

Kerry County Council



Waste Licence Ref No. W0069-01

REPORT TITLE

**Milltown Transfer Station
Annual Environmental Report**

Reporting Period:

January 2011 – December 2011

Prepared By:
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Tralee
Co. Kerry.

May

2012

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1.0 Introduction

Kerry County Council operates a waste transfer and recycling facility at Ballyvirrane, Milltown, Co. Kerry. It is located approximately 2 km south of the town of Milltown on the minor Milltown to Ballyvirrane road.

The principal activity of the Transfer Station is the compaction of solid waste into 30 cubic metre closed containers for subsequent transfer and disposal at North Kerry Landfill.

Other activities include the recycling or reclamation of inorganic materials including metals, glass, steel and aluminium cans, car batteries, dry cell batteries, fluorescent tubes, domestic hazardous waste, cardboard, plastic bottles and newspapers. Small quantities of organic waste are also collected for transfer to North Kerry Landfill for composting.

This Annual Environment Report is prepared in accordance with Condition 2.8 and Schedule C of Waste Licence W0069-01 issued by the Environmental Protection Agency (EPA).

2.0 Reporting Period

The reporting period for this Annual Environmental Report is 1st January 2011 – 31st December 2011.

3.0 Waste Activities Carried out at the Facility

Waste disposal activities carried out at Milltown Transfer Station are in accordance with Part 1 of Waste Licence W0069-01 which outlines the waste disposal activities licensed in accordance with the Third Schedule of the Waste Management Act 1996. Licensed activities include:

- Class 12** Repackaging prior to submission to any activity referred to in a preceding paragraph 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.

Waste recovery activities carried out at Milltown Transfer Station are in accordance with Part 1 of Waste Licence W0069-01 which outlines the waste recovery activities licensed in accordance with the Fourth Schedule of the Waste Management Act 1996. Licensed activities include:

- Class 1** Solvent reclamation or regeneration.
- Class 2** Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation 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.

4.0 Quantity and Composition of Waste Received, Disposed and Recovered: 1st Jan – 31st Dec 2011

Waste tonnage disposed of at Milltown Transfer Station during the reporting year (2011) decreased by 21% on the previous year (2010). This is primarily due to the downturn in the economy.

The weight of the waste accepted into Milltown Transfer Station Facility for disposal for the reporting period was 2,376.86 Tonnes. This comprises of the following breakdown:

<i>Waste for Disposal</i>	<i>Tonnes</i>	
	<i>2011</i>	<i>2010</i>
Municipal waste collected by Local Authority	650.38	870.13
Commercial & Industrial	341.00	467.28
Road Sweepings & Graveyard Waste	84.44	104.68
Flytipping	54.78	75.6
Public Domestic	1,246.26	1,495.67
Total for Disposal	2,376.86	3,013.36

Table 1 Waste Stream breakdown for reporting Period.

The quantity of waste sent for recycling in 2011 was 578.33T which is an increase of 12% in comparison to 2010 following decreases in the previous two years. The main increases were for plastic bottles, cardboard, newspapers and batteries. The reduction in dry recyclables is due to an increase in Kerry County Councils refuse vehicles travelling directly with dry recyclables to the Contractors depot instead of using this site. Waste sent for recycling during the reporting period compared with previous years is outlined in Table 2 below.

Waste for Recycling & Recovery	Tonnages 2008	Tonnages 2009	Tonnages 2010	Tonnages 2011
Metals	64.58	84.0	75.73	59.92
Glass	71.38	78.16	74.92	72.58
Aluminium	Included	2.32	3.06	2.55
Batteries	2.32	8.88	1.45	2.75
Newspapers	166.78	155	149.96	173.32
Cardboard	84.08	85.6	50.48	84.46
Fluorescent Tubes	0.38	0.28	0	0.54
Domestic Hazardous Waste	0.28	0.25est	0	0
Plastic Bottles	11.32	10.52	25.78	28.00
Waste Engine Oil	1.25	2.8	0	0
WEEE	326.2	106.02	99.17	98.27
Dry Recyclables	123.7	128.0	104.26 ¹	54.02 ¹
Cooking Oil	0	0.32	0	0
Textiles	0	2.28	2.24	1.92
Total for Recycling/Recovery	852.27	664.43	518.31	578.33

¹ Dry recyclables collected in eco sense bags and from KCC kerbside collection trucks

Table 2 Waste collected on site and recovered/recycled off site during the reporting period

Appendix I contains a breakdown of waste by classification collected on site for recovery/recycling off site during the reporting period.

5.0 Projections of the quantities to be accepted and percentages disposed and recycled/ recovered for the coming year

It is expected that waste disposal rates and recycling/recovery rates at Milltown Transfer Station will continue to decrease in the next reporting period mainly due to the weak economic environment, increasing landfill charges and the competitive waste industry.

6.0 Summary Report on Emissions for the Reporting Period

a) Foul Water Emissions

The foul water is discharged via a Puraflow Wastewater Treatment Unit and is monitored quarterly. The results are sent to the EPA and are also available at the Milltown facility. No significant exceedances of limits were noted during this reporting period.

b) Surface Water Emissions

Surface water runoff takes place from site roads and uncontaminated surfaces discharges via silt traps to the surface water drains.

c) Waste from Silt Traps and Interceptors

A total of approximately 26.1 Tonnes of silt/sludge were removed during the reporting period from the silt trap and the foul water treatment unit and disposed at the Killorglin Wastewater Treatment plant.

7.0 Summary of Results and Interpretations of Environmental Monitoring

a) Dust monitoring

The dust monitoring results for the reporting period are attached in Appendix IV and were within the dust deposition limits specified in the waste licence. There were no issues with dust during 2011 and no complaints were received in relation to dust at the facility.

b) Noise monitoring

Noise monitoring was carried out at the facility by Southern Scientific Services on the 15th November, 2011. The noise monitoring report is available at the facility and was forwarded separately to the EPA inspector. The report concludes that the noise limit prescribed in the Waste Licence is being met at locations B1 & B5 and that the

exceedences observed at other locations are primarily attributable to traffic. It is also concluded that activities at the waste transfer station are not adversely impacting on the noise environment at the nearest noise sensitive receptors. The waste transfer station does not generate noise at night-time when the facility is closed.

There were no issues with noise during 2011 and no complaints were received in relation to noise at the facility. The results over the years have shown that the facility caused no significant noise nuisance to neighbours.

c) Monitoring of surface water

The surface water monitoring results are attached in Appendix II.

Evidence of contamination is still noted at SW3c and SW4b. However elevated results may be exacerbated due to low flow, stagnant conditions.

Though not required as part of licence conditions Sampling has been resumed at SW8 and at points upstream and downstream of latter. Significant contamination is noted here which would indicate impact from old landfill activities. The drain sampled at SW8 flows eventually into *Keelbrogeen* stream. Recent sampling of latter shows profound contamination, although most of this is due to agricultural activity upstream of landfill. Further investigation will be carried out during 2012 to determine the source of contamination.

d) Foul Water

The foul water emissions results are attached in Appendix II. The results of samples from the foul water emissions exhibited no significant exceedances of limits during the reporting period.

e) Landfill gas

The levels of methane gas and carbon dioxide recorded have reduced significantly (CH₄ – 9.0% v/v, CO₂ – 3.9% v/v on 15/7/11) compared to 2008/2009 levels. The landfill gas monitoring results are attached in Appendix III.

8.0 Resource and Energy Consumption Summary

The following is the energy consumption for Milltown Transfer Station for the reporting period.

