

Golder Associates Ireland

Town Centre House, Dublin Road, Naas, Co. Kildare, Ireland

Tel: [353] (0)45 874411 Fax: [353] (0)45 874549 E-mail: info@golder.ie http://www.golder.com



Annual Environmental Report (Period 1st January 2008 to 31st December 2008)

Dean Waste Company Limited.
Waste Recycling and Transfer Facility
Sheriff Street Upper
Dublin 1.
Waste Licence Register No. W0042-01

Submitted to:
Dr. Ted Nealon
Managing Director
Dean Waste Limited
Broomhill Industrial Estate
Broomhill Road
Tallaght
Dublin 24

DISTRIBUTION:

2 copies - Dean Waste Company Limited.2 copies - Golder Associates Ireland

3 copies - Environmental Protection Agency

April 2009 Project No.: 08507190003



REPORT ISSUE FORM

Version Code	A.1.	Issue Date	06/04/09					
Document Title	Sheriff Street Waste Transfer Station, Sheriff Street Upper, Dublin 1.							
	Annual Envi Project Numb							
Comments								
List of Authors	Garrett Byrne, MSc., Thomas Vainio-Mattila, MSc., PGeo., EurGeol.							
Client	Dean Waste Co. Ltd.							
Client Reference								
Project Manager	Garrett Byrne	(name)	(signature)					
Reviewer	Thomas Vainio-Matilla (name) (signature)							
Report	Name							
Distribution	Environmenta	al Protection	Agency	3				
	Dean Waste Company Limited 2							
	Golder Associates Ireland Limited 2							

Definition of Version Code:

D. Applied during initial drafting of the report before it has been reviewed.

C. Applied after the report has been reviewed but before it has been approved by the Project Manager.

B. Applied after the Project Manager has approved the report ready for issue to the client.

A. Applied to reports after external/client review.

The version number starts at '0' and is raised by '1' at each re-type.

TABLE OF CONTENTS

SECT	P. P	AGE
1.0	INTRODUCTION	1
2.0	SITE DESCRIPTION	1
2.1 2.2 2.4	Waste Management Activities Carried Out At The Facility	2
3.0	REPORT ON ENVIRONMENTAL MONITORING AND EMISSION	iS 4
3.1	Dust Monitoring	5
	3.1.1 Introduction	5
	3.1.2 Summary of Results	5
	3.1.3 Mitigation Measures	5
3.2	Noise Monitoring	6
	3.2.1 Introduction	
	3.2.2 Summary of Results	
	3.2.3 Mitigation Measures	
3.3	Sewer Monitoring	
	3.3.1 Introduction	
	3.3.2 Summary of Results	
3.4	3.3.3 Mitigation Measures	
3.4	G	
4.0	RESOURCE AND ENERGY CONSUMPTION SUMMARY	8
5.0	REPORT ON DEVELOPMENT WORKS	8
5.1	Works for the Preceding Year	8
5.2	Works Planned for 2008	8
6.0	SCHEDULE OF OBJECTIVES AND TARGETS	8
6.1	Schedule of Objectives and Targets	9
7.0	DESCRIPTION OF PROCEDURES DEVELOPED IN 2008	9
8.0	TANK, DRUM, PIPELINE AND BUND TESTING AND INSPECTION	
9.0	REPORTED INCIDENTS AND COMPLAINTS SUMMARIES	
10.0	REVIEW OF NUISANCE CONTROLS	
10.0	Nuisances caused by Vermin	
10.1	Nuisances caused by Vermin	
10.2	Nuisances caused by Mud and Dust	
10.3	Nuisances caused by Odours	
	·····	

