WASTE RECOVERY SERVICES (FERMOY) LTD.

Licence No. W0107-01

ANNUAL ENVIRONMENTAL REPORT

2012

Prepared By: Adrian Dunlea.

Table of Contents

LIST OF APPENDICES

1 INTRODUCTION

1.1 Reporting Period

The following is the annual report (AER) for the period January 2012 to December 2012 for the Waste Transfer/Recycling Facility operated by Waste Recovery Services (Fermoy) Ltd. (WRS) at Cullenagh, Fermoy, Co Cork. The contents of this report are as specified in Schedule F of Waste licence W0107-01 granted on 18th of April 2002.

1.2 Waste Activities carried out at the facility

Waste Recovery Services (Fermoy) Ltd. are licenced by the Environmental Protection Agency to carry out waste activities in the operation of a non-hazardous waste transfer station. The facility is licensed to accept non hazardous waste (commercial, industrial and construction and demolition waste). Hazardous or liquid wastes are not accepted at this facility.

In pursuance of the powers conferred on it by the Waste Management Act, 1996, the Environmental Protection Agency (the Agency) under Section 40(1) of the said Act granted Waste Licence W107-01 to Waste Recovery Services (Fermoy) Limited to carry on the waste activities listed below at Cullenagh, Fermoy, Co. Cork subject to conditions contained in the licence. These activities are as specified in the third and fourth schedules of the Waste management Act, 1996 (see Tables 1.1 and 1.2).

Third Schedule **Class 12. Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.** This activity is limited to the transfer of non-recoverable waste into jumbo skips for transfer to landfill. **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.** This activity is limited to the temporary storage of non-recoverable wastes prior to dispatch to landfill.

Table 1.1 Licensed Waste Recovery Activities, in accordance with the Third Schedule of the Waste Management Act 1996

Fourth Schedule

Class 3. Recycling or reclamation of metals and metal compounds:

This activity is limited to the recovery and temporary storage of metal waste separated from waste accepted at the facility.

Class 4. Recycling or reclamation of other inorganic materials:
This activity is limited to the recovery and temporary storage of timber waste and of construction and demolition wastes accepted at the facility.

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:

This activity is limited to the storage of materials on site prior to recovery at the facility or removal to a recovery facility off-site

Table 1.2 Licensed Waste Disposal Activities, in accordance with the Fourth Schedule of the Waste Management Act 1996

1.3 Site Infrastructure & Development

1.3.1 Site Infrastructure

The waste management facility comprises a site office, weighbridge, process sheds, workshop and temporary storage areas as well as a waste water and storm water management system. The operations section of the site is separated into 3 sections:

1. Waste transfer area.
2. Construction & Demolition area.
3. Timber Segregation & Shredding area.

1.3.2 Waste Handling & Processing Capacity

As outlined the site is divided into 3 No. Sections, with the processing capacity each of the 3 No. sections outlined in Tables 1.3, 1.4 and 1.5 below.

1.4 Waste Transfer Area:

Equipment Type	Equipment Use	Rate of Tonnes Per Hour	Daily Tonnage Capacity - 10 Hour Day >>	Weekly Processing Capacity - 6 Days a Week	Annual Processing Capacity 51 Weeks
Ejector Trailer / Walking Floor, Komatsu - 13 Tonne Excavator, New Holland Skid Steer S160	Loading & Sorting Waste, Transport of Waste Materials	20	200	1,200.00	61,200.00
		Tonnes	**Tonnes**	**Tonnes**	**Tonnes**

Table 1.3 Equipment in Waste Transfer Area

1.5 Construction & Demolition Area:

Equipment Type	Equipment Use	Rate of Tonnes Per Hour	Daily Tonnage Capacity - 10 Hour Day >>	Weekly Processing Capacity - 6 Days a Week	Annual Processing Capacity 51 Weeks
Extec – Finger Screener & LJH – Mobile Picking Station, Manitou Telescopic loader, Tipper Lorries	Screening Waste, Sorting & Segregating Waste. Loading & Sorting Waste. Transport of Waste Materials	40.00	400.00	2,400.00	122,400.00
		Tonnes	**Tonnes**	**Tonnes**	**Tonnes**

Table 1.4 Equipment in Construction & Demolition Area

1.6 Timber Segregation & Shredding Area:

Equipment Type	Equipment Use	Rate of Tonnes Per Hour	Daily Tonnage Capacity - 10 Hour Day >>	Weekly Processing Capacity - 6 Days a Week	Annual Processing Capacity 51 Weeks
2 Wood Shredders, One 14 Tonne Loader & 13 Tonne Excavator, Walking Floor.	Shredding, Loading Wood & Woodchip	20	240	1,440.00	73,440.00
		Tonnes	**Tonnes**	**Tonnes**	**Tonnes**

Table 1.5 Equipment in Timber Segregation & Shredding area

WASTE ACTIVITES

The waste categories and quantities which can be accepted at the Facility are outlined in Schedule A (Table 2) of the waste licence (See Table 2.1)

Waste Type	Maximum Tonnes Per annum
Commercial	3000
Industrial	1700
Construction and Demolition	1800
Total	**6500**

Table 2.1 Waste types and quantities permitted by waste licence

The types of wastes received and dispatched at the site during 2012 are outlined in Table 2.2.

This information is commercially sensitive. If you require further details please contact Adrian Dunlea of Waste Recovery Services on 025-31055 with your name, company name, address and email and telephone numbers and we will respond to all queries in due course.

This information is commercially sensitive. If you require further details please contact Adrian Dunlea of Waste Recovery Services on 025-31055 with your name, company name, address and email and telephone numbers and we will respond to all queries in due course.

This information is commercially sensitive. If you require further details please contact Adrian Dunlea of Waste Recovery Services on 025-31055 with your name, company name, address and email and telephone numbers and we will respond to all queries in due course.

Table 2.2 Wastes Received and Dispatched from the 1st January – 31st December 2012

1.7 Waste recovered at the site

This information is commercially sensitive. If you require further details please contact Adrian Dunlea of Waste Recovery Services on 025-31055 with your name, company name, address and email and telephone numbers and we will respond to all queries in due course.

