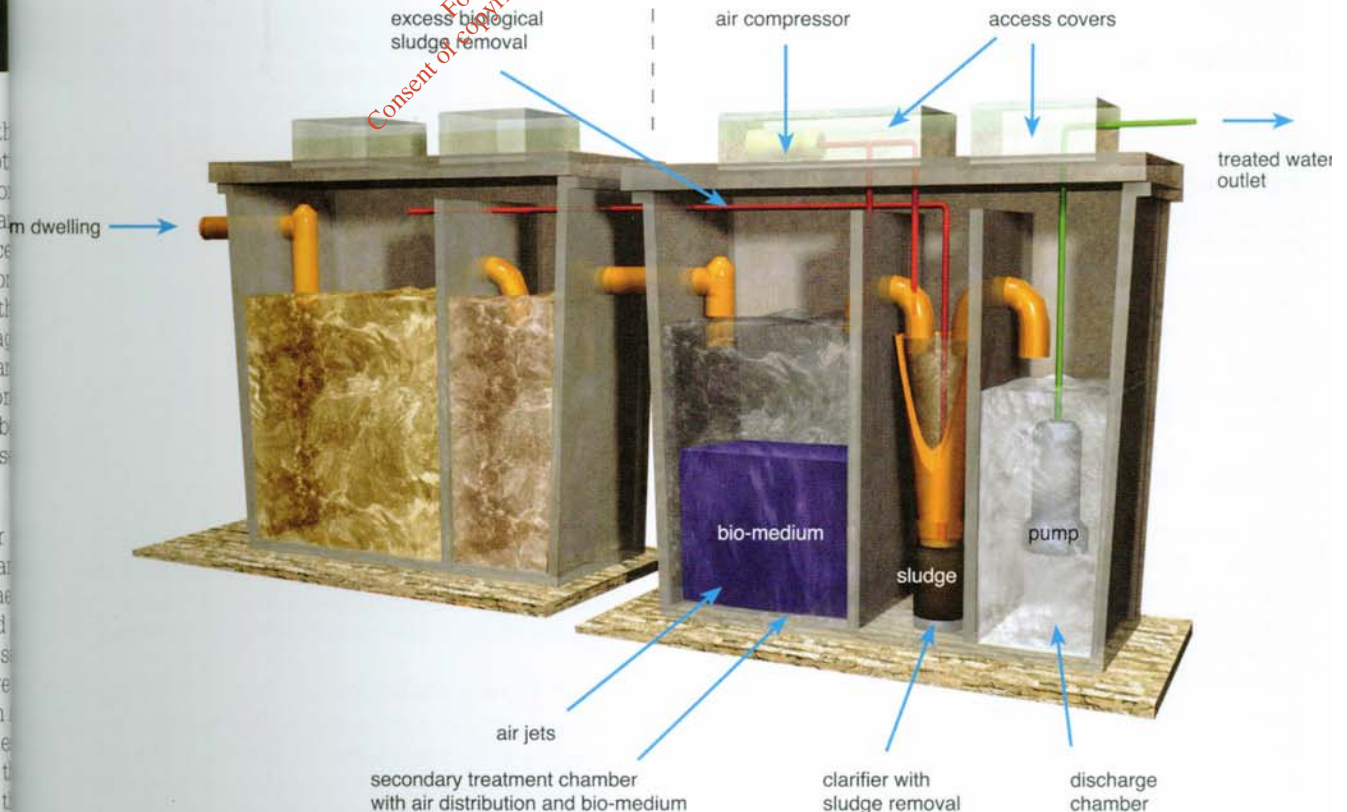


Fig. 1. Showing a cross-section through the Oakstown BAF Sewage Treatment System

APPENDIX 2.4
Annual Environmental Reports

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Ref no: RNP 6-1 (Comp-6)

5 October 2009

Padraig Thornton Waste Disposal Ltd
T/a Thorntons Recycling Ltd
Unit S3B
Parkwest Business Park
Dublin 12

RE: European Communities (Transmissible Spongiform Encephalopathies and Animal By-Products) Regulations of 2008 (S.I. No. 252 of 2008 as amended by S.I. No. 291 of 2009 and S.I. No. 345 of 2009) and Regulation (EC) No. 1774/2002

I am directed by the Minister for Agriculture, Fisheries & Food to inform you that you have been approved to operate Kilmainhamwood Compost located at Ballynalurgan, Kilmainhamwood, Kells, Co. Meath as a Composting Plant from **8th October 2009 to 7th October 2011**, in accordance with Part 4 of the European Communities (Transmissible Spongiform Encephalopathies and Animal By-Products) Regulations of 2008 (S.I. No. 252 of 2008 as amended).

The official **approval number** allocated to your composting plant is **COMP - 6** and your approval is subject to the following conditions:

SPECIFIC PLANT CONDITIONS:

1. The plant may accept Category 2 manure and digestive tract content separated from the digestive tract, as detailed in **Article 5(1)(a)**, milk and colostrum as detailed in **Article 5(1)(c)** of Regulation (EC) No 1774/2002.
2. The plant may accept the following Category 3 material:
 - Feathers as detailed in **Article 6(1)(c)**
 - Former foodstuff waste as detailed in **Article 6(1)(f)**
 - Raw milk as detailed in **Article 6(1)(g)**
 - Fish waste as detailed in **Article 6(1)(h)** and **Article 6(1)(i)**
 - Shells, hatchery by-products and cracked eggs as detailed in **Article 6(1)(j)**
 - Catering waste as detailed in **Article 6(1)(l)** of Regulation (EC) No 1774/2002 and defined in **Annex 1** of this Regulation.
3. The plant must not accept any other Animal By-Products, as defined in **Article 2(1)(a)** of Regulation (EC) No 1774/2002.
4. The plant must process the above mentioned approved Category 2 and 3 material using EU processing standards:
 - (a) Maximum particle size before entering the composting reactor:
12mm

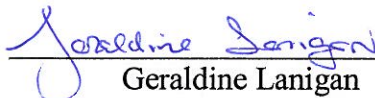
- (b) Minimum temperature in all material in the reactor: 70°C
(c) Minimum time in the reactor at 70°C (all material): 60 minutes
4. The plant's HACCP must be implemented and must be updated and modified as required.
 5. Unless otherwise directed by the Department of Agriculture, Fisheries and Food (DAFF), every batch of material, immediately after processing must be sampled for E-coli. Every batch of end product must be sampled for Salmonella. Batches for Salmonella testing may comprise of up to one months production of compost. Microbiological analysis must be carried out at a DAFF approved laboratory. In the event of a sample failure, DAFF must be notified immediately.

GENERAL CONDITIONS

1. The plant must meet the requirements of Regulation (EC) No 1774/2002, S.I. No. 252 of 2008 as amended, S.I. No. 253 of 2008, and all other relevant legislation.
2. Plant management must ensure that all necessary conditions as outlined in the attached document: "*Conditions for approval and operation of composting plants treating animal by-products in Ireland*" are complied with. These conditions may be subject to change.
3. Sale or supply of fertiliser or soil improvers must be in accordance with S.I. No. 253 of 2008, Regulation (EC) No 181 of 2006 and the Conditions for approval and operation of composting plants treating animal by-products in Ireland.
4. DAFF must be notified immediately of any changes in the registered company name or in plant management.

Please note that failure to comply with these conditions may result in enforcement proceedings or the suspension or withdrawal of your approval.

For the Minister for Agriculture, Fisheries and Food



Geraldine Lanigan
Higher Executive Officer

An Officer authorised in that behalf by the said Minister.

Ref No: RNP 6-1 (Comp-06)

20 August 2009

Mr Gary Brady
Padraic Thornton Waste Disposal Ltd (PTWDL)
Unit 53B Henry Road
Park West Business Park
Dublin 12



Dear Mr Brady

I refer to your 1st Stage application dated 17th July 2009, to upgrade Kilmainhamwood Compost, located at Ballynalurgan, Kilmainhamwood, Nobber, Co Meath.

I wish to inform you that a decision has now been made to approve in principle this 1st stage application.

Regarding the changes proposed in the feedstock acceptance area, this is acceptable in principle subject to satisfactory operation of changes and containment of animal by-products and waste water/leachate generated, so as to avoid environmental contamination.

Conditions for approval and operation of composting plants treating animal by-products in Ireland may be subject to review and amendment by the Minister from time to time to ensure compliance by an owner, operator or person in charge of a Plant as a consequence of changes to the EU or National legislation. The Minister may from time to time inter alia introduce new trader, or general notices relating to these conditions, which shall be published on the Department's web site and/or published in local or national press. It is the responsibility of an owner/operator, or person in charge of a Plant to ensure that a Plant operates in full compliance with all current legislation and other requirements governing the operation of a Plant.

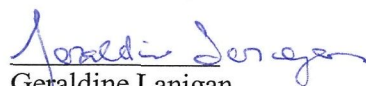
Any changes made to your 1st Stage application will deem this approval in principle invalid and a revised fully completed 1st Stage application must be submitted.

Please find enclosed a 2nd Stage application form for approval to treat animal by-products in composting or biogas plants in accordance with the European Communities (TSE and Animal By-Products) Regulations (S.I. No 252 of 2008 as amended by S.I. No 291 of 2009). Relevant sections of this application form relating to the upgrading of Kilmainhamwood Compost should be completed and submitted with all the required documentation including a validation proposal and revised sections of the Plant's HACCP, as early as possible during the upgrading of the Plant.

Please note that the new processing tunnels cannot be used prior to 2nd stage approval in principle being granted.

Should you have queries in relation to the above, you can contact me at 057- 8694343.

Yours sincerely



Geraldine Lanigan
Animal By-Products Section

1	<i>Introduction</i>	3
1.1	Operator	3
1.2	Reporting Period	3
2	<i>Facility Activities</i>	3
2.1	Waste Activities carried out at the Facility	3
2.2	Operation Processes – Waste Activities at the facility	4
2.3	Weighbridge Calibration	5
3	<i>Quantity and Composition of Waste Received, Recovered and Disposed of During the Reporting Period</i>	5
3.1	Waste Handled in Kilmainhamwood Compost	5
3.2	Waste Acceptance	6
3.3	Waste Received	8
3.4	Waste Disposed	8
4	<i>Contribution to the achievement of recovery targets</i>	9
4.1	Proposal for the contribution of the facility to the achievement of targets for the reduction of Biodegradable waste to landfill as specified in the landfill Directive	9
4.2	The recovery of non hazardous biodegradable waste	9
5.0	<i>Summary Report and Interpretations on Environmental Monitoring and Emissions Data</i>	10
5.1	Total Dust Deposition 2007	10
5.2	Noise Monitoring	10
5.3	Groundwater and Surface Water	11
5.3.1	Interpretation of Surface Water Analysis	16
5.3.2	Interpretation of Groundwater Analysis	18
6.0	<i>Resources and Energy Usage</i>	19
6.1	Electricity	19
6.2	Water	19
6.3	Diesel	19
7.0	<i>Development/Infrastructural Works</i>	20
7.1	Site Developments 2007	20
7.2	Proposed Developments 2008	20
7.3	Plant Capacity 2007	21
8.0	<i>Schedule of Environmental Objectives and Targets for 2008</i>	21
9.0	<i>Report on the progress towards achievement of the Environmental Objectives and Targets contained in the previous year's report</i>	22

10 Tank, drum, pipeline and bund testing..... 23

10.1 Pipeline Tests 23

11 Summary of Incidents and Complaints..... 23

11.1 Incidents 23

11.2 Complaints 23

12 Review of Nuisance Controls..... 23

12.1 Dust..... 24

12.2 Noise 24

12.3 Odour 24

12.4 Litter 24

12.5 Birds 24

12.6 Vermin..... 24

12.6 Mud..... 24

13 Management Structure, Programme for Public Information..... 24

14 Quantity of Compost Produced 2007..... 25

Prepared by:

Tom Mc Donnell – Facility Manager

Kilmainhamwood Compost, Ballymalurgan, Kilmainhamwood, Kells, Co. Meath

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1 Introduction

This report is the Annual Environmental Report for Kilmainhamwood Compost. It has been prepared in compliance with Condition 11.7 of the Waste Licence (Licence Reg. No. W0195-01) and includes emission details and reporting for the reporting period of 2007.

This licence was granted by the Environmental Protection Agency (EPA) to Padraig Thornton Waste Disposal Ltd (PTWDL) on the 30th January 2006. The contents of this report are as required by Schedule G of Waste Licence W0195-01.

1.1 Operator

The facility operator and licensee of licence number W0195-01 is Padraig Thornton Waste Disposal Ltd. This AER relates to Kilmainhamwood Compost, Ballynalurgan, Kilmainhamwood, Kells, Co. Meath.

The address and contact details for the company headquarters are;

Thorntons Recycling
Unit S3B Park West Business Park
Dublin 10.

Telephone: 01- 623 5133
Fax: 01- 623 5131
Site Contact: Tom McDonnell
Mobile: 086-8563431

1.2 Reporting Period

The reporting period for this Annual Environment Report (AER) is between the 01/01/2007 to the 31/12/2007.