111, 2007	111
	A.1

11.1	Site decommissioning11
11.2 I	Environmental nuisance and pollution incidents11
12.0 MANA	AGEMENT AND STAFFING STRUCTURE11
13.0 PROG	RAMME FOR PUBLIC INFORMATION 12
LIST OF TAB	LES
Table 2.1:	Licensed Recovery Activities
	Wastes IN at the Facility between 2004 and 2008
	Wastes OUT at the facility between 2004 and 2008
	Non-acceptable wastes sent off-site during 2008 Monitoring and Reporting Requirements
Tubic cit.	Monitoring Points and Grid Reference Locations
14010 0121	Dust Deposition Rates in the environs of the Dean Waste facility at Sheriff
	Street Upper
	Noise Levels at Sheriff Street Upper
Tuble Sic.	Results on Emission to Sewer
	Resource and Energy consumption between 2004 and 2008 Progress towards the achievement of Objectives and Targets set for 2003
14010 0111	Progress towards the achievement of Objectives and Targets set for 2004
	Progress towards the achievement of Objectives and Targets set for 2005
	Progress towards the achievement of Objectives and Targets set for 2006
	· · · · · · · · · · · · · · · · · · ·
	Progress towards the achievement of Objectives and Targets set for 2007 Progress towards the achievement of Objectives and Targets set for 2008
Table 9.1:	Incident log for the report period

Appendix 1 Appendix 2 Figure 1 Rev I - Monitoring Points Objectives & Targets

1.0 INTRODUCTION

The reporting period for this Annual Environmental Report (AER) is from 1st January 2008 to 31st December 2008.

Please note that the Annual Environmental Report (AER) enclosed herewith is furnished in respect of the legal obligation to submit same to the Agency imposed by Waste Licence No. W0042-01 ('the Waste Licence') and the provisions of the Waste Management Act, 1996 to 2003.

2.0 SITE DESCRIPTION

2.1 Waste Management Activities Carried Out At The Facility

Waste management activities carried out at the facility in accordance with the Waste Licence are depicted in Table 2.1.

Table 2.1: Licensed Recovery Activities

Licensed waste recovery & disposal activities, in accordance with the Fourth Schedule of the Waste Management Act, 1996 to 2003						
Class 2 Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes)						
Class 3	Recycling or reclamation of metals and metal compounds					
Class 4	Recycling or reclamation of other inorganic materials					
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.					

Incoming lorries carrying wastes proceed to an on-site weigh-scale where they are weighed and assessed.

Wastes are tipped in the Waste Transfer and Recycling Building ('the Building'). Wastes are further assessed, with regard to acceptability, and reloaded if unacceptable. Unacceptable wastes are either turned away at the weigh-scale or after reloading at the Waste Transfer and Recycling Building.

Wastes are mechanically sorted and in some cases shredded in the Building. Wastes are then loaded onto transfer vehicles and taken away from the facility for further recovery activities.

2.2 Quantity and Composition of Wastes Received

Table 2.2 presents the quantities of wastes <u>IN</u> at the facility during the reporting period. Data from 2004, 2005, 2006 and 2007 are also included as required by Schedule B of the Waste Licence 'Content of the Annual Environmental Report'.

Table 2.3 represents the quantities sent <u>OUT</u> from the facility during 2008. Data from 2004, 2005, 2006 and 2007 are also included as required by Schedule B of the Waste Licence 'Content of the Annual Environmental Report'.

Table 2.2: Wastes IN between 2004 and 2008.

Name and Location of Receiving Facilities	Type of Waste	EWC Codes	Licence / Permit No.	2004 (tonnes)	2005 (tonnes)	2006 (tonnes)	2007 (tonnes)	2008 (tonnes)
Sheriff Street, Dublin	C&D	170904	W0047-02	124,336	113,327	119,240	100,160	77,566.82
Sheriff Street, Dublin	Metal	200140	W0047-02	-	-	850	323	9.3
Whiteriver Landfill Site, Dunleer, Co. Louth	C&I	2001	W0060-02	0	4,744	165.02	143.72	0
Sheriff Street, Dublin	C&I	150106	W0047-02	-	-	-	-	5.1
Sheriff Street, Dublin	C&D Wood	170201	W0047-02	-	-	-	-	397.2
TOTAL				125,633	114,076	120,090	100,491	77,978.42

Table 2.3: Wastes OUT between 2004 and 2008.