8.1 Diesel

The diesel usage for Milltown Transfer Station for the reporting period 2011 was 2,860 litres. This is an increase of 368 litres in comparison with 2010 figures.

The primary usage of diesel is for the rubber tyred excavator on site with the remainder used by the oil burner for the steam washer.

8.2 Electricity

The electricity usage for the facility during the reporting period was 11,234 kilowatt hours. This is a decrease of 22% in comparison with 2010 figures.

The primary energy consumer on site is a 3 phase waste compactor. Power is also required for the office computer and lighting, storage heating, cardboard baler and public lighting on the site.

8.3 Water

Water supply to the site is via a connection to the mains water supply. Water usage for the facility during the reporting period was 28,000 litres. Water is mainly used on site for power washing yards, transfer station apron and hopper and washing of trucks where required. No surface water or ground water is abstracted.

9 Report on Development Works Undertaken during the Reporting Period

No development works were undertaken at the facility during the reporting period.

10 Proposed Development Works For Forthcoming Year

No development works are proposed at the facility during 2012.

11 Schedule of Environmental Objectives and Targets for the Forthcoming Year

<i>Target Area</i>	<i>Objective</i>	<i>Works Required</i>
<i>Surface Water Emissions</i>	Keep Surface Water Emissions within agreed limits	Regular inspection of surface water drains. Regular monitoring of results from Surface Water Monitoring Points. Regular inspection of bunded areas for integrity on site.
<i>Litter – On public roads to facility</i>	Reduction in the number of bags of waste/litter lost from trailers on the way to the facility	Regular inspections and clean up of approach roads. Quick response to clean up any reported waste on the approach roads to the facility
<i>Energy Resources</i>	Reduce the quantity of diesel and electricity used on site	Avail of night rate tariffs for electricity
<i>Waste Records</i>		Introduction of new computer system on site to record waste transactions with connection to KCC network

12 Report on Progress towards achievement of the 2010
Environmental Objectives and Targets

<i>Objective</i>	<i>Target</i>	<i>Progress</i>
<i>Keep Surface Water Emissions within limits</i>	Regular monitoring & Inspections	Ongoing
<i>Reduction in Litter on Public Roads to facility</i>	Regular inspection & clean up of roads	Ongoing
<i>Reduction in use of Energy Resources</i>	Reduce quantity of diesel and electricity used on site	Ongoing

13 Summary of Procedures Developed by the Licensee

The following procedures were developed during the reporting period:

- Revised Operational Procedures for Facility Manager
- Revised Health & Safety Procedures

14 Reported Incidents and Complaints

No incidences or complaints were reported in relation to the operation of the facility during the reporting period.

15 Report on Financial Provision

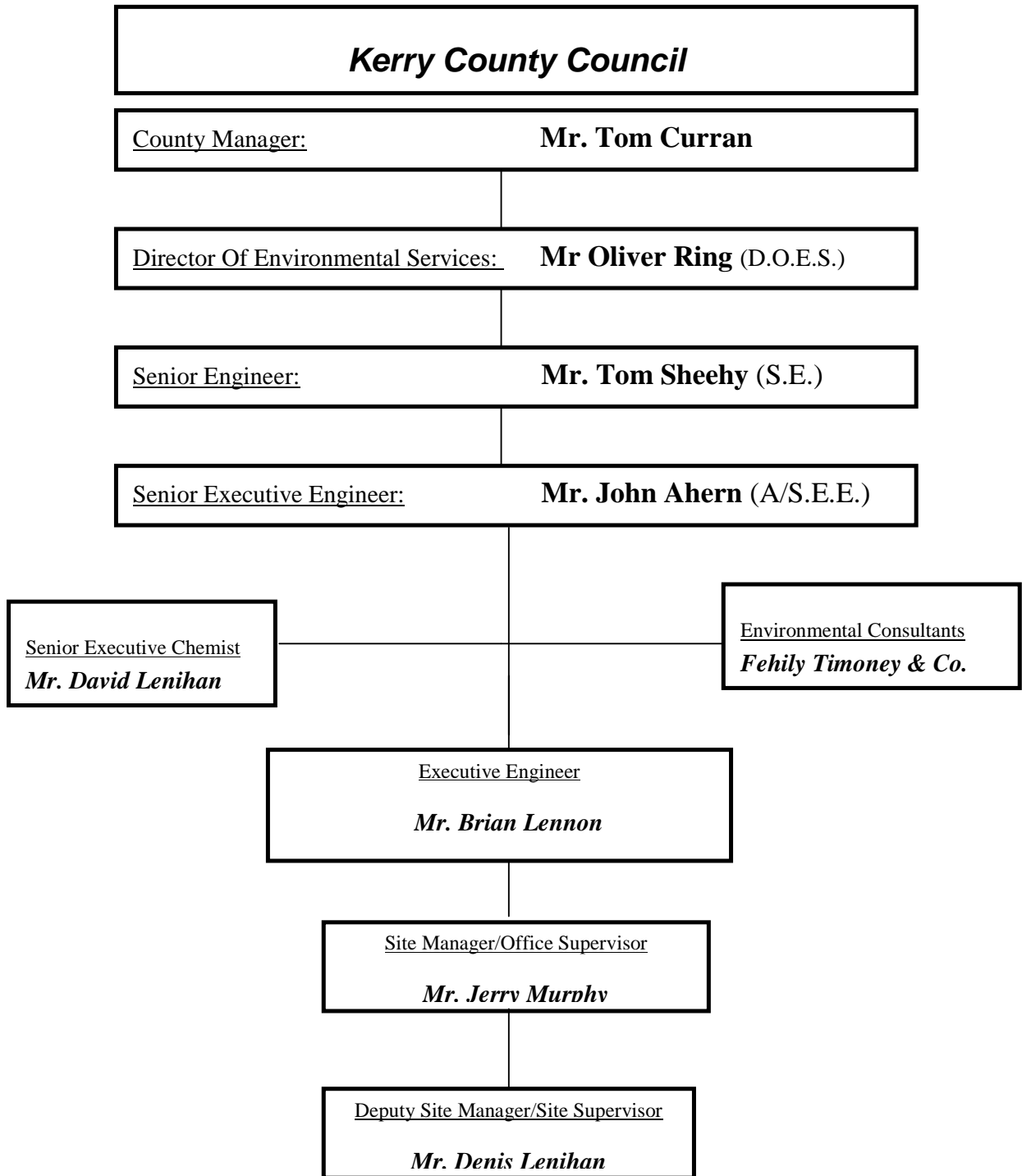
a) Statement of Costs for Waste Operations at Facility