2 Facility Activities

2.1 Waste Activities carried out at the Facility

Part 1 of the current Waste Licence W0195-01 lists those activities contained in the Third and the Fourth Schedule of the Waste Management Act 1996, which are licensed to be carried out at Kilmainhamwood Compost, Ballynalurgan, Kilmainhamwood, Kells, Co. Meath. These activities are as follows:

Third Schedule

Class 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 10 of this Schedule:
Class 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.

Fourth Schedule

Class 2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
Class 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.

2.2 Operation Processes – Waste Activities at the facility

The following section details the operational procedure for dealing with acceptable biodegradable waste that enters the Kilmainhamwood Compost Facility. (Appendix 1 details the Facility layout)

Standard Operation procedures in the Composting Building

On arrival the transportation vehicle bringing material to the facility is inspected and checked to ensure that it is clean and there are no residual materials on the truck body and that it is properly covered or netted. Passing inspection the vehicle is directed towards the weighbridge. After weighing the following information is recorded on our computerised system;

- a. Date
- b. The name of the carrier (including if appropriate, the waste carrier registration details),
- c. The vehicle registration number,
- d. The name of the producer(s)/collector(s) of the waste as appropriate,
- e. The name of the waste facility(if appropriate) from which the load originated including the waste licence or waste permit register number,
- f. A description of the waste including the associated EWC codes,
- g. The quantity of the waste, recorded in tonnes,
- h. The name of the person checking the load.

Once weighed the vehicle is directed to the reception hall, the door of the reception is opened and the vehicle is directed in, once inside the reception hall the door is closed. On clearance the driver is directed to tip load and the facility operator inspects the load whilst the load is tipping. The facility operator signs off the acceptance form and confirms if material is suitable for processing at the facility. Any material not suitable for processing or is in contravention of the licence is removed for temporary storage in a quarantine area. The quarantined material is removed off site ASAP by a licensed contractor for disposal as per waste acceptance procedure EP14 for Kilmainhamwood Compost.

Once tipping is complete the facility operator washes down the container with a steam power washer insuring no residual material remains. The door is opened and the driver is directed to leave the reception hall and to the weighbridge for weighing where he will be given a weighbridge docket. The vehicle then leaves the facility taking the exit route.

Inside the building the organic waste material suitable for composting is loaded into a batch mixer and is blended by weight with an amendment material. The typical blend is made up of 35% Seed Material, 40% sludge/grease trap waste and 25% food/catering waste. This mixer has capacity for a 12 tonne blend and delivers the blended material via a conveyor to a collection area where when a batch size of 120 tonnes is reached the materials are removed by a loading shovel and placed into an aerated bay. The material is given a unique sub-batch code which allows for full traceability of the ingredients of the batch and traceability of the batch through the facility. When

the bay is full the operator places one temperature probe into the material. The aeration is switched on which is controlled by a plc that brings the temperature to the required level. The composting material stays in this bay for two weeks. After this period the material is taken out of the bay and placed over the wall into Zone 3 (Appendix 1). The material is then placed into another bay and moisture is amended to the required level. A temperature probe is placed into the material and the aeration switched on. The composting material will stay in this zone for 4 weeks and will get one turn using a machine and a moisture amendment if required.

After this period the material is placed is taken into Zone 4 (Appendix 4) and screened through a 12mm screen. The oversize material is sent back to the start of the process as seed compost and the screened material is placed into an enclosed tunnel for pasteurisation. The tunnel can hold up to 25 sub-batches and when full the total material will be given a unique Batch Number for traceability. Once inside the enclosed tunnel the aeration is switched on and the temperature is brought to over 70°C for 60 consecutive minutes to satisfy the Animal By-Product Regulations (ABPR). After Pasteurisation the material is sampled in situ and the samples sent to an approved Laboratory for analysis. Once the material has passed the ABPR requirements and E.P.A. standards it can be classified as compost and taken out of the tunnel by a clean machine and loaded for transport off site to the appropriate end user.

Any material not meeting ABPR and EPA standards can be reworked in the facility to produce higher grade compost or transported to an appropriate landfill site as cover.

2.3 Weighbridge Calibration

The weighbridge was calibrated and certified by the legal metrology service on the 16th November 2006. A copy of this certificate is contained within Appendix 2.

3 Quantity and Composition of Waste Received, Recovered and Disposed of During the Reporting Period

3.1 Waste Handled in Kilmainhamwood Compost

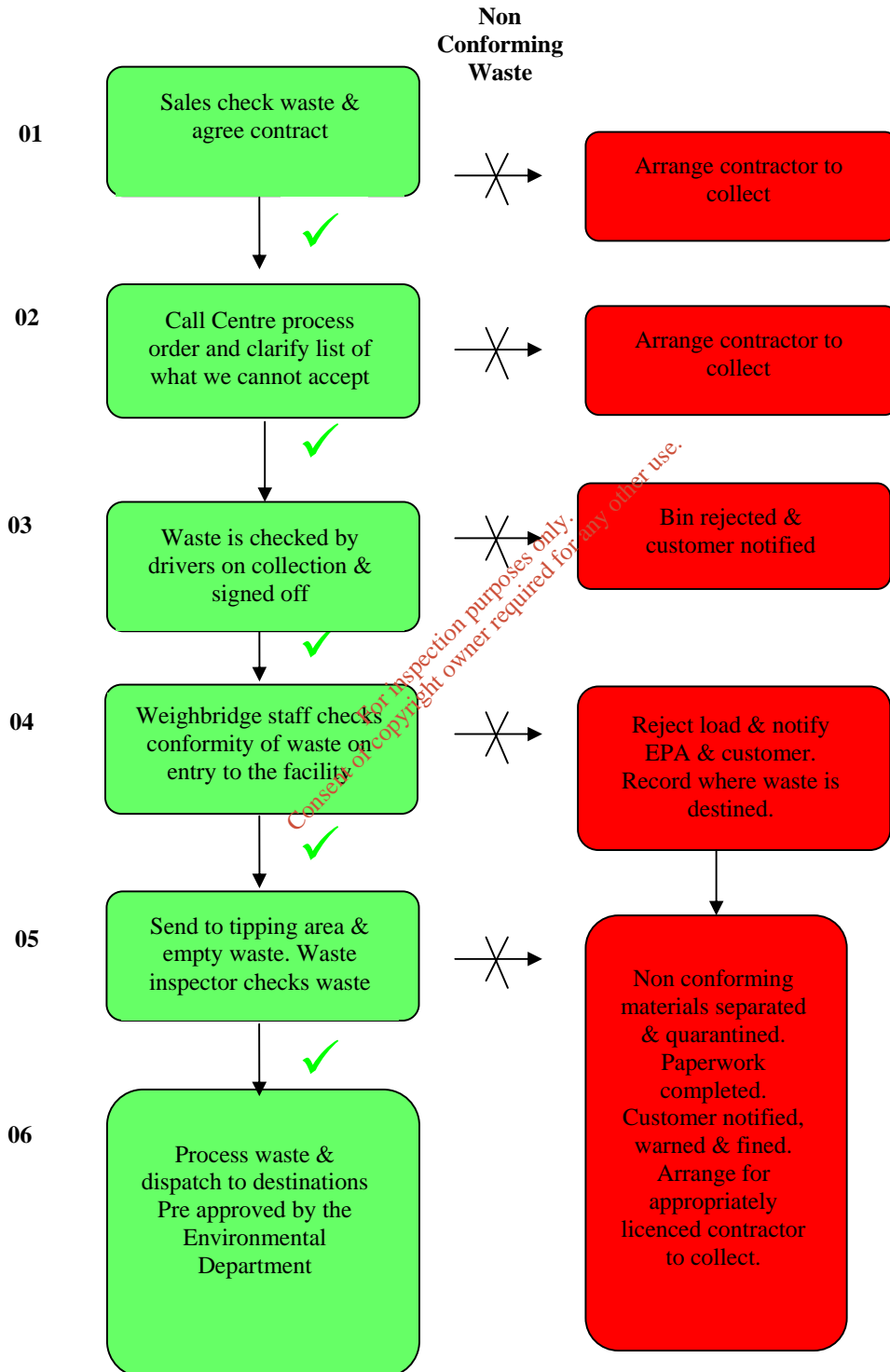
All waste is checked and documented at the weighbridge in accordance with our waste licence and our waste acceptance procedures. Waste is then inspected, processed and placed into our production system. The composting process takes up to 8 weeks to produce mature compost.

All compost produced since operations commenced in September 2006 to April 2007 was work in progress and this material had been used as seed compost for the operation process. This process is normally referred to as "ramping up" the facility. Mature compost started to leave the Facility on 14th April 2007 and was subjected to the quality analysis, as per Schedule E of the Licence W0195-01 and The Technical Amendment of the licence. Until the approval process for ABP from the Dept. of Agriculture was fully completed all compost produced went as inert landfill cover and for soil formation. Full approval under the ABP Regulations from the Dept. of Agriculture was received on 11th October 2007. A copy of the Approval Certificate is contained within Appendix 3.

Should any non-conforming waste come to the attention of our staff it is either rejected before collection or segregated and quarantined to be disposed of by a licensed contractor. Paperwork in relation to all non-conforming wastes is maintained on site.

3.2 Waste Acceptance

The following is a simplified diagram explaining our waste acceptance procedures at Kilmainhamwood Compost.



All new staff employed by the company in 2007 received an Environmental Induction which includes licence training, waste acceptance procedures, good practice in composting, emergency procedures and environmental awareness. All staff employed at the facility are diligent in assisting in eliminating the occurrence of non-conforming waste and producing a good quality compost at the facility.

As the Agency is aware Thorntons Recycling received certification in ISO14001 Environmental, ISO 9001 Quality, OHSAS 18001 Health and Safety in Dec 2006. In implementing the new Integrated Management System (IMS) new procedures, programmes and forms were developed and the Kilmainhamwood Compost site was integrated into the IMS system and achieved ISO 14001 Environmental, ISO 9001 Quality and ISO 18001 Health and safety certification in May 2007. The IMS system is available for inspection on the IMS drive at all company site offices.

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3.3 Waste Received

A total of 18,709 tonnes of waste was accepted at the facility in the reporting period from 1st January 2007 to 31st December 2007. As per E.P.A. licence W0195-01 Kilmainmhamwood compost can accept 20,800 tonnes of waste per annum. As this is the first year that the facility has been in operation for a full year no comparison study has been made with previous years for waste recovered or disposed.

Table 3.3.1 Quantity and Composition of Waste Received 2006-2007

EWC Code	Materials Received	2006	2007
19 08 05	Sludge Urban Waste Water	891	7,985
02 02 04	Sludge Food Prep Animal Orgin	-	195
20 01 25	Grease Trap Waste	256	981
02 03 04	Unsuitable food waste	391	1,662
20 01 08	Compostable Food Waste	1697	4,335
02 07 04	Unsuitable Alcohol/Liquid	-	120
02 06 01	Bakers Waste	-	48
03 01 05	Waste Manufacturing Wood	19	159
20 02 01	Compostable Green Waste	295	767
16 03 04	Products for Destruction	94	-
02 07 05	Sludge Alcohol/non-Alcohol	-	75
19 09 01	Screening Waste Water	-	104
02 01 01	Sludge Agri Washing	-	268
20 03 01	Mixed Muncipal Waste	-	204
20 03 04	Septic Tank Sludge	-	8
02 05 02	Sludge Dairy Industry	-	1798
	TOTAL TONNAGE		18 709

3.4 Waste Disposed

Of the total 18,709 tonnes accepted at the facility 504 tonnes of the material was not suitable for composting and was returned for landfill as a residual waste. The remaining material was suitable for composting and was sold as a product or returned into the operation to assist in the composting process and enable the production of a high grade compost.

4 Contribution to the achievement of recovery targets

4.1 Proposal for the contribution of the facility to the achievement of targets for the reduction of Biodegradable waste to landfill as specified in the landfill Directive

Progressive targets have been set out in the Landfill Directive (1999/31/EC) to reduce the proportion of biodegradable municipal waste landfilled. By 2006 Member States are restricted to landfilling a maximum of 75% of the total weight of biodegradable municipal waste generated in 1995, the baseline year. This target is further reduced to 50% of the 1995 baseline by 2009 and 35% by 2016. According to the National Waste Report 2005 which was recently published, an estimated 2,007,859 tonnes of biodegradable municipal waste was generated in Ireland in 2005 of which 65% was landfilled and the remaining 35% recycled. The report states that in 2005 the amount of biodegradable municipal waste landfilled was 101.4% of the 1995 baseline figure, showing that the country has a long way to go in reversing this trend and meeting the landfill directive targets.

Kilmainhamwood Compost, Ballynalurgan, Kilmainhamwood, Kells, Co. Meath have been successfully contributing towards National Targets and diverted approximately 18,709 tonnes of biodegradable waste from landfill for composting in 2007. This material would have historically gone for disposal to licensed landfills.