2 SUMMARY OF RESULTS AND INTERPRETATION OF ENVIRONMENTAL DATA

Foul Water Monitoring

Foul water monitoring is carried out at one location (FW-1), which is shown on Figure 2.1. FW-1 is at the foul water holding tank that contains water from the process shed. The holding tank is emptied regularly and the contents sent to the Fermoy Waste Water Treatment Plant. All of the parameters complied with the ELVs set in the Licence.

Groundwater Monitoring

Groundwater monitoring was carried out quarterly at five monitoring wells. Wells BH-1 and BH-3 are within the facility, while the other wells (Dunlea, O'Riordan, O'Leary and Coughlan) are at private residences in the vicinity of the facility. It is likely that BH-3 and O'Leary's are either upgradient of the facility or not in the same catchment. BH-1, Dunlea's and O'Riordan's are down gradient and Coughlan's is possibly side downgradient of the facility.

The licence does not specify any ELVs or Trigger Levels and for interpretation purposes the results had previously been compared to the Interim Guideline Values (IGV) for groundwater published by the Agency. The results are now also compared to the Threshold Values for groundwater (GTV) quality introduced by the European Communities Environmental Objectives (Groundwater) Regulations 2010 S.I. No. 9 of 2010.

The IGV levels represent typical background or unpolluted conditions; however levels higher than the IGV can occur naturally, depending on the local geological and hydrogeological conditions. While the GTVs are more appropriate for large scale abstraction wells used for potable supply, they can be used to assess the significance of contamination where present in groundwater. Because not all parameters monitored have been assigned GTVs, the relevant IGV continue to be used for comparative purposes.

In Q1, with the exception of O'Riordan's well which is fitted with a treatment unit, the pH levels in all wells are below the IGV range. The low pH is considered to be naturally occurring. Elevated potassium and ammonia were detected in BH-1, Dunlea's well and O'Riordan's well. The potassium levels in O'Riordan's well are associated with the treatment unit. The zinc level in O'Leary's well exceeded the IGV. Slightly elevated levels of copper were detected in O'Leary's wells. The total coliform levels in all of the wells are within the ranges previously detected. Faecal coliforms were only detected in O'Leary's well, which is either up gradient of the site, or in another catchment. .

The chloride, sulphate and orthophosphate levels in Dunlea's well exceeded the IGV with the sulphate level being above the TGV. Elevated levels of chloride and sulphate were also present in BH-3. The manganese levels in all wells, with the exception of O'Leary's, exceeded the IGV. TPH was detected in BH-1 (18.5µg/l). This level is greater than the IGV of 10µg/l. TPH was not detected in any of the other wells. High levels of manganese have been detected in these wells previously. As the high levels occur in both up and down gradient wells it is probable that the manganese is naturally occurring in the groundwater in this area.

In Q2, with the exception of O'Riordan's well, the pH levels in all wells are below the IGV range. Elevated potassium and ammonia were detected in BH-1, BH-3, Dunlea's well and O'Riordan's well. The potassium levels in O'Riordan's well are associated with the treatment unit. The total coliform levels in all of the wells are within the ranges previously detected. Faecal coliforms were only detected in BH-1

In Q3, with the exception of O'Riordan's well, which is fitted with a treatment unit, the pH levels in all wells are below the IGV range. Elevated potassium and ammonia were detected in BH-1 and Dunlea's well. The total coliform levels in all of the wells are within the ranges previously detected. Faecal coliforms were detected in Coughlan's well

In Q4, with the exception of O'Riordan's well, the pH levels in all wells were below the IGV. Elevated potassium was detected in BH-1, Dunlea's well and O'Riordan's well. The total coliform levels in all of the wells are within the ranges previously detected. Faecal coliforms were detected in Dunlea's and Coughlan's well

Percolation Testing

The discharge to the percolation area is monitored quarterly for BOD, suspended solids and mineral. The monitoring confirmed that the emission complied with the ELVs.

Dust

Dust monitoring was carried out on three occasions at the three monitoring points specified in the Licence. The results were below the deposition limit.

Noise

Noise monitoring was carried out annually at the monitoring points specified in the Licence. The noise levels complied with the ELV set in the Licence.

Dust

Dust monitoring was carried out on three occasions at the three monitoring points specified in the Licence. The monitoring was conducted in July, August and December. The results were all below the deposition limit set in the Licence.

Noise

Noise monitoring was carried out annually at the monitoring points specified in the Licence. The noise levels complied with the ELV set in the Licence.

2.1 Review of nuisance controls

Nuisance controls are reviewed on weekly bases.

3 REPORTED COMPLAINTS AND INCIDENTS

There have been no reportable incidents or complaints received over the last 12 months from January 1st to December 31st 2012

4 RESOURCE AND ENERGY CONSUMPTION

The main resources consumed at the facility during the reporting period were electricity, diesel, and lubricants. A summary of the significant resources consumed is tabulated below (See Table 4.1 and Table 4.2) with a summary of the principal resource consumption.

Area of Use	**Purpose**	**Principal Resource Consumed**
Site Plant/Vehicles	Placement and processing of Waste	Diesel, Lubricants
Offices and Sheds	Management of Yard and The facility management	Electricity and Water

Table 4.1 Principal areas of energy and resources usage January 2012 – December 2012

Resource	**Consumption for Reporting Period '2012**	**Consumption for previous year '2011**	**Increase / Decrease (%)**
Site Management			
Electricity	37, 378 Units	29,073 Units	Units (28.6%)
Site Plant / Vehicles			
Diesel	176,169.16 litres	185,455.87 litres	Litres (-5%)
Lubricants	1,420 litres	1,974 litres	Litres (-28.1%)

Table 4.2 Available data on quantities of Energy and Resources used for January 2012 – December 2012

5 ENVIRONMENTAL OBJECTIVES & TARGETS FOR 2012

Project	Status
1. Dust Emissions / Monitoring	On going
2. Noise Emissions / Monitoring	On going
3. Ground Water / Monitoring	On going
4. Foul Water / Monitoring	On going
5. Submit an application for a waste licence review	Completed April 2012