Name and Location of Receiving Facilities	Type of Waste	EWC Codes	Licence / Permit No.	2004 (tonnes)	2005 (tonnes)	2006 (tonnes)	2007 (tonnes)	2008 (tonnes)
Neiphin Trading Ltd., Integrated Waste Management Facility	C&D	170904	W0047-02	124,336	113,327	119,240	100,160	77,801.08
Neiphin Trading Ltd., Integrated Waste Management Facility	Metal	200140	W0047-02	-	-	850	323	177.34
TOTAL				125,633	114,076	120,090	100,491	77,978.42

Only small quantities of wastes (less than 100-200 tonnes) are typically held on the site overnight.

2.4 Quantity of Non Acceptable Wastes

Table 2.4 presents the quantities of non-acceptable wastes received at the site.

Table 2.4: Non-Acceptable wastes sent off site during 2008.

Non-Acceptable Waste	No.	Licensed Contractor	
25lb Gas Cylinders	0		
42lb Gas Cylinders	0	Calor Distributor, Tolka Quay Rd., Dublin 1.	
75lb Gas Cylinders	0	Dublin 1.	
Refrigerators	0	National Recycling, John F. Kennedy Drive, Naas Road, Dublin 12.	
Batteries	0	National Recycling, John F. Kennedy Drive, Naas Road, Dublin 12.	

3.0 REPORT ON ENVIRONMENTAL MONITORING AND EMISSIONS

Table 3.1 presents the monitoring and reporting requirements in compliance with the Waste Licence Register No. W0042-01 Schedule E: Monitoring. Figure 1, Rev I presents the locations of monitoring points. Table 3.2 below presents the Grid Reference for each monitoring location.

Table 3.1: Monitoring and Reporting Requirements

Media	Parameter	Monitoring Frequency	Reporting Frequency	
Dust Monitoring	Levels	Quarterly	Quarterly	
Noise Monitoring	Levels	Bi-annually	Bi-annually	
Monitoring of Emissions to Sewers	Quality	Quarterly	Quarterly	
Monitoring of Flow to Sewers	Flow	Quarterly	Quarterly	

Table 3.2: Monitoring Points and Grid Reference Locations

Media	Location	Eastings	Northings	
	D1	317834.3	234817.4	
	D2	317922.9	234751.8	
Dust	D3	317882.0	234742.1	
Dust	D4	317824.2	234757.0	
	D5	317862.4	234743.7	
	D6	317819.3	234793.1	
	N1	317909.3	234743.9	
	N2	317922.9	234751.8	
	N4	317819.3	234793.1	
Noise	N5	317862.4	234743.7	
	N6	317799.0	234766.0	
	N10	317865.6	234728.7	
	N11	317825.0	234732.0	
Sewer	S1	317844.6	234749.5	

3.1 Dust Monitoring

3.1.1 Introduction

The dust deposition rates recorded at the facility for quarterly dust monitoring rounds in 2008 are presented in Table 3.3.

Table 3.3: Dust Deposition Rates in the environs of the Dean Waste facility at Sheriff Street Upper

	Dust Deposition Rate mg/m²/day						
Sampling Point	Q 1 2008	Q 2 2008	Q 3 2008	Q 4 2008			
D-1	432.4	442.1	182.9	177.4			
D-2	565.5	585.7	238.4	160.8			
D-3	1070	803.9	654.2	693.0			
D-4	870.4	740.7	171.9	166.3			
D-5	615.4	2,285.3	338.1	260.6			
D-6	333	735.0	160.8	177.4			

3.1.2 Summary of Results

The waste licence Emission Limit Value (ELV) for dust is specified as being $350 \text{ mg/m}^2/\text{day}$ from the facility. This ELV is specified in Schedule F.2 of the licence.

The elevated dust concentrations recorded at the facility are attributable to construction activities on a building site opposite the facility, passing traffic on Sheriff Street and facility activities. The proportions attributable to the facility versus the off-site sources are difficult to quantify. The construction works have been on-going opposite the A1 facility on different projects for over two years.