Thorntons Recycling can now offer all their customers the opportunity to segregate all biodegradable waste at source and with the development of Kilmainhamwood Compost can offer a composting alternative to all its customers. Having opened our licensed facility in September 2006 at Ballynalurgan, Kilmainhamwood, County Meath, (Waste Licence W0195-01) it has proven to be very successful. The facility accepts non-hazardous biodegradable wastes (including sewage sludge, industrial sludges, household and commercial waste for composting). The development of such a facility and the service we can offer will hopefully enable a continued increase in the tonnage of biodegradable waste being diverted from landfill by Kilmainhamwood Compost.

Kilmainhamwood Compost will aim to continue to increase the quantity of biodegradable waste that can be diverted from landfill even further and assist Ireland in achieving Targets laid down by the landfill Directive (1999/31/EC).

4.2 The recovery of non hazardous biodegradable waste

All non hazardous biodegradable waste arrives at the facility and when accepted is tipped in the reception hall. After inspection the material is amended with other organic material such as wood chip or sawdust in order to create a blend with a Carbon: Nitrogen ratio of 30: 1, moisture content of 65% and with an open texture. This material will be placed into our composting bays and achieves temperatures in excess of 60°C. After 3 weeks the material is screened and the screened compost is placed into pasteurization in order to comply with the ABP Regulations, 70°C for 60mins with a 12mm particle size. After a total period of 8 weeks the composting material will have matured and using Schedule E of Licence W0195-01 can be classified in either a class I or class II compost. Any end product not meeting this standard can be reworked in the process or classified as a stabilized bio-waste and disposed of in an approved landfill site.

5.0 Summary Report and Interpretations on Environmental Monitoring and Emissions Data

In accordance with Schedule D of PTWDL waste licence W0195-01 monitoring of dust, noise, surface water, groundwater and air microbes were carried out during the reporting period. The following section details results obtained and interpretations of results.

5.1 Total Dust Deposition 2007

Three fixed monitoring locations (DA, DB and DC) were used to perform total dust deposition monitoring quarterly over the 30 day sampling period as per Waste licence W0195-01. The monitoring locations are presented in Appendix 1. The results presented in *Table 5.1* illustrate that total depositional dust at all locations. All dust depositions levels were under the guideline limit recommended by the EPA as per conditions of W0195-01.

Table 5.1 Average ambient Total dust deposition concentrations at three monitoring locations at the Kilmainhamwood Compost facility, Kilmainhamwood, Co. Meath.

Location	Unit	Feb-07	Jun-07	Sep-07	Dec-07
DA	mg/m ² /day	143	142	78	58
DB	mg/m ² /day	163	80	92	44
DC	mg/m ² /day	7460*	224	Damaged	62

* High result due to contamination with leaves, Dc was relocated

5.2 Noise Monitoring

The noise survey was carried out at the location N1 referenced in the waste licence (see map attached Appendix 1). Monitoring was carried out on a quarterly basis as per Schedule D of waste licence W0195-01. The monitoring results are presented in *Table 5.2*. The results presented in *Table 5.2* illustrate that recorded noise levels at all locations. Reports have been submitted to the EPA as per waste licence requirements and all levels displayed in *Table 5.2*. are below the emission levels set down by the waste licence W0915-01.

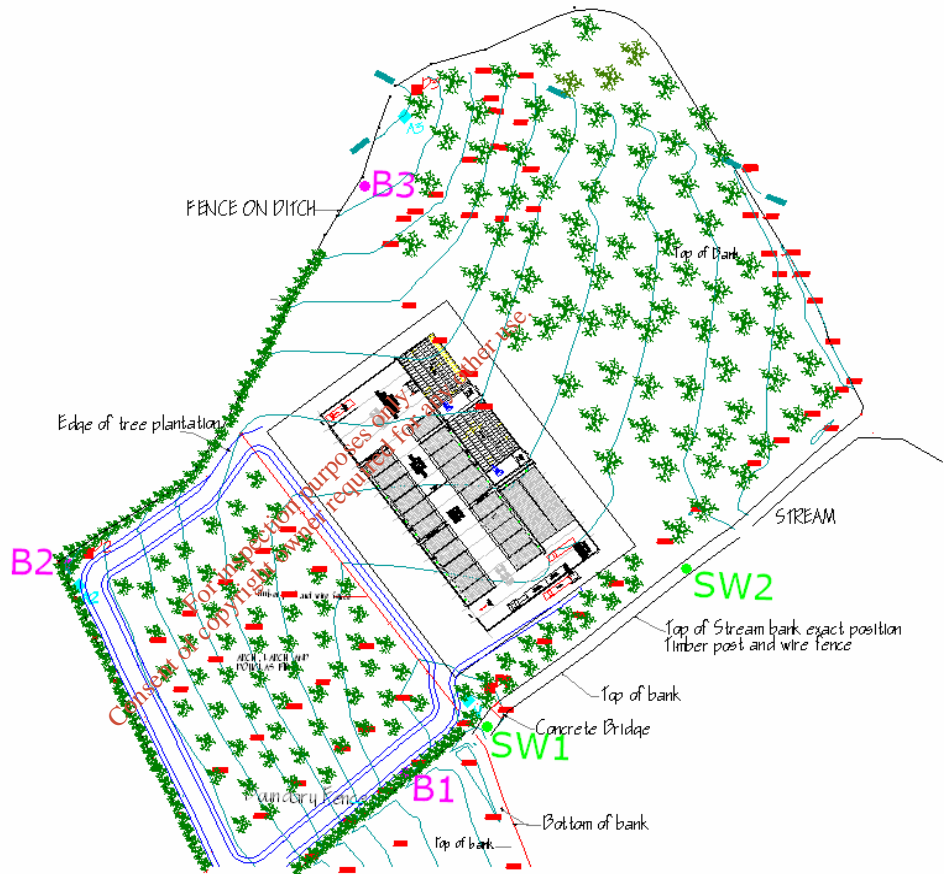
Table 5.2 Recorded Noise Levels dB(A) – Intervals 30 minutes

Location	2200	unit	April 07	July 07	Oct-07	Dec-07
N1	Day	Leq	43.6	44.8	44.8	48.4
	Day	L10	45.5	46.3	46.3	43.8
	Day	L90	41.7	42.1	42.1	41.5
	Night	Leq	37.5	38.6	38.6	39.8
	Night	L10	40.4	40.9	40.9	41.5
	Night	L90	33.6	34.2	34.2	30.8

5.3 Groundwater and Surface Water

As per Schedule D of waste licence W0195-01 Groundwater was monitored at B1, B2 and B3 bore wells and Surface Water was monitored quarterly at SW1 and SW2. Diagram 5.3.1 shows the locations of the monitoring points and the results are outlined in the tables below.

Figure 5.3.1 Monitoring Locations of Surface Water and Groundwater



SW1 -----Down stream Monitoring Point.

SW2-----Up stream Monitoring Point.

B1 -----Groundwater Well No.1 Monitoring Point.

B2 -----Groundwater Well No.2 Monitoring Point.

B3 -----Groundwater Well No.3 Monitoring Point.

The results of monitoring during the reporting period is recorded in the following tables.

MONITORING WELL B1: Chemical
Analysis of Groundwater.

Table 5.3.2

PARAMETERS	UNIT	21/06/06	25/07/2006	13/09/2007
FIELD ANALYSIS				
<i>General Water Quality Parameters</i>		mAoD(malin)	80.81m	80.81m
Colour	-	Clear	Reddish Brown	Clear
Conductivity @ 25°C	uS/cm	1,552	1,157	1,229
Odour	-	No Odour	No Odour	No Odour
pH	pH Units	7.75	7.54	7.33
Temperature	deg C	12.2	12.8	10.9
Ground Water Level	M			16.7
LABORATORY ANALYSIS				
<i>General Water Quality Parameters</i>				
pH	pH Units	7.6	7.4	7.6
<i>Inorganics</i>				
Ammonia	NH ₄ mg/l	<0.05	<0.05	<0.2
Calcium	Ca mg/l	206	-	168
Chloride	Cl mg/l	29	47	27
Nitrate	NH ₃ mg/l	2.5	-	<0.3
Phosphorous	P mg/l	<0.05	-	<0.05
Potassium	K mg/l	5.9	-	2.8
Ortho Phosphate	PO ₄ mg/l	<0.05	-	<0.04
Sodium	Na mg/l	25	-	26.5
Sulphate	SO ₄ mg/l	860	800	619
<i>Metals</i>				
Boron	B mg/l	0.32	-	0.42
Cadmium	Cd mg/l	<0.005	-	<0.004
Chromium (Total)	Cr mg/l	<0.01	-	<0.001
Copper	Cu mg/l	<0.01	-	<0.004
Iron	Fe mg/l	0.05	-	<0.002
Lead	Pb mg/l	<0.02	-	<0.001
Magnesium	Mg mg/l	75	-	58.39
Manganese	Mn mg/l	0.07	-	0.036
Nickel	Ni mg/l	<0.01	-	<0.008
Zinc	Zn mg/l	<0.01	-	0.114
<i>Bacteria</i>				
Feacal Coliforms	cfu/100ml		<1	<1
Total Coliforms	cfu/100ml		<1	800
<i>List I/II</i>				
Volatile Organic Compounds	mg/l		<0.001	<0.001
Semivolatiles	mg/l		<0.001	<0.001
Pesticides	mg/l		<0.00001	<0.00001

MONITORING WELL B2: Chemical
Analysis of Groundwater.

Table 5.3.3

PARAMETERS	UNIT	21/06/06	25/07/2006	13/09/2007
mAoD(malin)		86.93	86.93	86.93
FIELD ANALYSIS				
<i>General Water Quality Parameters</i>				
Colour	-	Slightly Rusty	Rusty Red	-
Conductivity @ 25°C	uS/cm	1,283	1,101	1,116
Odour	-	No Odour	No Odour	No Odour
pH	pH Units	7.62	7.27	7.1
Temperature	deg C	11.3	12.3	11.9
Ground Water Level	M			22.2
LABORATORY ANALYSIS				
<i>General Water Quality Parameters</i>				
pH	pH Units	7.6	7.4	7.49
<i>Inorganics</i>				
Ammonia	NH ₄ mg/l	<0.05	<0.05	<0.2
Calcium	Ca mg/l	187	-	175.1
Chloride	Cl mg/l	17	19	15
Nitrate	NO ₃ mg/l	2.6	-	<0.3
Phosphorous	P mg/l	<0.05	-	0.06
Potassium	K mg/l	3.6	-	2.8
Ortho Phosphate	PO ₄ mg/l	<0.05	-	0.03
Sodium	Na mg/l	42	-	39
Sulphate	SO ₄ mg/l	440	500	459
<i>Metals</i>				
Boron	B mg/l	<0.1	-	0.056
Cadmium	Cd mg/l	<0.005	-	<0.004
Chromium (Total)	Cr mg/l	<0.01	-	<0.001
Copper	Cu mg/l	<0.01	-	<0.001
Iron	Fe mg/l	0.02	-	<0.002
Lead	Pb mg/l	<0.02	-	<0.001
Magnesium	Mg mg/l	45	-	44.47
Manganese	Mn mg/l	0.85	-	0.154
Nickel	Ni mg/l	<0.01	-	0.003
Zinc	Zn mg/l	<0.01	-	0.012
<i>Bacteria</i>				
Feecal Coliforms	cfu/100ml		<1	<1
Total Coliforms	cfu/100ml		<1	3
List I/II				
Volatile Organic Compounds	mg/l		<0.001	<0.001
Semivolatiles	mg/l		<0.001	<0.001
Pesticides	mg/l		<0.00001	<0.00001

MONITORING WELL B3: Chemical
Analysis of Groundwater. Table 5.3.4

PARAMETERS	UNIT	21/06/06	25/07/2006	13/09/2007
FIELD ANALYSIS				
<i>General Water Quality Parameters</i>		mAOD(malin)		
Colour	-	Clear	Clear	Clear
Conductivity @ 25°C	uS/cm	541	23/05/1901	601
Odour	-	No Smell	No Odour	No Odour
pH	pH Units	7.78	07/01/1900	7.36
Temperature	deg C	11.9	11/01/1900	11.5
Ground Water Level	M			10
LABORATORY ANALYSIS				
<i>General Water Quality Parameters</i>				
pH	pH Units	7.7	7.6	7.82
<i>Inorganics</i>				
Ammonia	NH ₄ mg/l	<0.05	<0.05	<0.2
Calcium	Ca mg/l	83	-	90.27
Chloride	Cl mg/l	16	12	13
Nitrate	NH ₄ mg/l	5.2	-	1.6
Phosphorous	P mg/l	<0.05	-	0.12
Potassium	K mg/l	2.6	-	2.2
Ortho Phosphate	PO ₄ mg/l	<0.05	-	0.08
Sodium	Na mg/l	12	-	12.5
Sulphate	SO ₄ mg/l	64	68	90
<i>Metals</i>				
Boron	B mg/l	<0.1	-	0.035
Cadmium	Cd mg/l	<0.005	-	<0.004
Chromium (Total)	Cr mg/l	<0.01	-	<0.001
Copper	Cu mg/l	<0.01	-	<0.001
Iron	Fe mg/l	0.01	-	<0.002
Lead	Pb mg/l	<0.02	-	<0.001
Magnesium	Mg mg/l	17	-	17.36
Manganese	Mn mg/l	0.37	-	0.003
Nickel	Ni mg/l	<0.01	-	0.003
Zinc	Zn mg/l	<0.01	-	0.009
Bacteria				
Feecal Coliforms	cfu/100ml		<1	<1
Total Coliforms	cfu/100ml		<1	52
List I/II				
Volatile Organic Compounds	mg/l		<0.001	<0.001
Semivolatiles	mg/l		<0.001	<0.001
Pesticides	mg/l		<0.00001	<0.00001