Table 5.1 Progress on Objectives for site improvement for 2012

6 ENVIRONMENTAL OBJECTIVES & TARGETS FOR 2013

Objective	Target	Responsibility	Timescale
Assess and reduce where possible all dust emissions.	Not to exceed 350 mg/m^2/day in order to reduce the possibility of causing dust deposition nuisance beyond site boundary.	Adrian Dunlea	Ongoing
Assess and reduce where possible all site noise emissions.	Not to exceed 55 db(a) L_{AEq} (30 minutes) during day time and not to exceed 45 db(a) L_{AEq} (30 minutes) during night at noise monitoring locations in order to reduce the possibility of causing noise nuisance at noise sensitive locations beyond the site boundary.	Adrian Dunlea	Ongoing
Assess and monitoring groundwater quality at the site and in the immediate vicinity of the site	No pollution of groundwater due to site activities.	Adrian Dunlea	Ongoing
Assess and monitoring waste water emissions from the site.	Compliance with emission limits as required by schedule C4 of W0107-01.	Adrian Dunlea	Ongoing

Table 6.1 Objectives and Targets for 2013

7 NEW PROCEDURES PUT IN PLACE DURING 2012

No new procedures were put in place during 2012

8 MANAGEMENT AND STAFFING STRUCTURES

The management and staffing structures in place at WRS (see Figure 7.1) ensures clear communication of environmental policy and responsibility for environmental management on-site. A critical part of this management system is the provision of health and safety and environmental training to all staff members to ensure that all staff members from management to operatives are aware of their responsibilities and best practice to ensure the firm meets its environmental obligations.

Position	Name
General Manager	John Dunlea
Facility Manager / Site Manager / Environmental Manager	Adrian Dunlea
Deputy Facility Manager / Financial Manger / Administration / Logistics etc	Shane Dunlea

Table 8.1 Management and staffing structures at Waste Recovery Services (Fermoy) Ltd.

9 PUBLIC INFORMATION PROGRAMME

WRS have developed and implemented a communications procedure as part of the site EMS. In accordance with condition 2.4 of the waste licence, this procedure ensures that members of the public can obtain relevant information, at all reasonable times, concerning the environmental performance of the facility.

10 FINANCIAL PROVISION

An environmental liabilities risk assessment and site closure report have been prepared and submitted to the Agency. These reports contain proposals for financial provision which have been agreed by the Agency.

Adrian Dunlea

_____

Adrian Dunlea

Environmental Manager

Waste Recovery Services (Fermoy) Ltd

APPENDIX I. 2012 MONITORING RESULTS

Quarter 1 Ground Water Results 2012

Parameter	Units	BH-1	BH-3	Dunlea	Coughlan	O'Riordan	O'Leary	GTV	IGV
pH	pH units	5.7	5.8	5.9	5.3	7.4	5.7	-	6.5-9.5
Temperature	°C	11.7	12.3	11.5	12.5	10.7	9.9	-	25
Conductivity	mS/cm	0.485	1.021	0.749	0.133	0.570	0.101	1.875	1.000
Dissolved Oxygen	mg/l	4.0	9.3	5.7	6.3	6.2	8.8	-	-
Ammonia	mg/l	0.560	<0.007	0.097	<0.007	0.162	<0.007	0.175	0.12
Iron	µg/l	118.0	23.8	<20.0	<20.0	<20.0	<20.0	-	200
Zinc	µg/l	10.7	4.5	34.9	34.6	47.8	102.6	-	100
Copper	mg/l	<0.003	<0.003	0.009	0.016	0.020	0.043	1.5	0.03
Potassium	mg/l	19.2	3.2	11.5	0.8	181.3	0.8	-	5
Sodium	mg/l	22.7	73.4	36.8	10.7	15.2	9.4	150	150
Total Coliforms	mpn / 100 ml	3	0	9	5	2	138	-	0
Faecal Coliforms	mpn / 100 ml	0	0	0	0	0	15	-	0
Chloride	mg/l	25.7	243.5	45.9	12.4	13.2	8.5	-	30
TON	mg/l	ns	ns	ns	ns	ns	ns	-	NAC
Sulphate	mg/l	128.7	207.5	253.9	9.0	10.4	5.3	187.5	200
Ortho-phosphate	mg/l	<0.009	<0.009	0.046	<0.009	<0.009	0.029	-	0.03
Barium	µg/l	42.5	93.9	90.8	15.0	15.7	12.0		100
Cadmium	µg/l	0.5	0.1	0.4	0.1	0.2	<0.1	3.75	5
Chromium	µg/l	<1	1.2	<1	<1	<1	<1	37.5	30
Mercury	µg/l	0.24	0.16	0.26	<0.02	<0.02	<0.02	0.75	1
Manganese	µg/l	4764	167.5	4994.4	87.1	634.5	14.8	-	50
Nickel	µg/l	2.6	3.5	9.9	5.5	7.8	2.2	15	20
Lead	µg/l	0.6	<0.3	0.9	1.5	0.5	2.2	18.75	10
Boron	mg/l	0.06	0.02	0.08	0.05	0.16	<0.02	0.75	1
Calcium	mg/l	51.1	114.0	101.3	12.6	4.4	4.7	-	200
Total Phosphorus	mg/l	18.5	<0.01	1.54	0.02	0.04	0.05	-	NE
TPH	µg/l	<10	<10	<10	<10	<10	<10	-	10
TOC	mg/l	5.79	2.38	6.31	2.04	1.20	0.67	-	NAC
Magnesium	mg/l	10.9	21.2	21.2	3.6	3.3	3.8	-	50

NAC – No Abnormal Change

NE – Not Established
NS – Not Sampled

Quarter 2 Ground Water Results 2012

Parameter	Units	BH-1	BH-3	Dunlea	Coughlan	O'Riordan	O'Leary	GTV	IGV
pH	pH units	5.7	5.1	5.9	5.4	7.9	5.7	-	6.5-9.5
Temperature	°C	11.2	11.2	11.8	12.1	14.1	12	-	25
Conductivity	mS/cm	339	931	732	123	610	97	1.875	1.000
Dissolved Oxygen	mg/l	4.1	9.2	3.6	5.5	5.9	8.3	-	-
Ammonia	mg/l	0.068	<0.025	0.122	0.022	0.050	0.017	0.175	0.12
Iron	µg/l	156.6	<20.0	20.4	<20.0	<20.0	62.5	-	200
Zinc	µg/l	7.9	5.8	22.5	11.2	38.1	20.4	-	100
Copper	mg/l	0.006	0.005	0.007	0.004	0.034	0.017	1.5	0.03
Potassium	mg/l	11.1	6.5	11.6	1.0	220.60	0.8	-	5
Sodium	mg/l	15.9	100.0	41.2	11.1	16.5	10.4	150	150
Total Coliforms	mpn / 100 ml	70	0	95	202	4	3	-	0
Faecal Coliforms	mpn / 100 ml	1	0	0	0	0	0	-	0