Acc element	Waste 2011 Acc element(T)	EURO
60030	Wages	44,205.51
60040	Salaries	8,561.86
60100	ER PRSI	9,950.80
60200	Overtime	40,327.55
60300	Arrears	47.28
60400	Sick Pay	267.34
60500	Annual Leave	6,658.98
60510	Bank Holiday Leave	1,471.71
60600	Travel/Subsistence	5,840.46
61990	Other Allowances	1,703.16
65500	Minor Contracts- Trade Services & other works	32,463.06
68500	Non-Capital Equip Purchase - Other	414.05
69200	Repairs & Maint - Plant	396.95
69400	Transfers from Machinery Yard	3,606.50
69600	Other Vehicle Expenses	88.00
70000	Materials	662.14
70990	Issues from Stores	2,761.46
70991	Returns to Stores	-297.87
71000	Insurance	41.18
73400	Staff Travelling & Subsistence Expenses	3,266.25
75000	Computer Software and Maintenance Fees	6,314.00
76000	Communication Expenses	633.21
77100	Courier	8.40
78000	Training	344.25
79900	Consultancy/Professional Fees and Expenses	610.75
80000	Advertising	1,998.44
81000	Printing & Office Consumables	470.26
82100	Statutory Contributions to Other Bodies	6,288.58
85100	Rates & Other LA Charges	135.39
86000	Energy	2,759.91
99050	Refunds	6.61
	TOTAL	182,006.17

b) Statement of Costs for Recycling Operations at Facility

Recycling 2011		
Acc element	Acc element(T)	EURO
60030	Wages	7,149.38
60040	Salaries	2,853.87
60100	ER PRSI	1,988.54
60200	Overtime	7,378.87
60300	Arrears	15.76
60400	Sick Pay	1,169.61
60500	Annual Leave	1,589.73
60600	Travel/Subsistence	945.99
61990	Other Allowances	351.09
65500	Minor Contracts- Trade Services & other works	5,887.10
67500	Non-Capital Equip Purchase - Computers	992.00
68500	Non-Capital Equip Purchase - Other	143.80
69200	Repairs & Maint - Plant	28.76
70000	Materials	433.22
73400	Staff Travelling & Subsistence Expenses	1,368.20
76000	Communication Expenses	262.40
77100	Courier	1.60
79900	Consultancy/Professional Fees and Expenses	111.75
81000	Printing & Office Consumables	71.52
82100	Statutory Contributions to Other Bodies	2,695.10
85100	Rates & Other LA Charges	36.71
86000	Energy	441.41
99050	Refunds	-458.58
	TOTAL	35,457.83

16 Management and Staffing Structure at Facility 2011



17 Programme of Public Information

The following files are available for inspection on site by members of the public:

- AER of previous reporting years
- All correspondence with the Agency
- Surface Water Monitoring Results
- Incident/Complaints Register
- Tonnage of waste accepted on site
- Characterisation of waste accepted on site
- Operational Procedure Manual
- Waste Acceptance Procedure
- Information on Recycling Initiatives e.g. leaflets.
- Environmental Management System.

**Appendix I - Waste Collected at Milltown Transfer Station for
Recovery/Recycling during reporting period**

Material type	Suggested EWC Codes	Household Waste	Non-household Waste
(If you must depart from this list, please provide details on a separate sheet)	(overwrite as appropriate)		
mixed residual waste	20 03 01		
organic waste (food and garden) Total	20 01 08; 20 02 01	3.72	-
<i>if segregated, provide specific information on food and garden waste</i>			
<i>food</i>	<i>20 01 08</i>	<i>3.72</i>	
<i>garden</i>	<i>20 02 01</i>	<i>-</i>	
mixed dry recyclables (eco-bags)	15 01 06; 20 03 01	54.02	
cardboard, newspaper and other paper (Total)	15 01 01; 20 01 01	257.78	-
<i>if segregated, provide the breakdown of cardboard and paper in the rows below</i>			
<i>*cardboard packaging</i>	<i>15 01 01</i>	<i>84.46</i>	
<i>cardboard non-packaging</i>	<i>20 01 01</i>	<i>-</i>	
<i>paper packaging</i>	<i>15 01 01</i>	<i>-</i>	
<i>paper non-packaging</i>	<i>20 01 01</i>	<i>-</i>	
<i>*newspaper and magazines</i>	<i>20 01 01</i>	<i>173.32</i>	
glass (Total)	15 01 07; 20 01 02	72.58	-

<i>if segregated, provide the breakdown of glass in the next two rows</i>			
<i>glass packaging(bottles)</i>	<i>15 01 07</i>	<i>72.58</i>	
<i>glass non-packaging(sheet)</i>	<i>20 01 02</i>	<i>-</i>	
metals (Total)	15 01 04; 20 01 40	62.47	-
<i>if segregated, provide the breakdown of metals in the next four rows</i>			
<i>aluminium cans (packaging)</i>	<i>15 01 04</i>	<i>2.55</i>	
<i>steel cans (packaging)</i>	<i>15 01 04</i>	<i>8.26</i>	
<i>other metal packaging</i>	<i>15 01 04</i>	<i>-</i>	
<i>other metals (non-packaging)(scrap)</i>	<i>20 01 40</i>	<i>51.66</i>	
plastic (Total)	15 01 02; 20 01 39	28.00	-
<i>if segregated, provide the breakdown of plastic waste in the next two rows</i>			
<i>plastic packaging(bottles)</i>	<i>15 01 02</i>	<i>28.00</i>	
<i>plastic non-packaging</i>	<i>20 01 39</i>		
textiles (Total)	15 01 09; 20 01 11	1.92	-
<i>if segregated, provide the breakdown of textiles in the next two rows</i>			
<i>textiles, packaging</i>	<i>15 01 09</i>	<i>-</i>	
<i>textiles, non-packaging</i>	<i>20 01 11</i>	<i>1.92</i>	

wood (Total)	15 01 03; 20 01 38; 20 01 37*	-	-
<i>if segregated, provide the breakdown of wood waste in the next four rows</i>			
wood packaging	15 01 03	-	
wood non-packaging	20 01 38	-	
mixed, uncontaminated wood packaging and non-packaging	15 01 03; 20 01 38	-	
wood, treated, hazardous	20 01 37*	-	
miscellaneous hazardous waste (Total)		2.75	-
<i>small batteries</i>	<i>20 01 34; 20 01 33*</i>	<i>2.75</i>	
<i>lead acid batteries (Car Batteries)</i>	<i>16 06 01*</i>	<i>-</i>	
<i>Ni-Cd batteries and Accumulators</i>	<i>16 06 02*</i>	<i>-</i>	
<i>waste mineral oils (lubrication, vehicle, machine etc.)</i>	<i>13 xx xx</i>	<i>-</i>	
<i>oil filters (vehicles)</i>		<i>-</i>	
<i>oil containers (mineral oil) - plastic + metal</i>		<i>-</i>	
<i>waste cooking or vegetable oils</i>	<i>20 01 25</i>	<i>-</i>	
<i>aerosols</i>	<i>20 03 99</i>	<i>-</i>	
<i>waste paint and varnish (including containers)</i>		<i>-</i>	
WEEE (Total)	various	98.273	-
<i>if segregated, provide the breakdown of WEEE in the next five rows</i>			

<i>fridges and freezers</i>	<i>20 01 35*; 20 01 36; 16 02 11*; 16 02 14</i>	<i>15.556</i>	
<i>white goods (electrical and electronic)</i>	<i>20 01 36; 16 02 14</i>	<i>27.100</i>	
<i>televisions and PC monitors</i>	<i>20 01 35*; 16 02 13*;</i>	<i>22.906</i>	
<i>ICT- Information and Communications Technology Equipment, e.g Includes Computer Equipment</i>	<i>16 02 14</i>	<i>4.476</i>	
<i>other electrical and electronic equipment, eg. White Goods incl. Washing Machines, Dryer setc, TVs, PCs, Small Items incl. toasters Radios</i>	<i>20 01 36; 20 01 35*</i>	<i>28.235</i>	
<i>Gas Cylinders</i>		<i>-</i>	
<i>C & D Rubble</i>		<i>-</i>	
<i>fluorescent tubes and lighting</i>	<i>20 01 21*</i>	<i>0.54</i>	
<i>Tyres</i>	<i>16 01 03</i>	<i>-</i>	
<i>Ink Cartridges</i>	<i>08 01 11</i>		
<i>bulky waste (provide summary below of waste types), e.g. Furniture, Mattresses, Mixed Bulky Waste</i>	<i>20 03 07</i>	<i>-</i>	

Appendix II - Results of Foul and Surface Water Monitoring

Attn: Brian Lennon EE Waste Management Monday, 30 April 2012
Re: LABORATORY Results for Milltown Transfer stations: Jan 2011to Jan2012

Enclosed are results (2003 – date) of monitoring of designated Surface water points and Foul emission point sampled as set out in EPA licence conditions for *MILLTOWN transfer station* The latest results are for Jan – Jan 2012. Refer also to *app 1: details of sample locations*

Evidence of contamination are still been noted at SW3c and SW4b. However elevated results may be exacerbated due to low flow, stagnant conditions.