Table 5.3.5: SW1 Results

		Feb-07	Jul-07	Aug-07	Sep-07	Nov-07
FIELD ANALYSIS						
<i>General Water Quality Parameters</i>						
Colour	-	Clear	Clear	Clear	Clear	Brown tint
Conductivity @ 25°C	uS/cm	276	436	-	-	645
Odour	-	No Odour	No Odour	No Odour	No Odour	No Odour
pH	pH Units	-	6.19	-	-	7.66
Temperature	deg C	7.3	15.4	-	-	11
LABORATORY ANALYSIS						
<i>General Water Quality Parameters</i>						
Total Suspended Solids	mg/l	<10	<10	<10	<10	<10
Mineral Oils	mg/l	<0.01	<0.01	<10	<0.01	<0.01
pH	pH Units	7.57	7.2	7.64	7.55	7.66
<i>Inorganics</i>						
Total Ammonia	NH ₄ mg/l	2.4	0.3	0.2	2.4	1
Chloride	Cl mg/l	13	15	15	19	19

Table 5.3.6: SW2 Results

		Feb-07	Jul-07	Aug-07	Sep-07	Nov-07
FIELD ANALYSIS						
<i>General Water Quality Parameters</i>						
Colour	-	Clear	Clear	Clear	Clear	Brown
Conductivity @ 25°C	uS/cm	282	484	-	-	645
Odour	-	No Odour	No Odour	No Odour	No Odour	No Odour
pH	pH Units	-	6.18	-	-	7.46
Temperature	deg C	7.2	15.6	-	-	11
LABORATORY ANALYSIS						
<i>General Water Quality Parameters</i>						
Total Suspended Solids	mg/l	<10	<10	<10	<10	<10
Mineral Oils	mg/l	<0.01	<0.01	<10	<0.01	<0.01
pH	pH Units	7.29	7.2	7.64	7.67	7.46
<i>Inorganics</i>						
Total Ammonia	NH ₄ mg/l	<0.2	0.3	0.2	<0.2	<0.2
Chloride	Cl mg/l	13	13	14	18	19

5.3.1 Interpretation of Surface Water Analysis

The sample taken from SW2 represents the background water quality in the stream adjacent to the composting plant on 20th February 2007. The conductivity of 282uS/cm suggests that the stream has a good base flow rate which is normal at this time of year following long periods of precipitation causing dilution with surface water run off. This is to be expected in winter months and a higher conductivity can be expected during drier periods when the base flow is not diluted by surface water run-off but is influenced by groundwater dilution. The temperature of 7.2C is considered normal considering the time of year. The suspended solid level of <10 mg/l shows how clear the water is and is normal after high rainfall periods. The pH is normal and the ammonia, chloride and mineral oil levels are low. Combining these results with the clarity of the water and the lack of odour, it is concluded that the stream on the day contained good quality water with no signs of pollution.

The sample taken on 20th February from SW1 is downstream of the main activities at the site. The Facility was operating as normal on the day of sampling. The water quality was almost identical at SW1 to the water quality at SW2. The only difference being the ammonia readings. However the ammonia level at SW1 is similar to the previous reading took on 25/07/07 before any waste activities started. In either case, the analyses show that site operations had no impact on the water quality on this occasion.

The sample taken from SW2 represents the background water quality in the stream adjacent to the composting plant on 27th July 2007. The conductivity of 484uS/cm suggests that the stream has a good base flow rate which is normal at this time of year following long periods of precipitation causing dilution with surface water run off. This is to be expected in winter months and a higher conductivity can be expected during drier periods when the base flow is not diluted by surface water run-off but is influenced by groundwater dilution. The temperature of 15.6C is considered normal considering the time of year. The suspended solid level of <10 mg/l shows how clear the water is and is normal after high rainfall periods. The pH is normal and the ammonia, chloride and mineral oil levels are low. Combining these results with the clarity of the water and the lack of odour, it is concluded that the stream on the day contained good quality water with no signs of pollution.

The sample taken from SW1 is downstream of the main activities at the site. The Facility was operating as normal on the day of sampling. The water quality was almost identical at SW1 to the water quality at SW2. In either case, the analyses show that site operations had no impact on the water quality on this occasion.

Results from sampling undertaken by EPA personnel on the 30th August 2007 indicated generally good water quality when compared to the Environmental Quality Standards (EQS) for surface waters set down by the EPA. However slightly elevated levels of mineral oil (0.082 mg/l) were recorded at SW2. It was decided to resample both SW1 and SW2 to confirm the earlier results as no source of mineral oils could be accounted for.

Samples were then collected by Kilmainhamwood Staff on the 27th September 2007 and submitted to Alcontrol Laboratories for analysis by WYG. Results from SW1 indicated moderate water quality. An elevated level of ammoniacal nitrogen (2.4 mg/l) was recorded. It is reported that a discharge pipe from a local farm yard enters the local stream close to sampling location, SW1 and as such is likely to have contributed to the elevated levels recorded.

Results from SW2 indicated good water quality with all parameters below their respective EQSs.

Samples were collected by a member of White Young Green staff on the 15th November 2007 and submitted to Alcontrol Geochem Laboratories, Ballycoolin, Dublin 11 for analysis. Results from SW1 indicated moderate water quality. A slightly elevated level of ammoniacal nitrogen (1.0 mg/l) was recorded. This represents a slight improvement in water quality when compared with the previous monitoring round in September 2007 which recorded an ammoniacal nitrogen of 2.4 mg/l. Results of analysis of the suspended solids content, mineral oil, pH and chloride indicated levels of these parameters well within the relevant water quality standards and consistent with recent monitoring rounds. Elevated levels of ammoniacal nitrogen were recorded at SW1. It has been reported that a discharge pipe from a local farm enters the local stream close to sampling location SW1 and as such is likely to have contributed to the elevated levels recorded. SW2 recorded good water quality.

Results from SW2 indicated good water quality with all parameters well below their respective Environmental Quality Standards (EQS's). Water quality was generally similar to that recorded at SW1 although ammoniacal nitrogen was much improved. Results of surface water sampling undertaken by WYG indicated moderate water quality at SW1 and good water quality at SW2.

5.3.2 Interpretation of Groundwater Analysis

Results from monitoring of groundwater locations were compared to the Interim Guideline Values from the EPA document "Towards Setting Guideline values for the Protection of Groundwater in Ireland. Sampling results were found to indicate moderate water quality and be generally consistent with the previous annual round of sampling in June 2006. Slightly elevated levels of magnesium (58.39 mg/l), zinc (0.114 mg/l) and total coliforms (880 cfu/100ml) were recorded at Monitoring Location A. Sulphate (619 mg/l) was significantly elevated above the IGV limit of 200 mg/l. Elevated levels of manganese (0.154 mg/l), sulphate (459 mg/l) and total coliforms (3 mg/l) were also recorded at Monitoring Location B. Monitoring Location C recorded elevated levels of total coliforms (52 mg/l) only. No faecal coliforms were recorded at any of the monitoring locations.

Groundwater samples were also analysed for VOC and SVOC as is required by the licence on an annual basis. All parameters analysed were recorded at levels below the laboratory detection limit.

Results of groundwater sampling at the Kilmainhamwood facility during September 2007 indicated impacted water quality with elevated levels of a number of parameters at monitoring locations A and B. Significantly elevated levels of sulphate were recorded at Locations A (619 mg/l) and B (459). Elevated coliforms (800 cfu/100ml) were also recorded at Location A. It must be noted that groundwater monitoring carried out in 2007 is similar to baseline data recorded before commencement of site activities in September 2006.

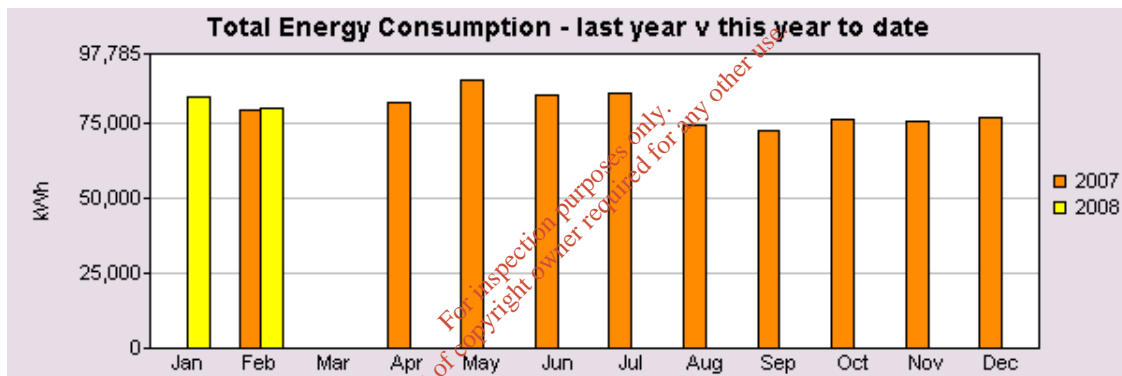
6.0 Resources and Energy Usage

The following section discusses resources such as Electricity, Fuel and Water used at Kilmainhamwood Compost in 2007.

6.1 Electricity

Operations started at the facility in September 2006. The facility was not connected to the National Grid until 23rd December 2006. The facility was powered by a 450Kva generator during this period and hence did not require any electricity from the National Grid so energy figures were not submitted for the AER for 2006. Therefore it is not possible to do a comparison study on the previous year for electricity consumption; however we can give an accurate estimation of consumption in 2007. This was 792,943 Kwh.

Figure 6.1 Energy Consumption 2007



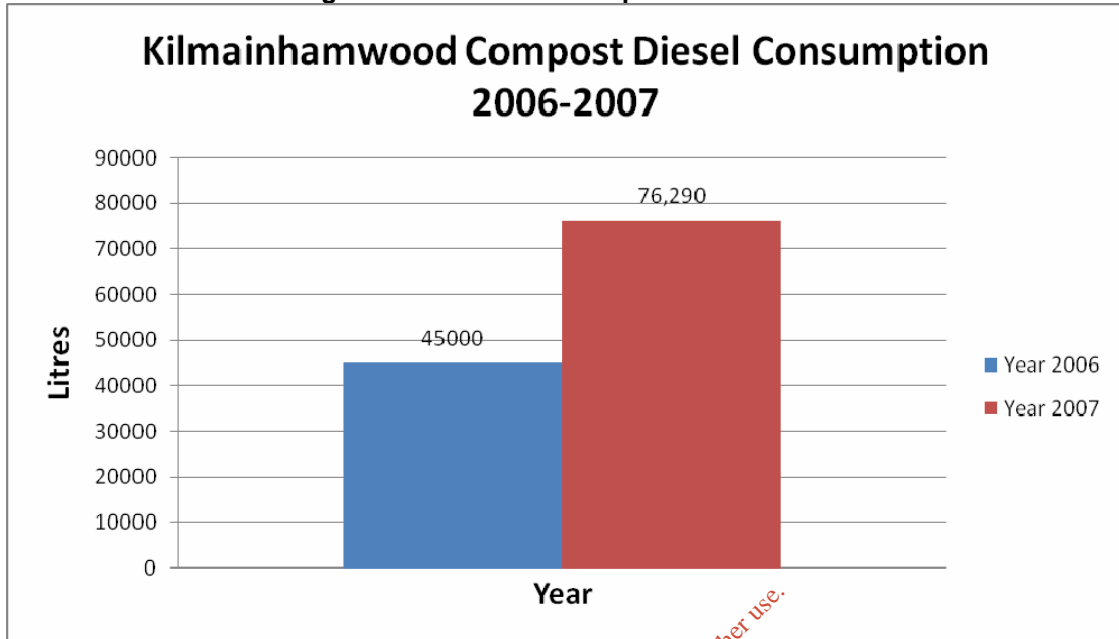
6.2 Water

Kilmainhamwood compost is not connected to the local water mains and uses its rain collection tank as a source of water for the facility. This water is used for washing trailers, equipment and floors. No water is used in the process as the in coming material contains excess moisture. Drinking water is supplied by a contract water supplier. For emergency purposes there is an over ground collection tank that holds 90,000 litres and is supplied by Bore well 3.