NAC – No Abnormal Change

NE – Not Established
NS – Not Sampled

Quarter 3 Ground Water Results 2012

Parameter	Units	BH-1	BH-3	Dunlea	Coughlan	O'Riordan	O'Leary	GTV	IGV
pH	pH units	5.2	5.51	5.49	5.1	7.17	5.4	-	6.5-9.5
Temperature	°C	11.6	11.2	11	11.6	11.6	11.1	-	25
Conductivity	mS/cm	387	997	725	131	549	95	1.875	1.000
Dissolved Oxygen	mg/l	4.4	9.9	4.5	5.5	8.7	8.6	-	-
Ammonia	mg/l	0.355	0.029	0.108	0.025	0.246	0.008	0.175	0.12
Iron	µg/l	144.3	54	<20.0	<20.0	<20.0	<20.0	-	200
Zinc	µg/l	<1.0	<1.0	3.9	<1.0	4.8	21.5	-	100
Copper	mg/l	0.004	0.003	0.007	0.006	0.006	0.020	1.5	0.03
Potassium	mg/l	18.4	3.3	10.4	0.9	180.6	0.8	-	5
Sodium	mg/l	19.2	87.6	35.7	9.9	13.6	8.3		
Total Coliforms	mpn / 100 ml	202	22	78	145	34	202	-	0
Faecal Coliforms	mpn / 100 ml	0	0	0	2	4	0	-	0

NAC – No Abnormal Change

NE – Not Established
NS – Not Sampled

Quarter 4 Ground Water Results 2012

Parameter	Units	BH-1	BH-3	Dunlea	Coughlan	O'Riordan	O'Leary	GTV	IGV
pH	pH units	5.8	5.1	5.9	5.4	7.5	6.1	-	6.5-9.5
Temperature	°C	9.9	9.6	9.6	10.7	10.7	9.9	-	25
Conductivity	mS/cm	290	696	707	111	539	122	1.875	1.000
Dissolved Oxygen	mg/l	4.6	8.0	9.5	5.1	5.8	8.6	-	-
Ammonia	mg/l	0.055	0.011	0.096	0.020	0.082	0.011	0.175	0.12
Iron	µg/l	134.6	<20.0	21.0	<20.0	<20.0	<20.0	-	200
Zinc	µg/l	5.1	4.6	11.6	6.1	74.0	42.3	-	100
Copper	mg/l	0.005	<0.003	0.005	0.004	0.024	0.028	1.5	0.03
Potassium	mg/l	11.0	4.2	10.5	0.7	182.6	0.9		5
Sodium	mg/l	10.7	58.0	32.8	7.8	15.9	7.9		
Total Coliforms	mpn / 100 ml	109	0	91	18	16	25		0
Faecal Coliforms	mpn / 100 ml	0	0	4	1	0	0		0

NAC – No Abnormal Change

NE – Not Established
NS – Not Sampled

Percolation Area Monitoring Results 2012

Parameter	Units	Q1	Q2	Q3	Q4	Trigger Level
BOD	mg/l	<1	<1	<1	<1	25
Total Suspended Solids	mg/l	<5	<5	5	<5	35
Mineral Oils	mg/l	0.155	<10	<10	<10	5

Foul Water Monitoring Results 2012

Parameter	Units	Q1	Q2	Q3	Q4	Emission Limit
pH	pH units	6.3	7.2	8.09	5.1	6 – 10
Temperature	°C	8.4	16.2	12	5.7	42
BOD	mg/l	>799	>345	141	>2384	3,000
COD	mg/l	5370.0	1236	493	5690	-
Detergents	mg/l	1.52	0.83	0.35	0.33	-
Oils, fats & greases	mg/l	38.0	<4.0	<4.0	23.0	100
Ammonia	mg/l N	73.728	45.14	20.34	7.25	100
Total Suspended Solids	mg/l	990	290	103	290	2,000

Dust Results 2012

Sample Location	July	Aug	December	Emission Limit
	mg/m^2/day	mg/m^2/day	mg/m^2/day	(mg/m^2/day)
Dust Point 1	35	286	53	350
Dust Point 2	305	288	233	350
Dust Point 3	125	73	39	350

APPENDIX II. 2012 PRTR

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.16

REFERENCE YEAR	2012

1. FACILITY IDENTIFICATION

Parent Company Name	Waste Recovery Services (Fermoy) Limited
Facility Name	Waste Recovery Services (Fermoy) Limited
PRTR Identification Number	W0107
Licence Number	W0107-01

Waste or IPPC Classes of Activity

No.	class_name
4.3	Recycling or reclamation of metals and metal compounds.
3.12	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.
3.13	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.
4.13	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.
4.4	Recycling or reclamation of other inorganic materials.
Address 1	Cullenagh
Address 2	Fermoy
Address 3	County Cork
Address 4	
	Cork
Country	Ireland
Coordinates of Location	-8.30669 52.1138
River Basin District	IESW
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Adrian Dunlea
AER Returns Contact Email Address	a.dunlea@wrs.ie
AER Returns Contact Position	Environmental Manager
AER Returns Contact Telephone Number	025-31055
AER Returns Contact Mobile Phone Number	087-6957668
AER Returns Contact Fax Number	025-31528
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	15
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General
50.1	General

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

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

Guidance on waste imported/accepted onto site

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

4.1 RELEASES TO AIR

Link to previous years emissions data

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

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

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

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(otal) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Waste Recovery Services (Fermoy) Limited

Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Used: Method Code	Method Used: Designation or Description	Facility Total Capacity m3 per hour	
Total estimated methane generation (as per site model)	0.0				N/A	
Methane flared	0.0				0.0	(Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0	(Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A	