Though not required as part of licence conditions Sampling has been resumed at SW8 and at points upstream and downstream of latter.

Significant contamination is noted here which would indicate impact from old landfill activities. The drain sampled at SW8 flows eventually into *Keelbrogeen* stream. Recent sampling of latter shows profound contamination, although most of this is due to agricultural activity upstream of landfill. Further investigation is underway

Results of samples from foul emissions exhibited no significant exceedances of limits during this reporting period

David Lenihan MSc

Senior Executive Chemist

Appendix1: Details Sampling points referred to in report				
<u>Location</u>	<u>comments</u>	<u>old or alternative name</u>	<u>Location Easting</u>	<u>Location Northing</u>
<u>Surface water</u>				
<u>Off site sampling pts</u>				
Sw8	Drain d/s of landfill on main road		83018.5	98692.1
Manhole at SW8	Leachate collection point		101840.8	91649
u/s SW8	Upstream of manhole at SW8		101794.7	91628.4
d/s SW8	Downstream of manhole at SW8		100842.9	91303.3
<u>On site sampling pts</u>				
Sw1	Drain NE of reception building inside perimeter fence		83018.5	98692.1
SW2	Mid way alongside Western drain inside perimeter fence		83053.4	98800
SW3a	Drain d/s from outfall from treatment plant		83087	98733
SW3c	Drain d/s of SW3a outside perimeter fence		83098.1	98785.1
<u>Leachate</u>				
<u>Lagoon sampling pts</u>				
FE 1		Effluent from transfer station	83066.4	98728

Landfill	Location	Eastings	Northings	Sample Reference	Sample Date	Sample Time	Ammonium (NH4)	pH	BOD (O2)	Conductivity @ 20 oC	Chemical Oxygen Demand (O2)	Chloride (Cl)	Dissolved Oxygen (O2)	Suspended Solids	Temperature	Faecal Coliforms	Total Coliforms
							mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l	mg/l	Degrees C	no./100mls	no./100mls
Milltown	Sw1	83018.5	98692.1	2010/0197	20-Jan-10	11:20	< 0.02	6.8	1.1	120	40	13	10.1	5	2.4		
Milltown	Sw1	83018.5	98692.1	2010/1488	08-Apr-10	15:25	< 0.02	8.1	1.9	160	42	6	13.9	2	12.3		
Milltown	Sw2	83053.4	98800	2003/0142	15-Jan-03	11:25	0.1	6.2	< 1	209	14	33	7.3	2	7.1		
Milltown	Sw2	83053.4	98800	2003/1914	16-Apr-03	11:40	< 0.02	6.3	1.3	186	23	29.5	7.9	4	14.2		
Milltown	Sw2	83053.4	98800	2003/3650	09-Jul-03	11:45	< 0.02	6.4	3.1	207	10	31.5	6.6	5	16.4		
Milltown	Sw2	83053.4	98800	2003/5454	01-Oct-03	14:15	0.06	6.6	9.4	232	36	45	4.2	121	12.5	10	7701
Milltown	Sw2	83053.4	98800	2004/0469	28-Jan-04	12:46	< 0.02	5.5	2.6	208	21	32	10.6	12	6.3		
Milltown	Sw2	83053.4	98800	2004/1697	14-Apr-04	11:10	< 0.02	6.2	4.3	171	25		6.9	16	11.1		
Milltown	Sw2	83053.4	98800	2004/3707	21-Jul-04	14:09	0.05	6.6	7.1	222	70	29	4.5	38	16.1	70	2419
Milltown	Sw2	83053.4	98800	2004/5206	06-Oct-04	11:10	0.11	5.8	1.7	181	65	30	3.7	5	11		
Milltown	Sw2	83053.4	98800	2005/0378	19-Jan-05	15:17	0.05	6.3	3	212	31	34	7.1	33	10.5		
Milltown	Sw2	83053.4	98800	2005/1910	19-Apr-05	10:14	< 0.02	6.1	> 8	222	99	35	11.5	65	6.4		
Milltown	Sw2	83053.4	98800	2005/3596	14-Jul-05	11:42	0.05	6.5	14.2	223	184	44	2.8	130	17.5		
Milltown	Sw2	83053.4	98800	2005/5369	18-Oct-05	12:01	0.21	6.5	8.3	285	59	33	5	12	12.5	687	24190
Milltown	Sw2	83053.4	98800	2006/0498	31-Jan-06	11:38	< 0.02	6	2.6	203	23	30	8.8	18	2.5		
Milltown	Sw2	83053.4	98800	2006/1666	20-Apr-06	13:46	< 0.02	5.9	1.5	184	36	27	6.7	7	10.7		
Milltown	Sw2	83053.4	98800	2006/3663	03-Aug-06	14:50	0.17	6.4	14.3	251	156	37	2.7	89	16.2		