6.3 Diesel

The main consumption of diesel in 2006 was from the generator which powered all the electrical equipment of the facility whilst the facility was waiting to be connected to the National Grid. A total of 45,000 litres of diesel was consumed during October to December 2006. To reduce diesel consumption the facility was connected to the National Grid in 2007 and only 76,290 litres of diesel was consumed in 2007; this was predominately used to fuel plant machinery on site in 2007.

Figure 6.3 Diesel Consumption 2006 - 2007



7.0 Development/Infrastructural Works

7.1 Site Developments 2007

The first load of waste for processing entered the facility on 14th September 2006. During 2007 the facility accepted and processed 18,709 Tonnes of waste. The following developments were carried out 2007;

Training

- Staff training – weekly health and safety inductions for new staff
- Staff training - weekly environmental/waste licence inductions for new staff
- Staff training - Machinery operation and driver certification

ISO

- Thorntons Recycling received certification in standards for ISO 14001 Environmental, ISO 9001 Quality and OHSAS 18001 Health and Safety during 2006. Kilmainhamwood Compost received certification in standards for ISO 14001 Environmental, ISO 9001 Quality and OHSAS 18001 Health and Safety in June 2007.

7.2 Proposed Developments 2008

A number of developments are proposed for the forthcoming year of 2008. All developments are carried out with the intention of reducing environmental impacts of the facility and increasing waste processing efficiency at Kilmainhamwood Compost. Developments proposed include;

- It is proposed to upgrade our screening process. This upgrade will reduce the time screening bays and also extracting the residual element e.g. plastic bags, stones etc out of our bays more efficiently.
- It is proposed that a 15 acre willow plantation is developed at the facility. This will enhance the environment by its consumption of CO2 and its timber can be used as a renewable source of Biofuel. This land is currently not in use.
- Continuous development on facility procedures in line with ISO certification and Animal By Products Regulations.

7.3 Plant Capacity 2007

The Facility is licensed to process 20,800 tonnes of waste per year. During 2007 18,709 tonnes of waste was processed. The facility contains the following plant which processes the waste;

List of equipment on site ;

- Two L90E Volvo Loading Shovels
- One Doppstadt Drum Screening Machine SM 620 Profi
- One Doppstadt Shredder AK 430 Profi
- One Turmec Mixer

The L90E Volvo Loading Shovels can move over 100 tonne of material per hour so they are well within their working capacity.

The Doppstadt Screening machine can screen 40 tonne per hour and the Doppstadt Shredder can shred 30 Tonne per hour.

The Turmec Mixer can make a 12 tonne batch every 15 minutes hence it has a capacity of 48 tonne per hour. The mixer has the lowest processing capacity of all the equipment but still can process up to 380 tonne per day.

As our waste intake has a limit of 400 tonnes per week all the above plant are well within their working Capacity. Kilmainhamwood Compost is part of the Thorntons Recycling Group so if there were any emergency breakdowns or additional plant machinery required then they can be brought from another facility for use on site. Thorntons Recycling have a maintenance garage which is fully equipped with mechanics, fitters etc which are available for use by Kilmainhamwood Compost,

8.0 Schedule of Environmental Objectives and Targets for 2008

The main Objective and Target of Kilmainhamwood Compost for 2007 was for the facility to be integrated into the Integrated Management System (IMS) operated by Thorntons Recycling at their other group sites and obtain ISO certification for ISO 14001 Environmental, OHSAS 18001 Health and Safety and ISO 9001 Quality. This was successfully achieved in May 2007 and now Kilmainhamwood Compost has three international standards for Health and Safety, Environmental and Quality systems.

The content the Integrated Management System (IMS) is too large to contain within the main body of this report, however the Agency can access this for inspection on a specially designated Drive (X Drive or IMS Drive) at any of the companies' site offices.

A schedule of Environmental Objectives and Targets for Kilmainhamwood Compost, Waste Licence W0195-01 as detailed in the Management Programme for the company for 2008 is contained in Appendix 4 of this report

9.0 Report on the progress towards achievement of the Environmental Objectives and Targets contained in the previous year's report

Kilmainhamwood Compost established an Environmental Management System on commencement of activities in 2006. This was further expanded in 2007 to cover a number of additional procedures specific to composting and the Animal By Products Regulations. The following is a summary of what is currently on the IMS and which relates to Kilmainhamwood Compost;

Top Level Manual
 Legal Register
 Emergency Response Plans
 Polices – EHS and Quality
 Key Performance Indicators
 Training File – Skills Matrix
 Third Party Contractors Files
 Management Programme – Objectives and Targets
 Staff Handbook

Environmental Procedures

- Communications Programme
- Waste Outlet Audit
- Environmental Monitoring and Analysis
- Odour Control
- Oil – Chemical Spill
- House Keeping
- Biofilters Monitoring Procedure Kilmainhamwood
- Waste Acceptance Kilmainhamwood
- Vehicle Emergency Response WCP Procedure
- Residual Waste Management Kilmainhamwood
- Tanker Emergency Response WCP Procedure
- Screen Sampling Procedure for Kilmainhamwood
- Housekeeping Procedure Kilmainhamwood
- Sampling Procedure Kilmanhaimwood
- Filling Pasteurisation Tunnel Procedure.
- Pasteurisation procedure
- Emptying Compost from Pasteurisation Tunnel Procedure

Health and Safety

- A detailed Safety Statement with risk assessments is also contained within the EMS

Quality

- Staff Appraisal
- Purchasing
- Weekly Operating Report Procedure
- Call Centre Instruction Manual
- Customer Focus
- Third Party Contractors

Generic Procedures

- Aspects
- Legal Identification and Evaluation
- Management Programmes
- Communications

- Training
- Emergency Response
- Monitoring and measurement
- Complaints
- Non-conformance and preventative actions
- Document control
- Internal auditing
- Management Review
- Records Management
- Risk Assessment
- Contractor Control
- Operational Control

A progress report on the objectives and targets in 2007 for Kilmainhamwood Compost is contained within Appendix 5 of this report.

10 Tank, drum, pipeline and bund testing.

At Kilmainhamwood Compost there is only one tank in use. This tank collects the leachate from the biofilters and from the wash bay. There are no fuel tanks on site and diesel is filled via a boozer. Kilmainhamwood Compost commissioned White Young Green, environmental consultants to carry out an integrity test on the leachate process tank in December 2006 to BS8007 standards. The tank at the facility passed the integrity tests. A copy of the report is attached in Appendix 6. This tank will be tested every three years as per Condition 3.10.5 of waste licence; therefore further tests are not due to be completed until the end of 2009.

10.1 Pipeline Tests

All pipe lines are running free and clear and will be serviced on a regular basis by Thorntons Tanker Services.

11 Summary of Incidents and Complaints

11.1 Incidents

There were no incidents recorded in 2007.

11.2 Complaints

There were only two complaints made to the Facility during 2007, both were in relation to odour. Following an investigation by the facility manager it was established that on both occasions the odour did not come from the facility and no corrective action was required.

Full details of the complaint have been maintained on site at the facility as per our complaints procedure PM08 – Complaints

12 Review of Nuisance Controls

Potential nuisances at composting facilities include dust, noise, odour, litter, birds, vermin and mud. Kilmainhamwood Compost do their utmost to control any nuisance which may occur at the facility, checks on nuisances are carried out daily and corrective actions are carried out as required.

12.1 Dust

Kilmainhamwood Compost is required to carry out dust monitoring quarterly (please refer to section 5.1 of this report). As all waste processes takes place indoors there are no dust emissions from the process. The main source of dust is from the roadways which will be wetted down during dry weather conditions.

In an effort to further reduce dust emissions from the yard and roadways Kilmainhamwood compost use Thornton's road sweeper weekly at the facility.

12.2 Noise

Noise monitoring surveys were conducted at the facility; see section 5.3 of this report. As all activities takes place inside the building noise levels are well within the permitted range.

12.3 Odour

All waste activities take place inside the fully enclosed building which is under negative pressure. All exhausted air from the building must pass through the biofilter system before entering the atmosphere. This biofilter system is designed to breakdown any foul odours before it leaves the system. Daily monitoring of this system takes place and the biofilters were continuously assessed during 2007.

12.4 Litter

Daily checks are carried out on litter within and around the site boundary any litter which may escape is cleared up immediately. All waste transportation vehicles are either enclosed or have a net which covers waste, preventing littering while waste is in transit. All staff sweep and tidy picking areas constantly throughout the day and daily housekeeping checks are carried out by supervisors in all areas with random checks carried out by the site manager to ensure that these are completed. All housekeeping checks are maintained on file in the site office.

12.5 Birds

Kilmainhamwood Compost has no problems with birds at the facility. Doors at the facility are kept closed.

12.6 Vermin

Irish Food Support Services Ltd Pest Control are contracted to carry out pest control for the facility. This includes rodents and flies. They conduct regular checks of all bait points around the facility which effectively controls rodents at the facility, all documentation for site visits and reports are maintained on site. Appendix 7 shows bait point locations around the facility.

Flies have not been a problem at the facility. However to ensure a fly problem never develops at the facility, Irish Food Support Services Ltd Pest Control carry out mitigation measures of spraying of areas where flies would most likely occur at regular intervals e.g. in the corridors.

12.6 Mud

All surfaces are hard standing and as such mud is not an issue at the facility. We also have a regular visit from Thornton's road sweeper that keeps these hard standings clean

13 Management Structure, Programme for Public Information

Programme of Public Information

Kilmainhamwood Compost operates an open door policy at the facility and has carried out, local representative groups, county councillors etc in 2007. The Environmental team also met with Councillors and Local representatives of the area to discuss operation of the facility and to ensure that clear channels of communication are kept open between the facility and the public for the future.

Kilmainhamwood Compost has become actively involved in financing a number of local projects. These included;

- Sponsored “Nobber Vintage Club” to purchase a number of defibrillators for the local community.
- Sponsored local soccer team “Electro Celtic” a set of football Jerseys.
- Main Sponsor with the Kilmainhamwood GAA project to develop an all weather pitch which was opened in November 2007
- Sponsorship of Kingscourt Scouts

New and existing clients are brought through our waste acceptance procedures and are supplied with information by sales representatives or call centre agents in relation to what waste types we can accept at the facility. Thorntons Recycling has also upgraded its website so customers can access information such as waste collection permit numbers and waste licences etc.

All information relating to activities carried out at Kilmainhamwood Compost is maintained on site. Public information is accessible at the site at all times at the site office or at the Office of Environmental Enforcement. Detailed Communications Procedures (PM04-Communications and EP01 – Communications Programme) has been implemented in our IMS and are used throughout the company (Appendix 8).

Management Structure

Kilmainhamwood Compost is part of the Thorntons Recycling Group and as such has access to the Management Facilities of Thorntons Recycling. These facilities include an Environmental Department which includes Mercedes Feely, David Duff and Maria Andrews. Below is a brief outline of the management structure of the site

**Carmel Thornton
Director**

**Paul Thornton
Director**

**Shane Thornton
Director**

**Anna Marie Thornton
Director**

**Gary Brady
Managing Director**

**Tom McDonnell
Facility Manager**

**Dermot Ward
Production Supervisor**

**General Operatives
(2)**

The Facility Manager of Kilmainhamwood Compost is Tom Mc Donnell. The Production Supervisor is Dermot Ward and is deputy manager when Tom Mc Donnell is not on site. There are two Loader Shovel Drivers, Fran Dowd and Keith Cassidy.

14 Quantity of Compost Produced 2007

The total amount of compost produced in Kilmainhamwood compost in 2007 was 4199.47 Tonnes.