4.2 RELEASES TO WATERS

Link to previous years emissions data

| PRTR# : W0107 | Facility Name : Waste Recovery Services (Fermoy) Limited | Filename : W0107_20121.xls | Return Year : 2012 | 08/02/14 18:23

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

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

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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

| PRTR# : W0107 | Facility Name : Waste Recovery Services (Fermoy) Limited | Filename : W0107_2t 08/02/14 18:25

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
		M			0.0	0.0	0.0	0.0

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

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

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
238	Ammonia (as N)	C	PER	Calc from the volume of wastewater removed in 2012 and laboratory results	1.33	1.33	0.0	0.0
303	BOD	C	PER	Calc from the volume of wastewater removed in 2012 and laboratory results	33.35	33.35	0.0	0.0
306	COD	C	PER	Calc from the volume of wastewater removed in 2012 and laboratory results	116.27	116.27	0.0	0.0
308	Detergents (as MBAS)	C	PER	Calc from the volume of wastewater removed in 2012 and laboratory results	0.02	0.02	0.0	0.0
314	Fats, Oils and Greases	C	PER	Calc from the volume of wastewater removed in 2012 and laboratory results	0.627	0.627	0.0	0.0
240	**Suspended Solids**	C	PER	Calc from the volume of wastewater removed in 2012 and laboratory results	15.2	15.2	0.0	0.0

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

4.4 RELEASES TO LAND Link to previous years emissions data | PRTR# : W0107 | Facility Name : Waste Recovery Services (Fermoy) Limited | Filename : W0107_20121.xls | Return Year : 2012 | 08/02/14 18:28

SECTION A : PRTR POLLUTANTS

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

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

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

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

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

This information is commercially sensitive. If you require further details please contact Adrian Dunlea of Waste Recovery Services on 025-31055 with your name, company name, address and email and telephone numbers and we will respond to all queries in due course.

This information is commercially sensitive. If you require further details please contact Adrian Dunlea of Waste Recovery Services on 025-31055 with your name, company name, address and email and telephone numbers and we will respond to all queries in due course

APPENDIX III - Noise Monitoring Report for 2012

DixonBrosnan
noise & ecology specialists
dixonbrosnan.com

Project	
	2012 annual waste licence compliance noise survey at Waste Recovery Services, Cullenagh, Fermoy, Co. Cork EPA waste licence W0107-01
Client	Waste Recovery Services

Project no	No pages	Client reference	©DixonBrosnan 2013
1249	12	W0107-1	v020113

DixonBrosnan Shronagreehy Kealkil Bantry Co Cork
Tel 086 813 1195 | damian@dixonbrosnan.com | www.dixonbrosnan.com

Report no	Date	Edit	Prepared by	Chkd
1249.1.1	08.01.13	Release 1	Damian Brosnan	CD

1 Introduction

1.1 DixonBrosnan noise consultants were instructed by Waste Recovery Services (WRS) to carry out the 2012 annual environmental noise survey at their waste management facility at Cullenagh, Fermoy, Co. Cork. The survey is a requirement of waste licence W0107-01 issued by the Environmental Protection Agency (EPA) in respect of the facility. Noise conditions of relevance attached to the licence are presented in **appendix 1**.

1.2 The noise survey was carried out on Thursday 20.12.12 during daytime hours while facility operations were in progress. As the facility operates during daytime hours only, evening and night-time surveys were not undertaken. Monitoring was conducted at two measurement locations specified in licence W0107-01 as shown in **appendix 2**. Survey methodology, equipment specifications and weather conditions are outlined in **appendix 3**. The survey was undertaken in accordance with Environmental Protection Agency document *NG4 Guidance note for noise: Licence applications, surveys and assessments in relation to scheduled activities* (2012). It should be noted that the survey was carried out prior to the EPA's issuing of their revision to table 5 of NG4; thus the survey consisted of four monitoring cycles rather than the three cycles now permitted by the revised table.

1.3 During the survey, noise emissions arose from several sources at the WRS facility as follows:

- Tracked excavator with grab in main building.
- Front end loader, telescopic loader and skidsteer in sporadic use around site.
- Truck movements around site, particularly through entrance and weighbridge area.
- Occasional power tools in workshop.

2 Results

2.1 Noise data recorded are presented in **appendix 4**, and summarised in **table 1** below. Tabulated frequency data are presented in **appendix 5**. Frequency spectra and time history profiles are shown in **appendix 6**.

Table 1: Noise data summarised.

Station	Period	Facility specific noise level	Tone objectively detected	Tone attributable to facility	Facility audibly tonal	Facility audibly impulsive	Rated noise level	Limit	Compliance
MP1	Day	<30 dB	x	x	x	x	<30 dB	55 dB	✓
MP2	Day	<32 dB	x	x	x	x	<32 dB	55 dB	✓

2.2 $L_{Aeq\ 30\ min}$ levels measured at MP1, at the site entrance, were 56-62 dB. These values were influenced chief by intermittent vehicle movements on the adjacent public road, including vehicles entering/leaving the WRS facility. Operations within the facility were faintly audible on occasion, and the contribution from these was estimated at less than 30 dB.

2.3 Plant reversing alarms at the WRS facility were faintly audible at MP2 to the south of the site, giving rise to an estimated contribution of less than 32 dB. Site emissions did not influence the 55-62 dB $L_{Aeq\ 30\ min}$ range measured, which was dominated by road traffic.

2.4 Facility operations did not give rise to tones or impulses at either of the monitoring stations.

3 Conclusions

3.1 Operations within the WRS facility gave rise to estimated sound pressure levels of less than 30 dB at MP1, and less than 32 dB at MP2. These levels are significantly lower than the 55 dB daytime noise limit specified in waste licence W0107-01.

3.2 No tones or impulses were detected in facility emissions. **It follows that WRS emissions complied with criteria set out in licence W0107-01**.

6.4. There shall be no clearly audible tonal component or impulsive component in the noise emissions from the activity at the noise sensitive locations.

C.1 Noise Emissions: (Measured at the monitoring points indicated in Table D.1.1).