A block of apartments were constructed first followed by the initiation of construction works on a site adjacent to the apartment block. Adequate netting is not present on the construction works that overshadow the A1 site and as a result, gusts of wind blow numerous clouds of material such as dust and styrofoam across the road in to the A1 site.

3.1.3 Mitigation Measures

Mitigation measures to reduce dust from the facility were implemented in 2001 and have been utilised throughout this reporting period. The shredder was moved from the drive through passage on the north side of the building to further inside the building to reduce dust emissions through the open doors. Heavy flexible rubber sheeting was installed in the open doors. The building sprinkler system was also extended. Sweeping of the yard is undertaken at regular intervals. The licensee will continue to enhance mitigation measures to reduce on-site dust generation. Enhancements will include:

- Additional sweeping of yard and;
- Additional wetting down of yard during dry periods.

3.2 Noise Monitoring

3.2.1 Introduction

Noise monitoring was carried out twice in the reporting period in compliance with the Waste Licence; in Quarter 2 (8th July 2008) and Quarter 4 (28th October 2008).

All monitoring locations were chosen to comply with the ISO 1996: *Acoustics – Description and Measurement of Environmental Noise* guidelines. Monitoring locations N1, N2, N4 and N5 are located along the boundary walls of the facility. Monitoring locations N6, N10 and N11 represent three other locations that can be considered as noise sensitive receptors. Table 3.4 depicts the noise-monitoring results for the reporting period.

Table 3.4: Noise Levels at Sheriff Street Upper

Monitoring Location	N1	N2	N4	N5	N6	N10	N11
Quarter 2 - (8 th July 2008)							
Noise Level L Aeq, 30min dB (A)	73	74	65	68	65	68	70
Quarter 4 - (28 th October 2008)							
Noise Level L Aeq, 30min dB (A)	76	70	64	70	65	67	68

3.2.2 Summary of Results

As the facility is located in a predominantly industrial area, the general noise environment is dominated by industrial activities adjoining the facility. These activities include construction work and general traffic in the area. General operational activities at the transfer facility also contribute to this noise environment.

The LAeq averaged noise levels during the 2^{nd} Quarter of 2008 ranged from 65 dB(A) to 74 dB(A). Noise levels recorded cannot be solely attributed to noise from the operations of the A1 facility. During the 4^{th} Quarter of 2008 the noise levels ranged from 64 dB(A) to 76 dB(A). Again construction noise as well as operational noise dominated the noise environment.

3.2.3 Mitigation Measures

A noise minimization plan was prepared (Condition 7.5 of the Waste Licence Register No. W0042-01) in February 2001. It is included in the Environmental Management Plan of 2001. The plan encompasses Site Layout and Planning, Working Methods and Operating Procedures, Selection of Plant and Machinery, Training and Supervision and Noise Control at site.

The main method for noise abatement at the site is to ensure that noise abatement equipment (i.e. mufflers) on plant and lorries are operating properly. In addition heavy flexible sheeting (rubber) has been installed along the front entrance of the transfer building to attenuate noise emissions from plant inside the building.

3.3 Sewer Monitoring

3.3.1 Introduction

Emissions to the Sewer are monitored quarterly as required by the Waste Licence 'Schedule E.1: Emission to Sewer'. Table 3.5 presents the results of sewer monitoring during the reporting period.

Table 3.5: Results on Emission to Sewer.