Milltown	Sw2	83053.4	98800	2006/4998	12-Oct-06	14:30	0.08	5.4	3	207	330	22.5	5.7	18	14.7	28	39726
Milltown	Sw2	83053.4	98800	2007/0621	01-Feb-07	11:23	< 0.02	5.4	2.2	204	75	31	6.2	43	9.9		
Milltown	Sw2	83053.4	98800	2007/1943	17-Apr-07	14:20	0.04	6.3	3.7	180	45	29	9.1	31	16.8		
Milltown	Sw2	83053.4	98800	2007/3899	19-Jul-07	11:42	0.43	6.8	73	269	1286	28	< 1	1785	16.8		
Milltown	Sw2	83053.4	98800	2007/5809	25-Oct-07	13:40	0.04	6.1	2.4	204	49	29	9.1	18	9.3	2	> 2419
Milltown	Sw2	83053.4	98800	2008/0017	03-Jan-08	09:48	0.04	6	1	179	33	31	6.2	16	5.6		
Milltown	Sw2	83053.4	98800	2008/1608	03-Apr-08	10:45	0.04	5.9	1.4	190	17	28	6.9	9	12.5		
Milltown	Sw2	83053.4	98800	2008/5850	04-Nov-08	15:00	0.11	6.1	5.5	175	86	29.5	6.7	86	8.8	148	580
Milltown	Sw2	83053.4	98800	2009/0086	07-Jan-09	14:20	< 0.02	7.2	2.9	205	28	32	5.7	31	5.3	0	205
Milltown	Sw2	83053.4	98800	2009/1943	07-Apr-09	11:15	0.04	6	1.9	164	41	28.5	4.3	20	10		
Milltown	Sw2	83053.4	98800	2009/5153	01-Oct-09	10:32	0.12	6.2	3.4	190	27	31	1.9	418	12.9		
Milltown	Sw2	83053.4	98800	2010/0198	20-Jan-10	10:55	< 0.02	5.8	2.1	131	38	23	7.9	21	4		
Milltown	Sw2	83053.4	98800	2010/1484	08-Apr-10	14:20	< 0.02	6	5.5	154	57	21	11.9	28	12.3		
Milltown	Sw2	83053.4	98800	2010/3119	14-Jul-10	15:05	0.18	6.5	16.5	157	185	20	5.4	116	14.1	432	214300
Milltown	Sw2	83053.4	98800	2010/4732	12-Oct-10	14:20	0.04	6.3	14	206	117	26.5	3.2	82	12.2		
Milltown	Sw2	83053.4	98786	2011/0330	19-Jan-11	11:55	0.03	6	2.3	170	17	27	8.5	14	2.6		
Milltown	Sw2	83053.4	98786	2011/2000	20-Apr-11	10:55	< 0.02	6	9	166	50	24	7.8	49	11.4		
Milltown	Sw2	83053.4	98786	2011/3419	27-Jul-11	15:15	0.09	6.5	> 6	275	92	27.6	4.9	38	17.9		15530
Milltown	Sw2	83053.4	98786	2011/4684	18-Oct-11	11:20	0.05	6	2.5	162	46	27.3	3.8	9	10.4		
Milltown	Sw2	83053.4	98786	2012/0449	25-Jan-12	11:20	0.05	5.6	4.5	128	48	21.8	8.1	28	9.4		
Milltown	Sw3a	83101.3	98726.3	2003/0143	15-Jan-03	11:00	0.51	6.4	> 26	248	88	33.5	8.4	33	7.7		
Milltown	Sw3a	83101.3	98726.3	2003/1915	16-Apr-03	11:20	0.03	6.4	4.7	199	60	26.5	8.2	58	14.6		
Milltown	Sw3a	83101.3	98726.3	2003/3651	09-Jul-03	11:35	< 0.02	6.3	7.2	224	28	22.5	3.4	63	16.1		
Milltown	Sw3a	83101.3	98726.3	2003/5455	01-Oct-03	14:25	0.29	7	27.3	266	146	25	3.5	153	14	156	> 24190
Milltown	Sw3a	83101.3	98726.3	2004/0470	28-Jan-04	13:02	< 0.02	6.2	6.8	206	13	32	8.2	7	8		
Milltown	Sw3a	83101.3	98726.3	2004/1698	14-Apr-04	10:48	< 0.02	6.4	1.9	216	< 10		8.7	1	11		
Milltown	Sw3a	83101.3	98726.3	2004/3708	21-Jul-04	14:22	0.05	6.7	5.6	238	22	26	4.8	21	16.8	365	14140
Milltown	Sw3a	83101.3	98726.3	2004/5207	06-Oct-04	10:50	< 0.02	6.5	1.3	215	38	26	4.6	15	12.7		
Milltown	Sw3a	83101.3	98726.3	2005/0379	19-Jan-05	15:07	< 0.02	6.2	< 1	207	14	32	7.9	4	10.1		
Milltown	Sw3a	83101.3	98726.3	2005/1911	19-Apr-05	09:52	< 0.02	6.4	5.2	191	23	26	9.5	30	10		
Milltown	Sw3a	83101.3	98726.3	2005/3597	14-Jul-05	11:56	0.11	6.4	14.5	236	73	30	2.9	214	17		
Milltown	Sw3a	83101.3	98726.3	2005/5370	18-Oct-05	12:14	0.15	6.8	3.8	264	24	24	4.4	22	13.4	345	5480

Milltown	Sw3a	83101.3	98726.3	2006/0499	31-Jan-06	11:48	< 0.02	6.3	1.4	216	< 10	27	6.6	15	7.6		
Milltown	Sw3a	83101.3	98726.3	2006/1668	20-Apr-06	13:57	< 0.02	6.2	1	198	< 10	26	6	4	11		
Milltown	Sw3a	83101.3	98726.3	2006/3664	03-Aug-06	15:05	1.58	6.5	20	374	206	50.5	2.2	102	19.3		
Milltown	Sw3a	83101.3	98726.3	2006/4999	12-Oct-06	14:00	0.05	6.2	2.3	215	117	26	3.4	22	15.9	31060	> 48390
Milltown	Sw3a	83101.3	98726.3	2007/0622	01-Feb-07	11:32	< 0.02	5.8	< 1	221	13	29	6.8	2	9.8		
Milltown	Sw3a	83101.3	98726.3	2007/1944	17-Apr-07	14:00	0.16	6.4	> 8	262	85	33	8.6	62	13.9		
Milltown	Sw3a	83098.1	98785.1	2007/3900	19-Jul-07	11:23	0.62	6.8	17	269	152	29	< 1	96	17.4		
Milltown	Sw3a	83101.3	98726.3	2007/5810	25-Oct-07	14:30	0.13	6.2	8.3	202	145	31	5.5	92	11.3	1986	> 2419
Milltown	Sw3a	83101.3	98726.3	2008/0018	03-Jan-08	10:11	0.04	6	< 1	211	20	30.5	4.7	12	7.8		
Milltown	Sw3a	83101.3	98726.3	2008/1609	03-Apr-08	10:50	< 0.02	5.9	4.6	210	24	29	8.9	35	12		
Milltown	Sw3a	83101.3	98726.3	2008/3686	17-Jul-08	10:32	0.06	6.6	1	222	< 10	26.5	4.6	5	15.8		
Milltown	Sw3a	83101.3	98726.3	2008/5851	04-Nov-08	15:10	0.1	6	30.4	205	232	29	5.5	259	10.1	402	13734
Milltown	Sw3a	83101.3	98726.3	2009/0087	07-Jan-09	14:00	< 0.02	7.1	< 1	218	< 10	30	5.6	2	8.6	4	187
Milltown	Sw3a	83101.3	98726.3	2009/1942	07-Apr-09	11:09	0.09	6.1	3	209	41	26	1.2	29	10.8		
Milltown	Sw3a	83101.3	98726.3	2009/3603	08-Jul-09	14:54	0.45	7.7	5.5	363	79	21	10.3	22	23.1		
Milltown	Sw3a	83101.3	98726.3	2009/5154	01-Oct-09	10:40	0.2	6.2	3.1	228	34	30	2	327	13.9		
Milltown	Sw3a	83101.3	98726.3	2010/0199	20-Jan-10	10:43	0.03	6	2.1	219	14	34	2.8	2	6.1		
Milltown	Sw3a	83101.3	98726.3	2010/1485	08-Apr-10	14:30	0.03	6.1	5.8	180	56	24.5	9.4	18	12		
Milltown	Sw3a	83101.3	98726.3	2010/3120	14-Jul-10	15:10	0.69	6.6	16.3	132	46	16	3.4	30	15.4	82300	2419600
Milltown	Sw3a	83101.3	98726.3	2010/4733	12-Oct-10	14:30	0.78	6.6	15.6	257	227	28	3.7	160	11.9		
Milltown	Sw3a	83087	98733	2011/0331	19-Jan-11	11:45	0.03	6.1	1.3	237	22	43	5.1	1	7.1		
Milltown	Sw3a	83087	98733	2011/2001	20-Apr-11	11:15	< 0.02	6.1	37.4	229	187	38	6.5	153	13.3		
Milltown	Sw3a	83087	98733	2011/3420	27-Jul-11	15:00	0.08	6.6	7.3	212	109	28.6	5.7	23	19.1		> 24196
Milltown	Sw3a	83087	98733	2011/4685	18-Oct-11	11:12	0.18	6	4.2	254	61	< 0.5	3.9	66	11.7		
Milltown	Sw3a	83087	98733	2012/0450	25-Jan-12	11:10	0.04	6	2.5	158	36	25	6.8	12	9.6		
Milltown	Sw3c	83098.1	98785.1	2003/0144	15-Jan-03	11:20	11.3	7.1	> 8	448	43	37.5	8	23	7.1		
Milltown	Sw3c	83098.1	98785.1	2003/1916	16-Apr-03	11:25	11	6.8	2.5	387	24	31.5	9.3	9	15.5		
Milltown	Sw3c	83098.1	98785.1	2003/3652	09-Jul-03	11:53	12.8	7	25.7	436	29	34.5	2.2	29	16.7		
Milltown	Sw3c	83098.1	98785.1	2003/5456	01-Oct-03	14:35	27.8	7.4	2	648	27	44	4.9	17	13.2	0	2755
Milltown	Sw3c	83098.1	98785.1	2004/0471	28-Jan-04	13:12	13	6.8	8.5	488	32	40	7.3	12	7.8		