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

Table D.1.1 Noise, groundwater, foul water and dust monitoring locations

Noise Stations	Groundwater Stations	Foul Water Stations
MP1 Note1	GW1 (Borehole of John Dunlea)	FW1 Note1
MP2 Note1	GW2 Note1	
	GW3 Note1	
	Private wells (Condition 9.4.4)	
	P1 (Emissions to percolation area) Note1	

D.3 Noise

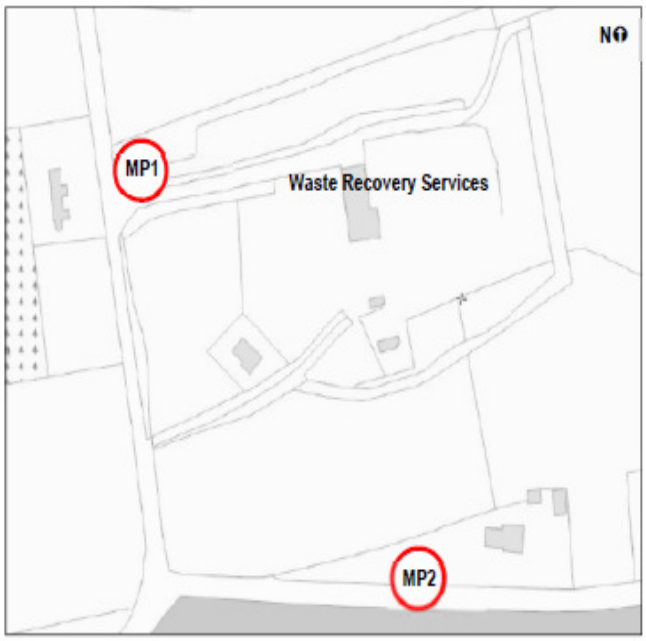
Table D.3.1 Noise Monitoring Frequency and Technique

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

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

Appendix 2: Noise stations

Station	ITM NGR	Location	Propagation route terrain
MP1	578856 595838	WRS facility entrance	Access road, scrub & pasture
MP2	579025 595626	Gate to detached dwelling S of facility	100 % pasture



Appendix 3: Survey details

File	Project ref.	1249
	Client	Waste Recovery Services
	Location	Cullenagh Fermoy
	Stations	MP1 MP2
	Purpose	2012 annual waste licence compliance
	Comment	Facility operating Lunch 1300-1400
Event	Period	Daytime only
	Date	20.12.12
	Day	Thursday
	Time	1045-1615
	Operator	Damian Brosnan BSc MIOA MIEI MIEnvSc
Conditions	Cloud cover	100 % initially foggy but clearing
	Precipitation	0 mm
	Temperature	8 ºC
Wind	Direction	-
	Speed	0 m/s
	Measurement	Anemo anemometer 2 m above ground level
Sound level meter	Instrument	Bruel & Kjaer Type 2250
	Instrument serial no.	2506594
	Microphone serial no.	2529531
	Application	BZ7224 Version 2.5
	Bandwidth	Broadband & 1/3 octaves
	Max input level	141.16 dB
	Broadband weightings	Time: Fast Frequency: AC
	Spectrum weightings	Time: Fast Frequency: Z
	Windscreen correction	UA-1650
	Sound field correction	Free-field
	UKAS calibration	17.01.12
	Calibration certificate	Available on request
Onsite calibration	Time	20/12/2012 10:52:29
	Calibration type	External
	Sensitivity	48.56 mV/Pa
	Post measurement check	93.9 dB
Onsite calibrator	Instrument	Bruel & Kjaer Type 4231
	Instrument serial no.	1723667
	UKAS calibration	16.01.12
	Calibration certificate	Available on request
Methodology	Standards	ISO 1996 Part 1 (2003) & Part 2 (2007) EPA NG4 (2012)
	Exceptions	-
	Intervals	30 min

Appendix 4: Noise data

Survey date: 20.12.12

Station	Time	$L_{Aeq\ 30\ min}$ dB	$L_{AF10\ 30\ min}$ dB	$L_{AF90\ 30\ min}$ dB	Specific level* dB	Noise audible
MP1	1053-1123	56	52	27	<30 Ignoring vehicle movements at gate	Onsite truck emissions occasionally audible at low level. Plant emissions faintly audible on occasion, chiefly reversing alarms. Sporadic vehicle movements through site entrance dominant when present. Intermittent passing road traffic also dominant when present. Bird song/calls and aircraft. Distant dog barking occasional audible at low level. Occasional gunshot events audible several hundred metres to SW.
	1201-1231	58	56	28	<30	As above.
	1400-1430	62	57	28	<30	As above.
	1510-1540	57	55	30	<30	As above.
MP2	1127-1157	59	39	25	<32	Plant reversing alarms onsite occasionally faintly audible. No other site emissions audible. Sporadic intermittent passing road traffic dominant when present. Intermittent traffic audible at several hundred metres. Distant dog baring occasional audible at low level. Bird song/calls and aircraft. Occasional gunshots audible several hundred metres to SW.
	1235-1305	62	60	29	<32	As above, except passing traffic much more frequent. Also, chainsaw use faintly audible to SW.
	1434-1504	58	44	31	<32	As above, without chainsaw.
	1544-1614	55	49	32	<32	As above, with two exceptions: landscaping machinery continuously audible <200 m at nearby golf course for first 15 min, and local intrusion from mail van.

*Specific level: Sound pressure level contribution considered attributable to facility, determined using real time assessment, field notes, time history profiles, statistical analysis, frequency spectra, near field correction if applicable, and other parameters.