Donomoton	Unit	ELV Note 1	2008			
Parameter			Q1	Q2	Q3	Q4
Flow to sewer	m ³ /day	15	5.52	1.29	7.20	2.5
BOD	ppm	1,000	3	7	56	78
COD	ppm	3,000	48	38	143	195
Suspended Solids	ppm	1,000	36	26	<10	<10
Fats, Oil, Grease	ppm	100	1	<1	<1	7
Detergents (as MBAS)	ppm	100	0.5	0.4	< 0.2	0.3
pН	Units	6-10	7.00	7.55	7.58	7.67
Conductivity (field)	μS/cm	-	1100	778	1082	1050

Note 1: ELV = Emissions Limit Value (for a grab sample)

Note 2: This represents an average daily flow calculated from data recorded from 04/01/2008 to 28/03/2008

Note 3: This represents an average daily flow calculated from data recorded from 04/04/2008 to 28/06/2008

Note 4: This represents an average daily flow calculated from data recorded from 05/07/2008 to 28/09/2008

Note 4: This represents an average daily flow calculated from data recorded from 05/07/2008 to 28/09/2008

Note 5: This represents an average daily flow calculated from data recorded from 05/10/2008 to 28/12/2008

3.3.2 Summary of Results

All parameters were reported in the Quarterly Monitoring Reports 1 to 4. During the reporting period all parameters were observed to be below the ELVs specified in Schedule F.1 of the Waste Licence.

3.3.3 Mitigation Measures

No further mitigation measures are planned at this time.

3.4 **Vermin Monitoring**

Vermin control is carried out on the site by L. G. Vaughan & Sons (Rathfarnham, Dublin 16). The monitoring includes regular site assessments and the maintenance (examining and replenishing) of bait boxes placed in fixed locations around the site.

The Vermin Control Plan is included in the Environmental Management Program (EMP) of 2002 (issued February 2003).

4.0 RESOURCE AND ENERGY CONSUMPTION SUMMARY

Table 4.1 presents information for resource and energy consumption at the facility between 2004 and 2008.

Table 4.1: Resource and Energy consumption between 2004 and 2008.

Resource / Energy	Quantity used					
source	2004	2005	2006	2007	2008	
Water	2,893 m ³	2,080 m ³	783 m ^{3 Note 1}	1,634 m ³	3580	
Gas oil	121.8 m ³	77.4 m^3	63.8 m ³	50.59 m ³	45.30	
Electricity	35,691	45,881	52, 961	43,078	29,360	
	units	units	units	units	units	

Note 1: Water usage figure for 2006 is lower than previous years due to complications with the water metre on site.

REPORT ON DEVELOPMENT WORKS 5.0

5.1 Works for the Preceding Year

There were no works carried out at the facility during the reporting period of 1st January 2008 to 31st December 2008.

5.2 Works Planned for 2008

There are no development works proposed for 2009.

6.0 SCHEDULE OF OBJECTIVES AND TARGETS

A review of the schedule of objectives and targets is undertaken annually for the facility, and achievement of targets during the previous twelve months are measured.

Overall responsibility for managing the Schedule of Objectives and Targets rests with the company General Manager and the Facility Manager.

6.1 **Schedule of Objectives and Targets**

There are no new Objectives and Targets for 2009. Previously proposed Objectives and Targets will be addressed.

7.0 **DESCRIPTION OF PROCEDURES DEVELOPED IN 2008**

Procedures, which have been implemented at the site, were developed in 2001 (see AER/EMP 2001). These procedures are reviewed annually and amended as required.

In total, 3 no. new procedures developed at the site during 2008. These are listed below:

- Waste Acceptance Procedures Weighbridge Operating Procedures
- Waste Acceptance Procedures On-site Verification of Wastes
- Waste Acceptance Procedures- Procedure for the Acceptance, Handling and Transfer of Gypsum Wastes

8.0 TANK, DRUM, PIPELINE AND BUND TESTING AND INSPECTION **REPORT**

Underground pipes and sumps were inspected and their integrity assessed during 2001. There were no tests carried out during 2008.

9.0 REPORTED INCIDENTS AND COMPLAINTS SUMMARIES

Condition 10.6 of the Waste Licence requires a notification of the Agency in case an incident has, or may have, taken place at the facility. Incidents as described in Condition 3.1 of the Licence are as follows:

"The Licencee shall make written records of the following incidents:

- a) Any nuisance caused by the activity
- b) Any emission which does not comply with the requirements of this licence
- c) Any trigger level specified in this licence which is attained or exceeded
- d) Any indication that environmental pollution has, or may have, taken place
- e) Any emergency."