Milltown	Sw3c	83098.1	98785.1	2004/1699	14-Apr-04	10:52	6.91	6.9	3.6	378	22	6.9	9	11.3			
Milltown	Sw3c	83098.1	98785.1	2004/3709	21-Jul-04	14:46	13.1	6.8	3.4	470	44	32.5	2.5	69	15.6	7	> 2419
Milltown	Sw3c	83098.1	98785.1	2004/5208	06-Oct-04	11:00	7.38	7.2	1.4	361	35	32	3.5	6	11.7		
Milltown	Sw3c	83098.1	98785.1	2005/0380	19-Jan-05	14:52	7.56	6.8	< 1	416	24	39.5	4.9	4	10.6		
Milltown	Sw3c	83098.1	98785.1	2005/1912	19-Apr-05	10:29	3.96	7	1.4	292	45	30	8.6	68	9.6		
Milltown	Sw3c	83098.1	98785.1	2005/3598	14-Jul-05	12:11	6.56	7	3.4	394	30	33	4.9	48	17.5		
Milltown	Sw3c	83098.1	98785.1	2005/5371	18-Oct-05	12:22	4.81	7.1	1.4	364	19	29	5.7	3	12.5	161	9800
Milltown	Sw3c	83098.1	98785.1	2006/0500	31-Jan-06	11:37	8.25	6.7	< 1	401	13	31	4.7	5	6		
Milltown	Sw3c	83098.1	98785.1	2006/1669	20-Apr-06	14:05	4.56	6.7	< 1	349	11	32	5.2	2	10.6		
Milltown	Sw3c	83098.1	98785.1	2006/3665	03-Aug-06	15:12	6.82	6.7	3.8	500	23	34.5	1.9	84	18.8		
Milltown	Sw3c	83098.1	98785.1	2006/5000	12-Oct-06	14:10	4.35	6.7	3.8	347	260	26.5	4.4	24	15.5	> 48390	> 48390
Milltown	Sw3c	83098.1	98785.1	2007/0623	01-Feb-07	11:40	0.09	6.5	< 1	439	18	33	5	4	9.9		
Milltown	Sw3c	83098.1	98785.1	2007/1945	17-Apr-07	13:50	5.33	6.6	2.9	373	24	31	6.3	17	15		
Milltown	Sw3c	83094.9	98829.5	2007/3901	19-Jul-07	12:02	5.11	6.8	3.2	368	51	25	3.2	118	17.6		
Milltown	Sw3c	83098.1	98785.1	2007/5811	25-Oct-07	13:55	3.64	6.6	4	285	61	30	4.8	83	12.1	2419	> 2419
Milltown	Sw3c	83098.1	98785.1	2008/0019	03-Jan-08	10:19	6.22	6.6	17.6	403	59	38.5	5.1	86	7.2		
Milltown	Sw3c	83098.1	98785.1	2008/1610	03-Apr-08	10:55	3.02	6.5	1.2	318	29	32	4.5	32	12.3		
Milltown	Sw3c	83098.1	98785.1	2008/3687	17-Jul-08	10:36	5.05	7	< 1	329	18	30	5.8	7	15.7		
Milltown	Sw3c	83098.1	98785.1	2008/5852	04-Nov-08	15:20	1.24	6.2	2	232	22	28	6.5	10	10.1	126	1968
Milltown	Sw3c	83098.1	98785.1	2009/0088	07-Jan-09	14:10	1.09	6	1.4	253	11	30	6.6	2	7.2	9	1986
Milltown	Sw3c	83098.1	98785.1	2009/1944	07-Apr-09	11:28	0.33	6.5	10.5	232	110	28.5	10.3	12	11		
Milltown	Sw3c	83098.1	98785.1	2009/3604	08-Jul-09	15:36	0.06	6.8	13.5	234	136	24	6.3	302	19.4		
Milltown	Sw3c	83098.1	98785.1	2009/5155	01-Oct-09	11:05	0.15	6.3	1.5	233	14	28	5.1	70	13.8		
Milltown	Sw3c	83098.1	98785.1	2010/0200	20-Jan-10	11:00	0.08	6.1	1.4	218	17	40	3.4	2	7		
Milltown	Sw3c	83098.1	98785.1	2010/1486	08-Apr-10	14:45	0.02	6.1	< 1	191	33	22	5.4	2	10.3		
Milltown	Sw3c	83098.1	98785.1	2010/3121	14-Jul-10	15:35	1.9	6.7	5.5	269	77	30	2.2	22	15.2	11588	98800
Milltown	Sw3c	83098.1	98785.1	2010/4734	12-Oct-10	14:45	1.02	6.8	1.8	328	66	25.5	5.6	5	12.5		
Milltown	Sw3c	83098.1	98785.1	2011/0332	19-Jan-11	12:00	< 0.02	6.1	3.1	246	37	47	4.6	27	7		
Milltown	Sw3c	83098.1	98785.1	2011/2002	20-Apr-11	11:25	< 0.02	6.2	19.7	305	129	60	4.8	120	11.6		
Milltown	Sw3c	83098.1	98785.1	2011/3421	27-Jul-11	15:40	0.52	6.4	4.7	302	33	50.7	2.7	22	18		173290
Milltown	Sw3c	83098.1	98785.1	2011/4686	18-Oct-11	11:40	0.8	6.5	4.4	383	49	76.5	3.8	22	11.6		
Milltown	Sw3c	83098.1	98785.1	2012/0451	25-Jan-12	11:45	0.14	6.2	1.5	239	20	29	4.2	2	9.5		
Milltown	Sw4b	83094.9	98829.5	2003/0145	15-Jan-03	11:30	< 0.02	6.4	< 1	202	19	32.5	7.4	2	7.9		