Appendix 5: Frequency data

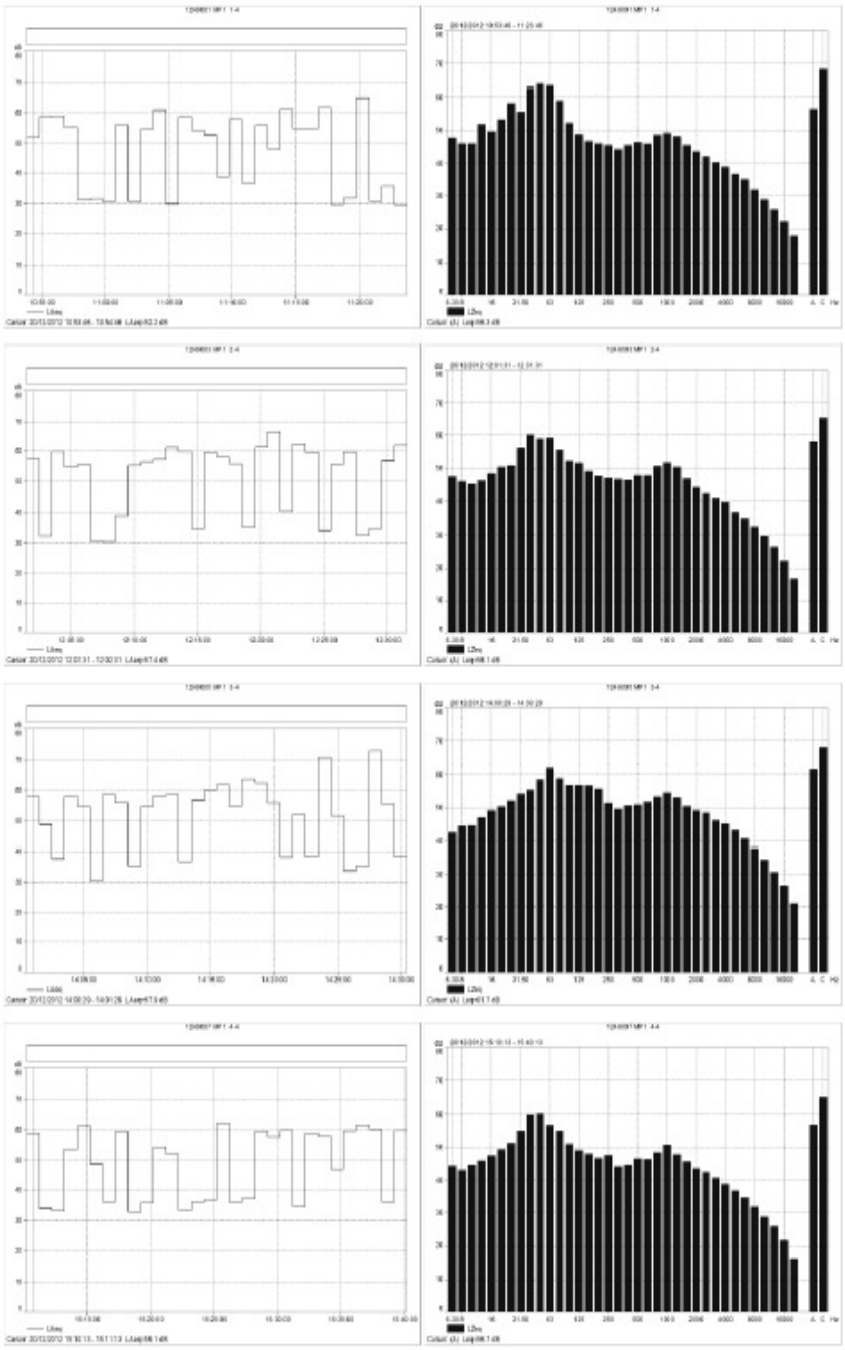
Level differences suggested by annex D of *International Standard ISO 1996-2 Acoustics – Description, measurement and assessment of environmental noise, Part 2: Determination of environmental noise levels* (2007):

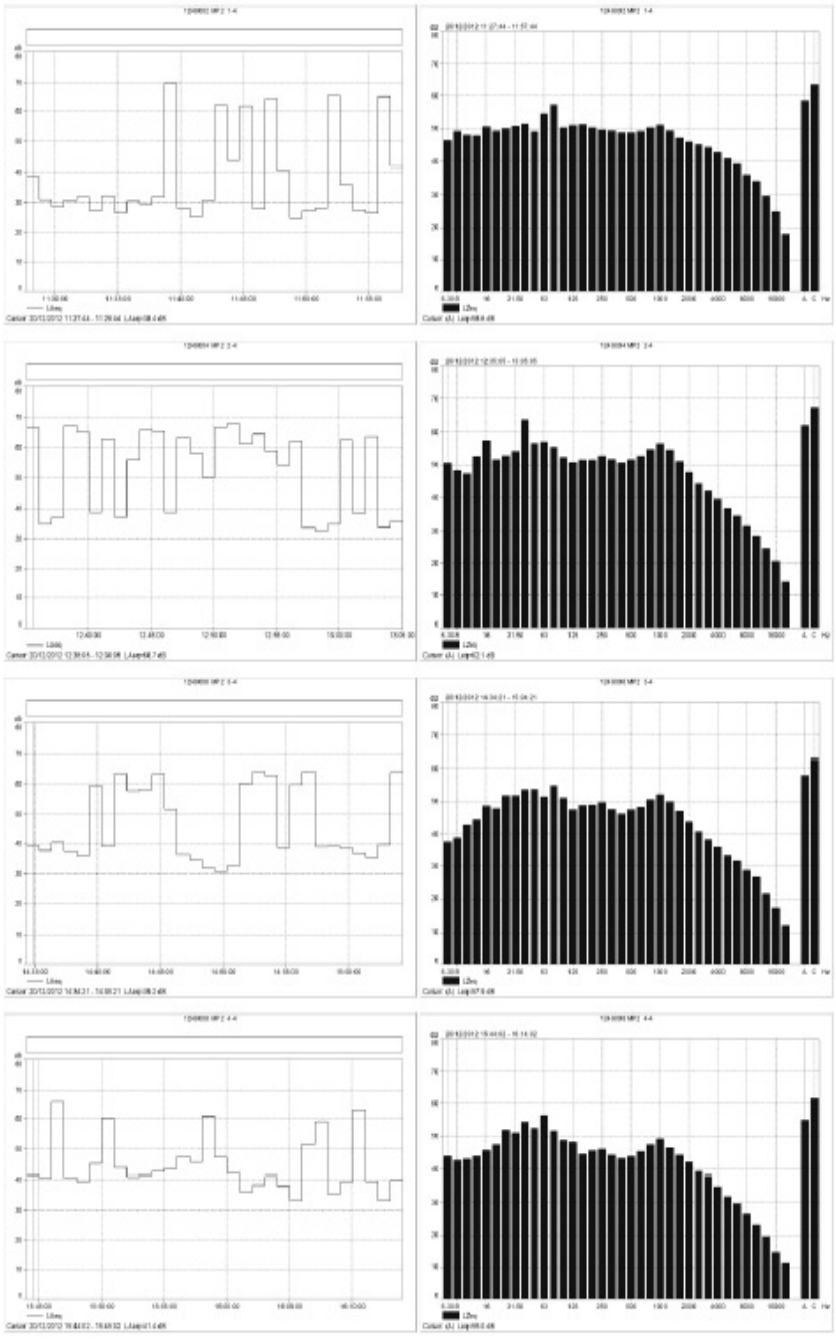
- 15 dB in the third octave bands 25-125 Hz.
- 8 dB in the third octave bands 160-400 Hz.
- 5 dB in the third octave bands 500-10000 Hz.