List of Appendices

Appendix 1 – Facility Layout complete with Monitoring Locations

Appendix 2 – Weighbridge Certificate

Appendix 3 – Department of Agriculture – Facility Approval Certificate

Appendix 4 – Environmental Management Programme 2008

Appendix 5 – Environmental Management Programme 2007 – Progress Report

Appendix 6 – Integrity Test Report for leachate process Tank

Appendix 7 – Bait Point Locations for Rodent Control

Appendix 8 – Communications Programme

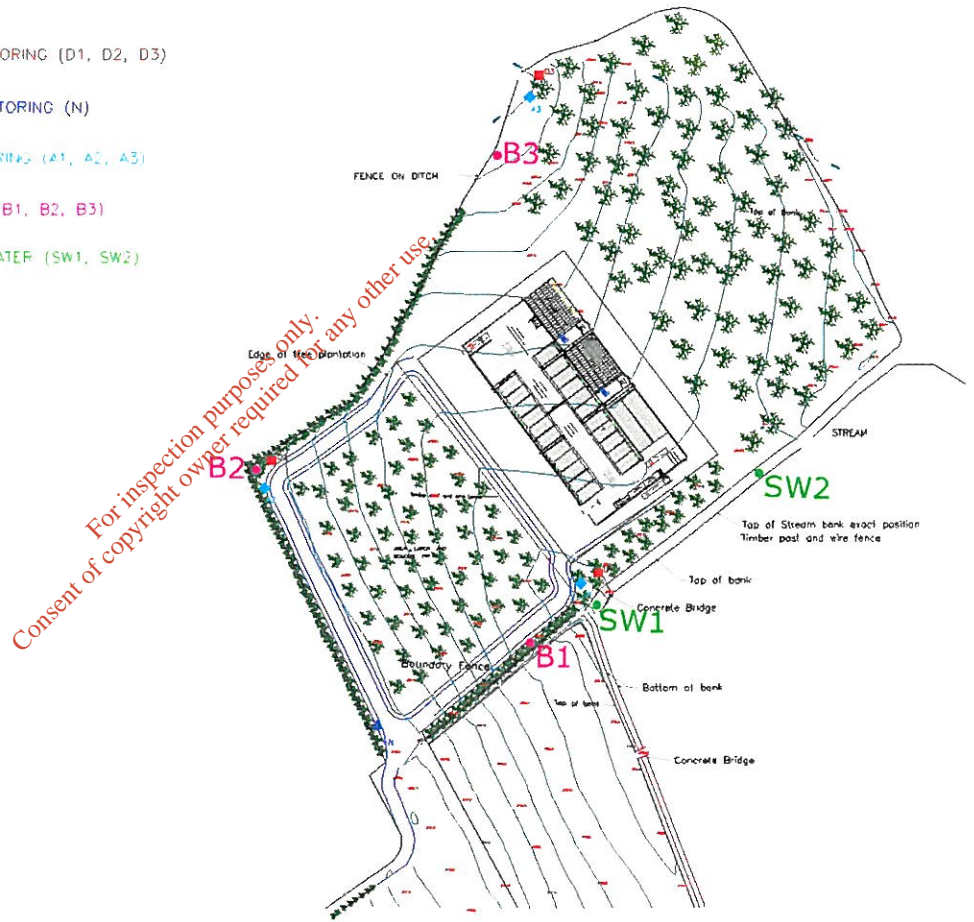
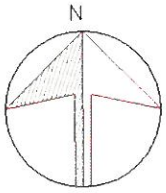
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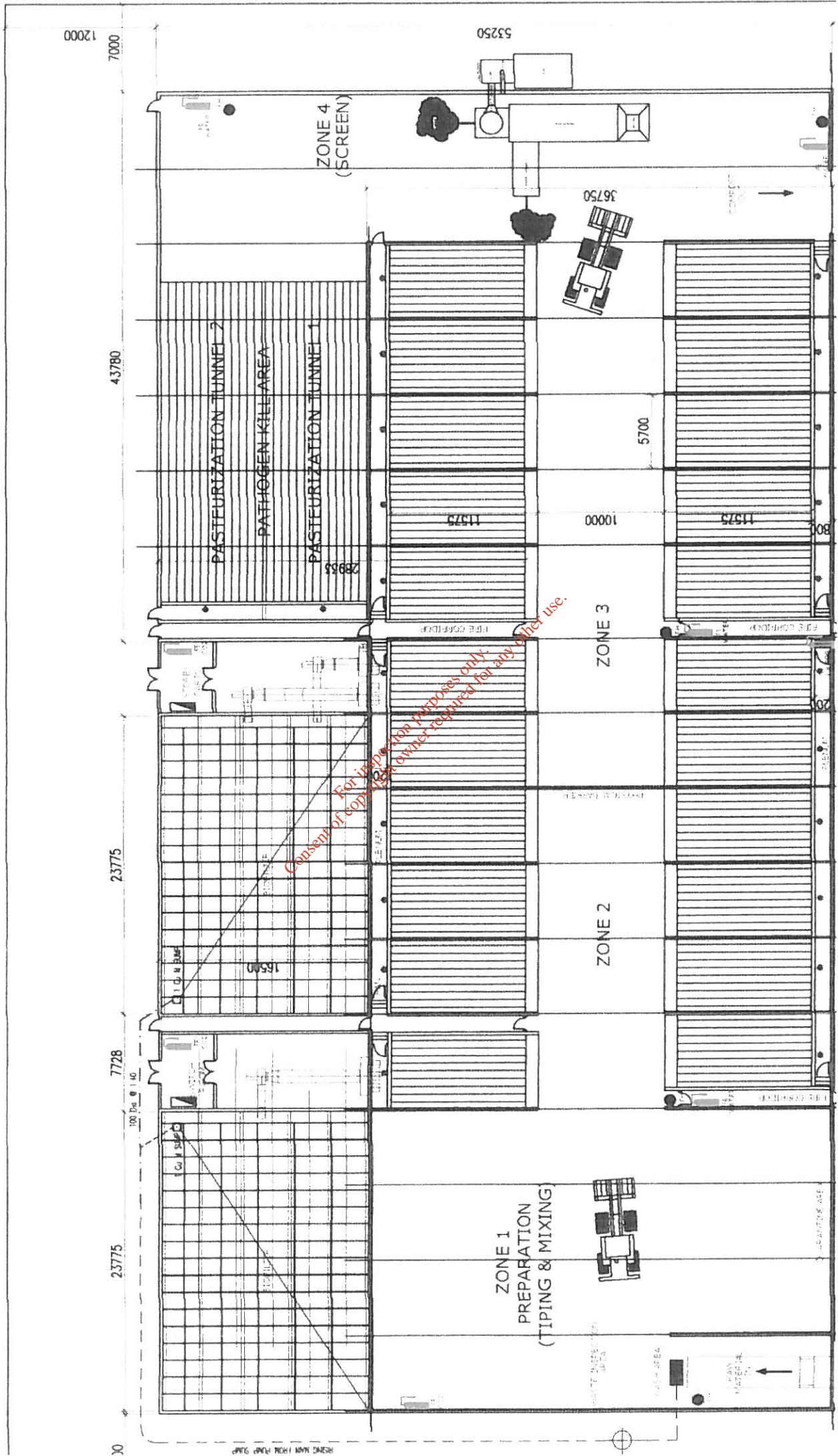
APPENDIX 1

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LEGEND

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





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APPENDIX 2

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Metrology Acts, 1980-1998
Certificate of Conformity

Dundalk Regional Centre

IDA Small Business Park,
Coe's Road,
Dundalk,
Co. Louth

Tel: 042 933 2758
Fax: 042 933 2791

Certificate No: DK 06 1045

File No: Job No: Order No:

CLIENT NAME: THORNTON RECYCLING LTD

ADDRESS: WILKINHAM WOOD KENNA CO MEATH.

This is to certify that the metrological instrument described hereunder was/were examined and tested by me on 16/11/06 and was/were found to be in conformity with the requirements of the Metrology Acts 1980-1998 and that the Standards used to perform the tests are traceable to National Standards.

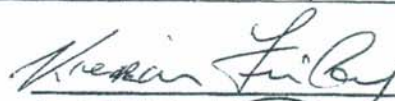
(NOTE: This Certificate only indicates that the instrument concerned conforms to the requirements of the Metrology Acts 1980 - 1998 and does not imply compliance with any other applicable regulations enforced by other Statutory Bodies.)

DESCRIPTION

Instrument Type: WEIGHBRIDGE

Manufacturer	Model	Serial no.	Capacity	Scale Interval	Type Approval No.	Accuracy Class (where Applicable)
<u>PORTABLE DELTA</u>	<u>LD-5204</u>	<u>180477616</u>	<u>50t</u>	<u>20kg</u>	<u>DK 0199-27</u>	<u>III</u>

Date: 11/12/06


Legal Metrology Inspector

APPENDIX 3

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Ref no: RNP 6-1 (Comp 6)

11 October 2007

Padraig Thornton Waste Disposal Ltd
T/a Thorntons Recycling Ltd
Unit S3B
Parkwest Business Park
Dublin 12

RE: **European Communities (Transmissible Spongiform Encephalopathies and Animal By-Products) Regulations of 2006 – SI No 612 of 2006, and Regulation (EC) No. 1774/2002**

I am directed by the Minister of Agriculture, Fisheries & Food to inform you that Kilmainhamwood Compost located at Ballynalurgan, Kilmainhamwood, Kells, Co Meath has been approved to operate as a composting plant from **8th October 2007 to 7th October 2009**, in accordance with Regulation 10(6) of the European Communities (Transmissible Spongiform Encephalopathies and Animal By-Products) Regulations of 2006 – SI No 612 of 2006.

The official **approval number** allocated to your composting plant is **COMP - 6**.

Your approval is subject to the following conditions:

1. The plant must meet the requirements of Regulation (EC) No 1774/2002.
2. The plant may accept catering waste as detailed in **Article 6(1)(l)** of Regulation (EC) No 1774/2002 and defined in **Annex 1** of this Regulation.
3. The plant may accept former foodstuff waste as detailed in **Article 6(1)(f)** of Regulation (EC) No 1774/2002 and fish waste as detailed in **Article 6(1)(i)** of this Regulation.
4. The plant may accept manure, digestive tract content separated from the digestive tract, as detailed in **Article 5(2)(e)** of Regulation (EC) No 1774/2002.
5. The plant must not accept any other Animal By-Products, as defined in **Article 2(1)(a)** of Regulation (EC) No 1774/2002.
6. The plant must process approved Category 2 and 3 material using EU processing standards of:
 - (a) Maximum particle size before entering the composting reactor: 12mm
 - (b) Minimum temperature in all material in the reactor: 70°C
 - (c) Minimum time in the reactor at 70°C (all material): 60 minutes



7. The plant must adopt all measures necessary to comply with the requirements of Regulation (EC) No 1774/2002 and carry out its own checks as provided for under **Article 25** of this Regulation.
8. The plant will be subjected to regular inspection by the Competent Authority in accordance with **Article 26** of Regulation (EC) No 1774/2002
9. The plant, must ensure that wastewater from the plant is treated in accordance with other relevant Community legislation.
10. The plant must take representative samples from every batch of compost for microbiological analysis at a Department of Agriculture, Fisheries and Food approved laboratory. This Department must be notified immediately of all sample failures. Following a sample failure no material should be moved off site without the Department's approval.
11. Plant management must ensure that all necessary conditions as outlined in the Department of Agriculture, Fisheries and Food's document are adhered to "*Conditions for approval and operation of composting and biogas plants treating animal by-products in Ireland*" (Attached)
12. The landspread of organic fertilisers and soil improvers must be in accordance with S.I. 612 No of 2006 and S.I. No. 615 of 2006.

Please note that failure to comply with these conditions may result in enforcement proceedings or the withdrawal of your approval.

For the Minister of Agriculture, Fisheries and Food

Geraldine Lanigan
Higher Executive Officer

An Officer authorised in that behalf by the said Minister.

APPENDIX 4

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PM03- F01 Management Programme 2008

COMPLETED		DELAYED CARRY FORWARD 2009			PM03- F01 Management Programme 2008			
Ref Number	Date	Type	Objective and Target	Location	Responsibility	Method	Time Frame	Status
Env 1	Jan-08	Env	Create a calibration register to be connected with monitoring and analysis EP03	All sites	Mrep Environment	1. Determine what on each site is due to be calibrated 2. Set up a register on IMS drive 3. Communicate to all managers how to use and complete register	Jun-08	Started
Env 2	Jan-08	Env	Improve environmental appearance of all licensed facilities - Planting, shrubs, painting etc	Killeen Road, Dunboyne, Kilmainhamwood	Environment Manager for site	1 Environmental Manager for each site is responsible for improving the environmental appearance of the facility 2 Quotes from gardeners for planting and maintenance contracts for one year. Check Licence conditions re landscaping 3 Daily Checks on Litter to be carried out	Aug-08	Ongoing works. Sites to be reviewed for planting etc in Spring 2008
Env 3	Jan-08	Env	Establish monitoring and targeting for energy and water consumption, Kilmain TMCD identified resources to be monitored	All sites	Environment Manager for each site	1 Determine what resources are to be monitored 2 Develop means and documented procedure for capturing information in conjunction with the finance department 3 Train all relevant employees on the new procedure and format 4 All data to be collated by the end of December every year	Sep-08	KR, MF energy report completed for GB, Dunboyne DD working on electricity cost saving
Env 4	Jan-08	Env	To increase community liaison with residents and local community groups	All sites	Environment Manager PR Manager	1. Produce Leaflet/ establish section in website for Environment 2. Support local events and initiatives 3. Make contact with community groups and local school visit	Dec-08	WIP
Env 5	Jan-08	Env/Quality	Prevention and Minimisation of waste in the offices i.e. Improve recycling in the offices	All sites	Mrep Environment	1. Establish team to organise a three bin system 2. Buy new bins for all offices 3. Labelling and employee education to be carried out	Jun-08	Not Started
Env 6	Jan-08	Env	Covering of new diesel bund and relocation of kerosene bund	Killeen Road	Environment Manager	1. Cover with appropriate material	Jun-08	WIP Quotes being obtained
Env 7	Jan-08	Env	New Site - Environmental	New Site	Environment Manager Killeen Road	1 Obtain planning 2 Obtain Licence	Sep-08	Planning lodged in November 2007 Licence application lodged Dec 2007
Env 8	Feb-08	Env	Licence compliance in relation to Bund Testing	All sites	Environment Manager	1. Ensure all on sites bunds have been tested as per conditions of waste licence	Jun-08	Quotes obtained for testing Kr
Env 9	Jan-08	Env	Review the processes in the dry recycling shed in Killeen road	Killeen Road	Dunboyne Environmental Manager	1. Audit and observe the current practices in the Killen road dry recycling shed. 2. Identify new equipment if need be. 3. Complete a report as to the recommendations.	May-08	Not started