A.1

Table 9.1: Incident Log for the reporting period.

Date	Incident	Action		
Quarter 1	Dust level limit exceeded	Notified Agency in Quarter 1 Report 2008		
Quarter 2	Dust and noise level limit exceeded	Notified Agency in Quarter 2 Report 2008		
Quarter 3	Dust level limit exceeded	Notified Agency in Quarter 3 Report 2008		
Quarter 4	Dust and noise level limit exceeded	Notified Agency in Quarter 4 Report 2008		

One complaint was received in 2007. A local residents committee contacted the Agency on the 26th of February 2007 in relation to concerns about the proximity of the new residential development to the waste transfer station.

It was pointed out however, that there were no environmental nuisances associated with the transfer station and the fact that the transfer station participates in the Construction & Demolition waste recycling program, there was a positive environmental impact created by the facility. No complaints were received during 2008.

10.0 REVIEW OF NUISANCE CONTROLS

The Waste Licence requires a weekly inspection of the facility and its immediate surroundings for nuisance caused by vermin, birds, flies, mud, dust and odours. The Facility Manager carries out these inspections. A written report of each inspection is filed and kept at the facility office.

10.1 Nuisances caused by Vermin

Pest control is carried out on the site by L.G. Vaughan & Sons, 205 Grange Road, Rathfarnham, Dublin 16. A revised vermin control plan was included in the Environmental Management Program (EMP) of February 2003.

10.2 Nuisances caused by Birds

Birds have not been identified on the site as a nuisance. In the occurrence of a bird related problem a licensed pest controller for birds will be employed. A revised vermin control plan was included in the EMP of February 2003.

10.3 Nuisances caused by Mud and Dust

Monitoring for dust emissions on the site are carried out quarterly as specified in the Waste Licence. A quarterly report is prepared and sent to the Agency, which includes details of dust monitoring results. A revised dust minimization plan was included in the EMP of February 2003.

10.4 Nuisances caused by Odours

Odours have not been identified as a nuisance.

11.0 FINANCIAL PROVISIONS

A report on Financial Provisions, was issued to the Agency in correspondence dated 17 September 2001.

In summary, there are two potential scenarios for which a Financial Provision, available for use by the Agency, may be needed:

11.1 Site decommissioning

In the event of a decommissioning of the site it would probably be for the purposes of a trade sale and the licensee undertakes to instruct the Company Solicitor to withhold sufficient funds from sale proceeds to discharge whatever costs arise from decommissioning.

11.2 Environmental nuisance and pollution incidents

An Environmental Liabilities Risk Assessment (Condition 11.2.1) was prepared and submitted as part of the "Six Months After Grant Licence Report".

The Licensee has put in place an Environmental Site Liability Insurance Policy with the Chubb Insurance Company of Europe to cover unexpected pollution events.

12.0 MANAGEMENT AND STAFFING STRUCTURE

A management structure depicting the site management and staffing was included in the Environmental Management Program (EMP) of February 2003. No amendments were made to the management structure in 2008.

13.0 PROGRAMME FOR PUBLIC INFORMATION

A Communications Program was developed for the site (last revised in February 2003) – see EMP 2003.

The specific objectives of the program are as follows:

- To ensure that the general public is aware of how to contact management personnel at the facility and at the head office.
- To encourage liaison between the Licensee and local residents and those who may be affected by operations at the facility.
- To make available Environmental Performance Data relating to the Waste Recycling and Transfer Facility at Sheriff Street Upper at all reasonable times.

The communications program focuses on ensuring that the general public knows how to access relevant information, facilitate personal contact with site management and facilitate site visits.

Any complaints regarding the site operation can be forwarded to the facility manager who will log them.

APPENDIX 1

Figure 1 Rev. I – Monitoring Locations

Appendix 2

Objectives & Targets