Milltown	Sw4b	83094.9	98829.5	2003/1917	16-Apr-03	11:45	0.14	6.4	7.4	180	71	28	4.4	80	15.8		
Milltown	Sw4b	83094.9	98829.5	2003/3653	09-Jul-03	12:02	< 0.02	6.7	17	243	325	30	6.6	341	14.4		
Milltown	Sw4b	83094.9	98829.5	2003/5457	01-Oct-03	14:40	6.71	7.2	1.9	460	39	40	4.9	31	13.4	0	7701
Milltown	Sw4b	83094.9	98829.5	2004/0472	28-Jan-04	13:25	13	7	14.4	506	41	44	4.4	7	6.8		
Milltown	Sw4b	83094.9	98829.5	2004/1700	14-Apr-04	10:57	4.38	7	20.6	373	21		3	9	10.9		
Milltown	Sw4b	83094.9	98829.5	2004/5209	06-Oct-04	11:03	5.35	7	1.5	372	33	32	2.8	3	11.4		
Milltown	Sw4b	83094.9	98829.5	2005/0381	19-Jan-05	14:30	6.88	6.9	< 1	422	26	45	3.7	2	10.5		
Milltown	Sw4b	83094.9	98829.5	2005/1913	19-Apr-05	10:40	< 0.02	7	3	286	77	32	7	82	8.4		
Milltown	Sw4b	83094.9	98829.5	2005/3599	14-Jul-05	12:20	0.07	7.1	24.9	381	223	42	4.8	282	17		
Milltown	Sw4b	83094.9	98829.5	2005/5372	18-Oct-05	12:31	0.45	7.1	1.4	324	20	32	5.2	7	12.9	7	5790
Milltown	Sw4b	83094.9	98829.5	2006/0501	31-Jan-06	11:45	4.75	7.2	< 1	403	11	31	3.6	< 1	4.8		
Milltown	Sw4b	83094.9	98829.5	2006/1670	20-Apr-06	14:11	0.25	6.9	< 1	337	52	32	4	3	10.4		
Milltown	Sw4b	83094.9	98829.5	2006/3666	03-Aug-06	15:24	0.29	7.2	6.9	394	69	37	1.9	90	17.2		
Milltown	Sw4b	83094.9	98829.5	2006/5001	12-Oct-06	14:20	1.88	6.9	2.5	365	225	32	3.9	8	15.1	> 48390	> 48390
Milltown	Sw4b	83094.9	98829.5	2007/0624	01-Feb-07	11:45	4.39	6.7	< 1	412	27	31	5.1	< 1	9.7		
Milltown	Sw4b	83094.9	98829.5	2007/1946	17-Apr-07	14:10	0.03	6.8	1.2	338	27	31	6.4	7	13.5		
Milltown	Sw4b	83094.9	98829.5	2007/3902	19-Jul-07	12:10	0.29	6.8	15	235	493	29	3.5	480	16.4		
Milltown	Sw4b	83094.9	98829.5	2007/5812	25-Oct-07	14:15	2.37	6.2	2.7	300	20	33	6.9	4	11.5	272	> 2419
Milltown	Sw4b	83094.9	98829.5	2008/0020	03-Jan-08	10:25	3.65	6.9	10.6	380	27	37	4.2	4	7.5		
Milltown	Sw4b	83094.9	98829.5	2008/1611	03-Apr-08	11:05	0.27	6.1	1.5	314	15	33	4.2	2	11.9		
Milltown	Sw4b	83094.9	98829.5	2008/3688	17-Jul-08	10:40	3.06	7.2	< 1	286	17	30	9.9	6	17.4		
Milltown	Sw4b	83094.9	98829.5	2008/5853	04-Nov-08	15:30	0.03	5.8	1.1	189	23	28	5.4	2	9.5	4	96
Milltown	Sw4b	83094.9	98829.5	2009/0089	07-Jan-09	14:40	< 0.02	5.9	< 1	207	16	30	3.6	4	6.1	0	48
Milltown	Sw4b	83094.9	98829.5	2009/1945	07-Apr-09	11:40	0.13	6.6	2.2	222	33	26	9.5	18	11		
Milltown	Sw4b	83094.9	98829.5	2009/5156	01-Oct-09	11:15	0.51	6.2	7.8	295	123	39	5.9	3000	12.9		
Milltown	Sw4b	83094.9	98829.5	2010/0201	20-Jan-10	11:11	0.99	6.7	5.5	296	58	23	4.2	101	4.9		
Milltown	Sw4b	83094.9	98829.5	2010/1487	08-Apr-10	14:50	< 0.02	6.3	2	182	37	24	9.1	6	10.8		
Milltown	Sw4b	83094.9	98829.5	2010/3122	14-Jul-10	15:50	0.48	6.7	6.4	198	59	20	2.9	7	15.2	4106	38550
Milltown	Sw4b	83094.9	98829.5	2010/4735	12-Oct-10	15:00	0.39	6.4	11.2	258	99	24.5	2.2	71	13		
Milltown	Sw4b	83116	98869	2011/0333	19-Jan-11	12:10	0.03	6.5	< 1	229	20	43	8.4	< 1	6		
Milltown	Sw4b	83116	98869	2011/2003	20-Apr-11	11:35	< 0.02	6.5	4.5	263	71	51	7.2	105	11.2		
Milltown	Sw4b	83116	98869	2011/3422	27-Jul-11	15:30	< 0.02	6.7	< 1	261	12	42.5	5.9	3	15.9		2419
Milltown	Sw4b	83116	98869	2011/4687	18-Oct-11	11:55	0.59	6.5	2.8	248	52	32.1	4.3	18	10.4		
Milltown	Sw4b	83116	98869	2012/0452	25-Jan-12	11:35	0.03	6.7	1.2	205	34	28	8	3	9.4		

Milltown	u/s SW8	83089.5	98605.2	2011/1580	04-Apr-11	12:20	0.04		> 8		131	32	9.3	66	10.8	
Milltown	u/s SW8	83089.5	98605.2	2011/2005	20-Apr-11	11:50	0.15	7.1	9.6	216	85	30	8.7	36	12.9	
Milltown	u/s SW8	83089.5	98605.2	2011/4689	18-Oct-11	12:07	0.22	6.9	1.7	329	81	49.8	4.1	5	10.3	
Milltown	Sw8	83033	98594.6	2011/1582	04-Apr-11	11:55	36.9		4.1		190	59	8.6	36	11.3	
Milltown	Sw8	83033	98594.6	2011/2004	20-Apr-11	12:00	72	7	14.3	1292	136	88	3.8	506	12	
Milltown	Sw8	83033	98594.6	2011/3423	27-Jul-11	16:00	56	7.2	13.5	1026	67	69.2	2.4	64	16.9	8660
Milltown	D/S SW8	82971.2	98495.7	2011/1581	04-Apr-11	12:25	14		4.9		59	51	5.6	19	11.5	
Milltown	D/S SW8	82971.2	98495.7	2011/2006	20-Apr-11	12:35	17.7	7.6	22	665	74	59	4.6	58	11.7	
Milltown	D/S SW8	82971.2	98495.7	2011/4690	18-Oct-11	12:18	15.3	7.6	1.6	646	57	65.4	4.2	6	9.7	
Milltown	D/S SW8 (manhole 1)	82971.2	98495.7	2011/2225	13-May- 11	12:15	120	7.4	5.4	1806	111					
Milltown	D/S SW8 (manhole 2)	82971.2	98495.7	2011/2226	13-May- 11	12:15	232	7.3	10.5	2660	222					