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Env 10	Jan-08	Env	Dunboyne Civic Amenity Upgrade	Dunboyne	Environment Manager	<ol style="list-style-type: none"> 1 Source Destinations 2 Source equipment, signage, staffing etc 3 Attract New customers 4 Meath CC re WEEE collection point 	Mar-08	Meeting with MCC re WEEE collection, collection days organised for January 2008
Env 11	Jan-08	Env	Produce a screened compost product more efficiently	Kilmainham	Facility Compost Manager	<ol style="list-style-type: none"> 1 Investigate different types and costings of screener 2 Seek independent advice 3 Environmental aspects 4 Install 	Apr-08	Investigation commenced
Env 12	Jan-08	Env	Investigate alternative energy sources	Kilmainham	Facility Compost Manager	<ol style="list-style-type: none"> 1. Identify resources and data collation on same 2. Invite consultants to assist on project 3. Research on processes to determine the most suitable technology for site 4. Assess available energy from end product compost 	Dec-08	Investigation commenced
Env 13	Jan-08	Env	Plant willow farm	Kilmainham	Facility Compost Manager	<ol style="list-style-type: none"> 1. Contact EPA re licence and status of planting willow trees 2. Obtain drawings 3. Contact department of agriculture department re grant 4. Consult with specialist consultants 5. Planting to commence in May 2008 	May-08	Started
Env 14	Jan-08	Env	Create a waste management plan for PDM	PDM	Environmental Manager	<ol style="list-style-type: none"> 1. Review the current waste streams 2. Collate the information into a report of the current situation 3. Research ways of reducing waste in the work place 4. Put in place a plan to reduce waste onsite 5. Review the effectiveness of the changes 	Mar-08	Not started
Env 15	Jan-08	Env	Look at the possibility of recycling polystyrene	Dunboyne	Environmental Manager	<ol style="list-style-type: none"> 1. Research polystyrene recycling 2. Source balers and compactors and prices 3. Source outlets for the processed polystyrene 4. Identify the sources of collection and the quantities 5. Complete the Profit or Loss and give to senior management 	Apr-08	1. Researched the recycling of polystyrene, 2. Compactors sourced, 3. Outlets and prices sourced, 4. Outstanding
Env 16	Jan-08	Env	Research the possibility of providing our customers with a skip recycling bag	Dunboyne	Environmental Manager	<ol style="list-style-type: none"> 1. Research the product 2. Design a skip bag 3. Contact suppliers for quotes 4. Do up a Profit or loss 5. organise the production of the bags and their distribution 	Apr-08	At the Profit and loss satge in Jan 08
Env 17	Jan-08	Env	Research the possibility of providing an inhouse way of shredding tyres and sourcing outlets	ELV	Environmental manager	<ol style="list-style-type: none"> 1. Research the processes for recycling tyres 2. Identify recycling equipment 3. Identify and source outlets 4. Contact outlets for prices 5. Complete a profit or loss 6. Do up a report as a proposal 	Jul-08	Not started
Env 18	Mar-08	Env	Willow Tree plantation and permitted facility for spreading of de sludged water	Barrockstown	Map Environment	<ol style="list-style-type: none"> 1. Contact MCC re permit and status of spreading effluent and planting willow trees 2. Obtain drawings 3. Contact planning department re spreading and establishing permit site 4. Application to be lodged for both with MCC 	Jun-08	WIP

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PM03- F01 Management Programme 2007

COMPLETED	DELAYED CARRY FORWARD 2008								
Ref Number	Date	Type	Objective and Target	Location	Responsibility	Method	Time Frame	Status	
Env 1	Apr-07	Env	To received ISO 14001 Certification in Khamarhwood	Khaman	Emron Manager/ Khaman	1. TMCD to meet ATC to look at procedures etc. 2. MF to contact BECC and update legal register to include composting 3. TMCD to be reviewed as internal auditor 4. Pre audit June 2007 5. Certification July 2007	Jun-07	Register requested by MF through BECC in April 2007 site updated re ISO. Achieved certification in June 2007	
Env 2	Apr-07	Env	Improve the quality of drainage at the Khaman Road track. Project re diversion of the drains	Khaman Rd	Emron Manager/ Khaman Rd	1. Establish consultant engineers who will assist on the project - Completed 2. Establish team internally who will work on project - Completed 3. Arrange for roof drainage to be diverted to SWZ - Completed 4. CCTV surveys updated - Completed 5. Choose a treatment system cost and design - Completed 6. Proposal for DCC and the EPA - Submitted 7. Diver: SW1 into FVZ 8. Place new sediment gullies in Joshi's yard and a grid in front of stone shed 9. Initial screener and connect into FVZ 10. Test samples and ensure meet levels set down in WL 0044-02	Jul-07	WIP - Proposal Submitted in Jan 2007 to DCC and the EPA. Approved. OHS commenced May 2007 plan in place see drainage shed due for completion by end of July 2007, screen commissioned 02.07.07. Results for Quarter 4 below emission limit levels	
Env 3	Apr-07	Env	Improve environmental appearance of all licensed facilities - Planting, stinks, painting Outbye, etc	Khaman Road, Khaman, Outbye, (Khaman)	Emron Manager/ Assistant for each site	1. Environmental Manager for each site is responsible for improving the environmental appearance of the facility 2. Quotes from gardeners for planting and maintenance contracts for one year. Check Licence conditions re landscaping 3. Daily Checks on Letter to be carried out	Aug-07	All sites planting commenced May 2007. KR painting and baskets, Khaman Flower bed, Outbye planting etc. CARRY FORWARD FOR 2008	
Env 4	Apr-07	Env	To produce a Class 1 compost in the required time	Khaman	Emron Manager/ Khamarhwood	1. To satisfy the Standards of a Class 1 Compost. 2. To assess the time required to meet the Standards. 3. Determine plan. 4. Review February.	Jul-07	Complete - Tests completed see TMCD files in Khamarhwood. Site approved by Department of Agriculture	
Env 5	Apr-07	Env	Establish monitoring and targeting for energy and water consumption	All sites	Emron Manager for each site	1. Determine which resources are to be monitored 2. Develop means to document procedure for capturing information in collection with the new site document 3. Train all relevant employees on the new procedure and format 4. All data to be collated by the end of December every year	Dec-07	KR, MF energy report completed for QA. Outbye DD working on electricity cost saving WIP WORK SHARED CARRY FORWARD	
Env 6	Apr-07	Env	Issue all new and existing outlets with TR terms and conditions	Khaman Road	JHCL	1. Draft terms & Conditions 2. Get feedback from TR 3. Send to outlets	Jun-07	Terms and Conditions drafted with DW in France for approval. Changed from T & C's to Letter to outlets JH co-ordinating. Decided against sending re management decision	

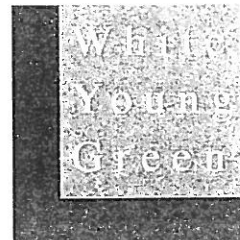
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Env 7	Apr-07	Env	Env	Ensure all TR staff are aware of TR Working Group	All sites	JH	1. Inform through newsletter and managers	Jul-07	Informed through newsletter. JH co-ordinating
Env 8	Apr-07	Env	Env	Research Project on end uses of stone product from Dubsboyne Site	Dubsboyne	Environmental Manager Dubsboyne	1. Customer Questionnaire to be completed by customers buying stone 2. Details to be filed in Dubsboyne Environmental Department	May-07	Complete on file with DD in Dubsboyne
Env 9	Apr-07	Env	Env	To increase community liaison with residents and local community groups	Kilmah	Environmental Manager Kilmahamwood	1. Produce Leaflet 2. Support local events and initiatives 3. Make contact with community groups and local school visit	Dec-07	WIP - Photographs for printing, sponsoring GAA work started. Newsletter produced and circulated in Nov 2007. MORE WORK REQUIRED CARRY FORWARD
Env 10	Apr-07	Env	Env	To install a weather station	Kilmah	Environment Manager Kilmahamwood	1. Research similar stations used in similar facilities 2. Select station that can measure parameters required by EPA 3. Obtain quotes and install	Aug-07	To be installed July 2007 avoiding software delay with OMI installed Sept 2007
Env 11	Apr-07	Env	Env	Improve Signage	All sites	Environmental Manager	1. Identify areas where signage required 2. Erect signs 3. ELV specific to mail merge car manufacturers	Sep-07	WIP - KR new signage for machines completed, cut off relative to split lifts signs made from sign machine. DD sign areas and CA signage put up. Car manufacturers signage erected at front door of ELV facility. Kilmah all signage in place
Env 12	Apr-07	Env	Env	Prevention and Minimisation of waste in the offices i.e. Improve recycling in the offices	All sites	Environment Management	1. Organise a Team to organise a two bin system 2. Review signs for all offices 3. Labels and employee education to be carried out	Dec-07	Not Started MORE WORK REQUIRED CARRY FORWARD
Env 13	Apr-07	Env	Env	Covering of kerosene bund	Dubsboyne	Environment Manager	1. Cover appropriate material	Oct-07	WIP Quotes being obtained DD. Completed July 2007
Env 14	Jul-07	Env	Env	Generic Newsletter for all sites	All sites	Environment Team	1. Environmental Team to provide information for newsletter JH to coordinate	Aug-07	Received final newsletters in November 2007 circulated on all sites, including distribution of 145 householders in Ballyfermot.
Env 15	Jul-07	Env	Env	Dubsboyne Civic Amenity Upgrade	Dubsboyne	Environment Manager	1. Source Destinations 2. Source equipment, signage, staffing etc 3. Attract New customers 4. Meet CC re WEEE collection point	Dec-07	Meeting with MCC re WEEE collection, collection days organised for January 2008, meeting held with returnseat, ERP, Enva etc
Env 16	Jul-07	Env	Env	New Site - Environmental	New Site	Environment Manager Kilmah Road	1. Obtain quotes from 4 consultants 2. Interview consultants and choose appropriate consultant 3. Pre planning meeting with FCC 4. Collate information in field 5. Collate information on operations, processes, drainage, emission etc	Dec-07	Planning budget in November 2007 License application lodged Dec 2007 MORE WORK REQUIRED CARRY FORWARD
Env 17	Jul-07	Env	Env	WIMS Clean Up - Re Collection Permits	All sites	Environmental Team	1. Run reports for March 2007 flag errors and meet WIMS committee 2. Clean up through Credit Control then through call centre 3. Re run and verification to ensure all data correct	Dec-07	DD co-ordinating clean up, meeting held with CC and CC. Listed forwarded monthly to DD and errors cleaned up. Reports should be ready and completely tidied up by year end for AER's in WCP's

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APPENDIX 6

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Kilmainhamwood Compost,
Kilmainhamwood,
Co Meath

Leachate Tank Integrity Test

December 2006

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Reference: CE05243 Leachate Integrity Test			
Issue	Prepared by	Checked by	Verified by
V1	DEC 06		
V2	-		
V3	-		
V4	David McDermott		Donal Marron
V5	Senior Environmental Scientist		Regional Director

File Reference: CE05243/Reports

White Young Green Ireland Limited, Apex Business Centre, Blackthorn Road, Sandymount Industrial Estate, Dublin 18
Telephone: +353 12931200 Facsimile: +353 12931250 E-Mail: enviro.dublin@wyg.com

Mr Tom McDonnell,
Kilmainhamwood Compost,
Kilmainhamwood,
Kells Co Meath

December 13th 2006

Re: Integrity Test on the Leachate Process Tank

Padraig Thornton Waste Disposal Limited, (PTWDL) requested White Young Green Environmental (Ireland) Ltd (WYG) to undertake integrity testing on its Leachate Process Tank at its composting facility at Kilmainhamwood, Kells, Co Meath.

The test involved filling the tank with a known volume of water and monitoring any losses over a monitoring period. Where applicable the following British Standard was used in testing the tank; "BS 8007 - The British Standard Code of Practice for the Design of concrete structures for retaining aqueous liquids".

It is recommended by BS 8007 that integrity testing take place over a standard seven day period with a soakage period of the same order. However due to plant operational constraints, the test could only occur over a weekend three day period. The tank was filled for a 24 hour period prior to testing allowing any soakage effects from the concrete to be minimised. Under the British Standard it is also recommended that a visual inspection of the structure be undertaken for any defects prior to testing. For safety reasons, given the confined space risks involved, it was decided that the tank should only be visually inspected if the integrity test failed.

As the tank is located underground and all inputs and outputs were sealed for the duration of the test, climatic conditions i.e. rainfall, evaporation are unlikely to have had any significant effect on the water levels recorded and as such were not monitored.