Level differences in the table over do not exceed these criteria.

Band (Hz)	MP1 (dB)				MP2 (dB)			
	1/4	2/4	3/4	4/4	1/4	2/4	3/4	4/4
	L_{15eq}	L_{15eq}	L_{15eq}	L_{15eq}	L_{15eq}	L_{15eq}	L_{15eq}	L_{15eq}
6.30	48	48	43	44	46	51	37	44
8	46	46	45	43	49	48	39	43
10	46	45	45	45	48	47	43	43
12.50	52	46	47	46	48	52	45	44
16	50	49	49	48	51	57	49	46
20	53	50	50	49	49	52	48	47
25	58	51	52	51	50	53	52	52
31.50	56	56	54	55	51	54	52	51
40	63	60	56	60	51	63	54	54
50	64	59	59	60	49	56	54	52
63	63	59	62	57	55	57	51	56
80	59	56	59	55	57	55	55	52
100	52	52	57	51	50	52	51	49
125	49	52	57	49	51	51	48	48
160	47	49	57	48	51	52	49	45
200	46	48	56	47	50	52	49	45
250	45	47	52	48	50	53	50	46
315	44	47	50	44	49	52	48	44
400	45	46	51	45	49	51	46	43
500	46	48	51	47	49	52	48	44
630	46	48	52	46	49	52	48	45
800	49	51	53	49	50	55	51	47
1000	49	52	54	51	51	56	52	49
1250	48	50	53	48	49	55	50	46
1600	45	47	50	46	47	51	47	44
2000	44	44	49	44	46	48	44	42
2500	42	42	49	42	45	44	41	39
3150	40	41	46	41	44	42	38	38
4000	39	40	45	39	43	40	36	35
5000	36	37	43	37	41	37	33	32
6300	35	35	41	35	39	35	31	30
8000	32	32	38	32	36	31	29	27
10000	29	30	34	29	34	28	27	23
12500	26	27	31	26	30	25	21	20
16000	22	22	27	22	25	21	17	15
20000	18	17	21	16	18	14	12	11
A	56	58	62	57	59	62	58	55
C	68	66	68	65	64	67	63	62

Appendix 6: Time history profiles & frequency spectra





Appendix 7: Glossary

Ambient	Total noise environment at a location, including all sounds present.
A-weighting	Weighting or adjustment applied to sound level to approximate non-linear frequency response of human ear. Denoted by suffix A in parameters such as $L_{Aeq\,T}$, $L_{AF10\,T}$, etc.
Background level	$L_{AF90\,T}$. A-weighted sound pressure level of residual noise exceeded for 90 % of time interval T.
Broadband	Noise which contains roughly equal energy across frequency spectrum. Does not contain tones, and is generally less annoying than tonal noise.
Decibel	Shortened to dB. Unit of noise measurement scale. Based on logarithmic scale so cannot be simply added or subtracted. 3 dB difference is smallest change perceptible to human ear. 10 dB difference is perceived as doubling or halving of sound level. **Throughout this report noise levels are presented as decibels relative to 20 µPa.** Examples of decibel levels are as follows: 20 dB: very quiet room; 30-35 dB: night-time rural environment; 55-65 dB: conversation; 80 dB: busy pub; 100 dB: nightclub.
Fast response	0.125 seconds response time of sound level meter to changing noise levels. Denoted by suffix F in parameters such as $L_{AF10\,T}$, $L_{AF90\,T}$, etc.
Frequency	Number of cycles per second of a sound or vibration wave. Low frequency noise may be perceived as hum, while whine represents higher frequency. Range of human hearing approaches 20-20,000 Hertz.
Hertz	Shortened to Hz. Unit of frequency measurement.
Impulse	Noise which is of short duration, typically less than one second, sound pressure level of which is significantly higher than background.
Interval	Time period T over which noise monitoring is conducted. Denoted by T in $L_{Aeq\,T}$, $L_{AF90\,T}$, etc.
$L_{Aeq\,T}$	Equivalent continuous sound level during interval T, effectively representing average A-weighted noise level.
L_{AF}	Sound pressure level averaged over one second, and changing each second in fluctuating noise environment.
$L_{AF10\,T}$	Sound pressure level exceeded for 10% of interval T, usually used to quantify traffic noise.
$L_{AF90\,T}$	Sound pressure level exceeded for 90% of interval T, usually used to quantify background noise. May also be used to describe noise level from continuous steady or almost-steady source, particularly where local noise environment fluctuates.
$L_{Req\,T}$	Rating noise level, derived from $L_{Aeq\,T}$ plus specified adjustments for tonal and impulsive characteristics. Equivalent to $L_{Ar\,T}$ used by EPA.
Noise sensitive location	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 absence of noise at nuisance levels.
1/3 octave band	Frequency spectrum may be divided into octave bands. Upper limit of each octave is twice lower limit. Each octave may be subdivided into thirds, allowing greater analysis of tones.
Specific level	Sound pressure level contribution arising from specific noise source, measured directly or by estimation or calculation.
Tone	Character of noise caused by dominance of one or more frequencies which may result in increased noise nuisance.
Z-weighting	Standard weighting applied by sound level meters to represent linear scale. Denoted by suffix Z in parameters such as $L_{Zeq\,T}$, $L_{ZF90\,T}$, etc. used to describe 1/3 octave band levels in frequency spectra.