The Leachate Processing Tank as shown on Figure 1 has an internal diameter of 2.710m (2.996m externally) and a depth of 3.035m indicating a total capacity of 15.9m³ or 3500

Kilmainhamwood - PTWDL
CE05243 page 1 of 2

gallons. For the test the tank was filled to an arbitrary level close to the top of the tank and 0.637m below the manhole cover. Therefore approximately 2 398m or 13.8m³ of water were pumped into the tank (or just over 87% of the tank capacity). It is reported by PTWDL that in normal operating conditions the tank is filled to a level of no greater than 75% of the capacity of the tank.

Figure 1 shows the construction of the Leachate Processing tank. Test water was pumped into the bund on the 23rd of November 2006 under PTWDL supervision. A period of stabilisation of 24 hours was allowed prior to the test commencing at 16.30 on the 24th of November 2006.

The tank was monitored over a three day test period by a combination of WYG and PTWDL staff on a daily basis measuring from the top of the manhole to the water level at the same location. Table 1 below presents the levels recorded in the tank over this period.

Table 1 Integrity Test Results

Date	Time	Monitored level
24/11/06	16:30	0.637
24/11/06	16:45	0.637
24/11/06	17:00	0.637
25/11/06	10:50	0.637
26/11/06	11:50	0.637
27/11/06	12:00	0.637

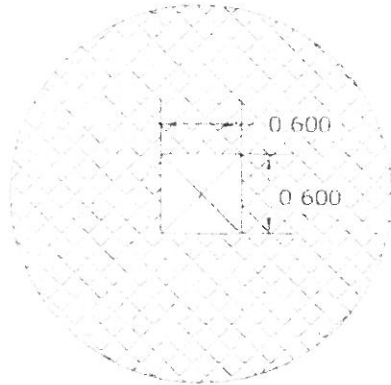
As can be seen on the table a steady water level of 0.637m below the top of the tank was recorded over the three day period. It is concluded that the tank has passed the integrity test.

The Leachate Process Tank is deemed to have passed the integrity test. All tanks require testing every 3 years.

CARLOW PRECAST TANKS LTD.

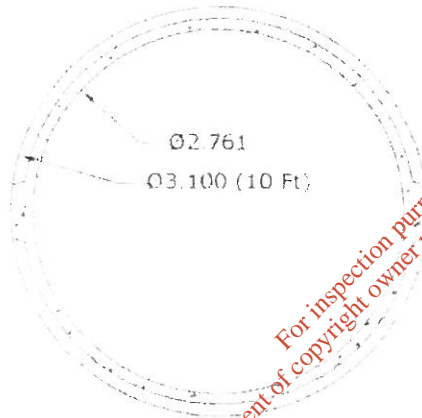
Unit 104, Bideford Road, Bideford, Devon PL6 9JL, UK. Tel: 01399 91 5930 Fax: 01399 91 5920 Email: enquiries@carlowprecasttanks.com
Sales: 01399 91 5930 Email: sales@carlowprecasttanks.com Reservations: reservations@carlowprecasttanks.com

3500 GALLON (15.90 cubic metre) TANK

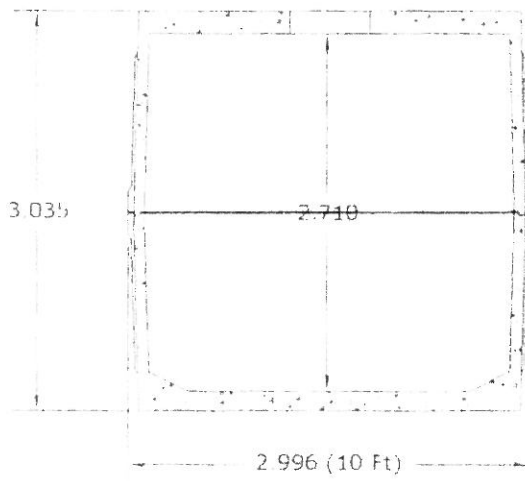


ROOF PLAN

Tank weights:
Base section 4,500kg
Top section 4,500kg



FLOOR PLAN



SECTION

Roof design to particular loading requirements

Collars, fittings etc. to customers requirements

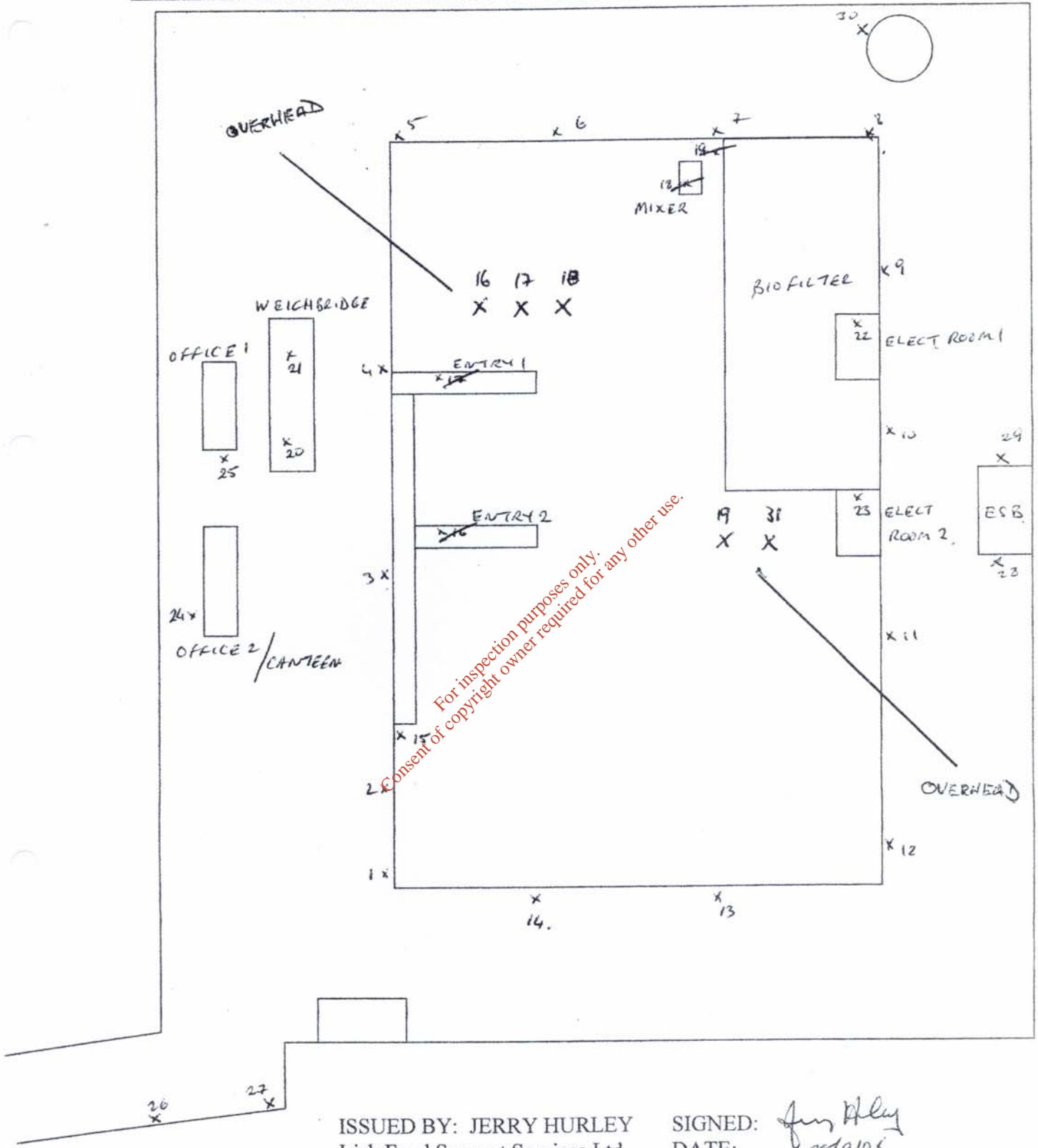
0m 1m 2m 3m 4m

The water level level of tank

APPENDIX 7

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Pest Control Site Map - Kilmainhamwood Compost



ISSUED BY: JERRY HURLEY
 Irish Food Support Services Ltd.
 Gardenrath Road,
 Kells, Co. Meath.

SIGNED: *Jerry Hurley*
 DATE: 25/9/06
 REV: 0-

16-PP *Copy of location*
Diagrams
Jerry Hurley 11/1/02

APPENDIX 8

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Environmental Procedures Manual		Reference	EP01
Title: Communications Programme		Date issued	22-10-06
		Revision	01

Relevant to:-	Killeen Road	Killmainham	Dunboyne	PDM	ELV	HQ	Tankerin g
	√	√	√				

Purpose and Scope

The purpose of this communications programme will ensure that effective and responsive communication measures are in place at Thorntons Recycling to allow any local community groups, key interest groups, local residents and members of the public to obtain information concerning the environmental performance of the facility, as required under the Conditions of site Waste Licences.

RESPONSIBILITY

The Public Relations Department – Damien Quinn, is responsible for ensuring that all requests from members of the public or customers on environmental information relating to the facility are dealt with in a quick and professional manner.

Associated Documentation

[EP01-F01 request for Environmental Information](#)

COMMUNICATION TEAM AND OBJECTIVES

The Environmental Department will be the main channel of information between Thorntons Recycling Centre and local residents, businesses and interest groups/organizations.

The Environmental Department will perform the following objectives;

- Manage consultation with local residents, businesses and local interest/representative groups
- Investigate complaints in relation to the Thorntons Recycling (and provide report to PR team to deal with)
- Encourage liaison between Thorntons Recycling Centre and local residents
- Ensure the general public is aware of how to contact the facility
- Make available Environmental Performance data relating to waste transfer and recycling information available to members of the public at all reasonable times.

PROGRAMME IMPLEMENTATION

The communication programme will consist of the following elements:

(a) Site Notice Board

A site notice board has been erected at the front gate of Thorntons Recycling Centre. This clearly displays:

1. Name and telephone number of the facility
2. The normal hours of opening

Environmental Procedures Manual		Reference	EP01
Title: Communications Programme		Date issued	22-10-06
		Revision	01

Relevant to:-	Killeen Road	Killmainham	Dunboyne	PDM	ELV	HQ	Tankerin g
	√	√	√				

3. Name of licence holder
4. An emergency out of hours contact telephone number
5. The licence reference number
6. Location of environmental information relating to the facility.

(b) Queries or Requests for Environmental Information

Environmental information including annual environmental reports, quarterly reports, environmental policy and waste licence, in relation to Thorntons Recycling can be viewed at;

- The Main Reception for Thorntons Recycling and the facility offices of, Killeen Road, Dunboyne and Killmainham Wood, between the hours of 09:00 and 17:00 only. All visitors must sign a visitor's book at reception at site offices.
- Office of Environmental Enforcement, EPA, McCuminskey House, Richview, Clonskeagh, Dublin 14 on request between the hours of 09:00 and 17:00 only.

All requests/queries concerning the performance of the facility will be logged in the communication record format the office of each site. [EP01-F01 request for Environmental Information](#) Form must be completed by all persons requesting information.

(c) Main Contacts

Local resident groups and businesses can contact the PR Manager or Environmental Manager or Deputy of the facility. If issues arise local residents may contact either of the PR managers to ensure that issues are dealt with effectively and efficiently by Thorntons Recycling.

(d) Site Visits

Thorntons Recycling maintain an "open door" policy to neighbors that may wish visit the facility at reasonable times. Site visits and tours can be arranged by writing to the Environmental Department of the site which you wish to visit. The written request must detail the date and time of the proposed visit, number of visitors and the purpose of such a visit.

(e) Complaints Register

1. All complaints concerning the performance of the facility will be logged in the [complaint record form](#) completed for record tracking purposes.
2. The Environmental Department will have regard to the [corrective action procedure](#) and liaise with the complainant to ensure that impacts have been alleviated.
3. The environmental department will respond to all written complaints within ten days.

(f) Meetings with Interested parties/organisations

Interested parties/organizations can submit a written request for a member of Thorntons Recycling management to attend meetings. The written request must detail the date and time of the proposed meeting and the purpose of the meeting. Thorntons Recycling management will do their best to honour such requests.

Environmental Procedures Manual		Reference	EP01
Title: Communications Programme		Date issued	22-10-06
		Revision	01

Relevant to:-	Killeen Road	Killmainham	Dunboyne	PDM	ELV	HQ	Tankerin g
	√	√	√				

(g) Newsletters

Thorntons Recycling Centre will continue to submit newsletters to local residents and interested parties.

(h) Thorntons Recycling Website

Information in relation to the company including the companies' EHS policy is available to download from Thorntons Recycling Website at www.thorntonsrecycling.com

COMMUNICATION POLICY

“Thorntons Recycling is committed to maintaining open and clear channels of communication with local residents and other interested parties with regards to the environmental performance of all of Thorntons Recycling facilities. It is intended that the communication programme will help address any concerns and certainly help avoid any misunderstandings about the operation of Thorntons Recycling”.

All original completed records of request for information or any complaints received in relation to Thorntons Recycling will be filed in the communications file or the complaints file in the Environmental department, of each Thorntons Recycling site and will be available for inspection by the EPA at all reasonable times.

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