Table 1 Surface Water Monitoring Results

Landfill	Location	Sample Reference	Sample Date	Sample Time	Ammonium (NH4)	pH	BOD (O2)	Conductivity @ 20 oC	Chemical Oxygen Demand (O2)	Suspended Solids	Temperature	Oils/Fats & Grease	Oils/Fats & Grease	Odour
					mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	Degrees C	mg/l	Descriptive	Descriptive
Milltown	Fe1	2003/0155	15-Jan-03	11:15	9.8	5.3	954	1000	1428	105		70		Sour/Sharp/Acidic
Milltown	Fe1	2003/1918	16-Apr-03	12:00	0.8	7	9.5	219	31	21	15.3	9		musty
Milltown	Fe1	2003/3654	09-Jul-03	12:00	37.4	7.3	18.9	602	64	12	20.8	3.5		Slightly oily
Milltown	Fe1	2003/5458	01-Oct-03	15:00	22.3	7.4	10.1	474	50	17.5	16	2		earthy odour
Milltown	Fe1	2004/0482	28-Jan-04	13:30	4.89	6.6	3.6	216	62	8	7.8	15		earthy
Milltown	Fe1	2004/1701	14-Apr-04	10:40	<	7	1.3	355	36	< 1	11	9		NoneDetected
Milltown	Fe1	2004/3710	21-Jul-04	14:52	0.02	6.4	1.9	250	48	1	16.9	1.5		NoneDetected
Milltown	Fe1	2004/5210	06-Oct-04	10:37	<	6.8	< 1	252	23	< 1	13.4	6		NoneDetected
Milltown	Fe1	2005/0382	19-Jan-05	14:40	0.14	6.9	< 1	379	19	2	10	1		NoneDetected
Milltown	Fe1	2005/1909	19-Apr-05	12:56	<	7.1	< 1	233	27	< 1	11	9.5		NoneDetected
Milltown	Fe1	2005/3600	14-Jul-05	12:35	3.62	6.8	22.7	416	81	14	16.5	1.2		Anaerobic/Sewage
Milltown	Fe1	2005/5323	13-Oct-05	15:12	0.46	6.9	1.8	385	35	1	13.6	< 1	no visual evidence	NoneDetected
Milltown	Fe1	2006/0512	31-Jan-06	13:46	0.05	6.7	< 1	395	48	22	8	< 1	no visual evidence	NoneDetected
Milltown	FE1	2006/1671	20-Apr-06	14:20	0.08	6.6	1.4	294	35	1	11.5	1.2		NoneDetected
Milltown	Fe1	2006/3667	03-Aug-	15:33	4.3	6.7	22	1068	96	17	18.7	9		sl. sewage

			06														
Milltown	Fe1	2006/5002	12-Oct-06	14:40	4.58	6.6	57	554	328	35	16.1	8			NoneDetected		
Milltown	Fe1	2007/0625	01-Feb-07	11:58	3.49	6.4	3.5	498	163	101	9.6	3			Peaty		
Milltown	Fe1	2007/1947	17-Apr-07	14:30	7.78	6.9	10.5	431	41	16	13.5	3			ND		
Milltown	Fe1	2007/3908	19-Jul-07	11:07	0.59	6.6	6.3	343	48	12	16.4	6.8			N/D		
Milltown	Fe1	2007/5814	25-Oct-07	13:30	8.75	6.5	3.8	488	222	11	13.5	10			V. sl.musty		
Milltown	Fe1	2008/0021	03-Jan-08	09:39	0.7	6.8	3.7	300	40	21		16			N/D		
Milltown	Fe1	2008/1612	03-Apr-08	10:35	0.18	6.7	2.3	341	60	7		6.3			N/D		
Milltown	Fe1	2008/3926	28-Jul-08	10:55	1	7.2	5.4	442	90	90	14	< 2	no visual evidence		None		
Milltown	Fe1	2008/6327	25-Nov-08	15:15	0.06	7.3	2.3	737	70	34	10	33.6			ND		
Milltown	Fe1	2009/0507	27-Jan-09	16:15	<	6.9	< 1	880	67	26	7.8	3.2			ND		
Milltown	Fe1	2009/1941	07-Apr-09	11:00	3.88	6.8	8.8	328	70	20	10.4	2.5			slightly,oily		
Milltown	Fe1	2009/4592	01-Sep-09	15:30	<	7.3	1.9	874	123	54	15.9	19.3			ND		
Milltown	Fe1	2009/6067	26-Nov-09	15:00	<	7.2	2.7	679	81	12		< 2	no visual evidence		ND		
Milltown	Fe1	2010/1489	08-Apr-10	14:15	<	6.8	1.7	222	58	7	10.3	< 2	no visual evidence		ND		
Milltown	Fe1	2010/1732	22-Apr-10	10:52	1.88	6.4	1.1	363	49	4	9.5	< 2	no visual evidence		None		
Milltown	Fe1	2010/3124	14-Jul-10	15:15	3.58	6.7	17.6	294	86	5	15.5	2.1			Sl. sewage(ammonia)		
Milltown	Fe1	2010/4822	18-Oct-10	16:30	5.65	7.6	4.2	416	38	20		189			ND		
Milltown	Fe1	2011/0334	19-Jan-11	11:35	0.81	6.9	1.9	602	37	2	6.5	< 2	no visual evidence		ND		
Milltown	Fe1	2011/2007	20-Apr-11	11:10	1.59	7.2	5.1	644	69	15	13	< 2	no visual evidence		ND		
Milltown	Fe1	2011/3424	27-Jul-11	15:10	9.62	6.8	31.3	882	137	18	17.5		No visual evidence		leachate odour		
Milltown	Fe1	2011/4688	18-Oct-11	11:03	15.1	6.7	117	2460	182	23	12.3	< 2	No visual evidence		ND		
Milltown	Fe1	2012/0453	25-Jan-12	11:05	5.68	6.7	8.6	814	42	< 1	9.8	0.5	No visual evidence		ND		

Table 2 Foul Water Monitoring Results

Appendix III - Landfill Gas Summary

Milltown Waste Transfer Station

Monitoring of Landfill Gas Levels

Date	Ref.	CH ₄ % v/v	CO ₂ % v/v	O ₂ % v/v	Atm. Pressure Mbar	Temperature Degrees Celsius
6/10/08	L1	19.6	6.4	7.8	1005	13
	L2	24.7	10.3	6.1	1005	13
11/5/09	L1	22.6	8.7	6.8	1008	17
	L2	18.1	8.2	6.4	1008	17
3/12/09	L1	24.2	7.8	7.1	1004	7
	L2	19.6	10.2	8.6	1004	7
20/4/10	L1	3.4	1.7	17.8	1015	14
30/3/11	L1	2.6	0.6	19.6	999	12
15/7/11	L1	9.0	3.9	18.1	1004	17

Note: L2 is no longer monitored as agreed with EPA

Appendix IV – Results of Dust Monitoring



OUR REF: RP 2011 | KERRY COUNTY COUNCIL – MILLTOWN | 03

PAGE 1 | 1

ANALYSIS REPORT

CUSTOMER:	KERRY COUNTY COUNCIL	SAMPLE TYPE:	DUST
ADDRESS:	Environment Section, Main Street, Tralee, County Kerry	CONDITION OF SAMPLE ON RECEIPT:	Satisfactory
REPORT TO:	BRIAN LENNON	DATE SAMPLED:	26 September – 28 October 2011
SAMPLED BY:	Customer	DATE RECEIVED:	28 October 2011
SAMPLING PT:	MILLTOWN TRANSFER STATION	DATE ANALYSED:	04 – 11 November 2011
ORDER NO:		DATE REPORTED:	14 November 2011
		WORK NO:	25542 C

TABLE OF RESULTS

METHOD:	LAB REF:	YOUR REF:	TOTAL PARTICULATES mg/m ³ /day	INORGANIC PARTICULATES mg/m ³ /day
SCP 039	CH-0ct 582	Station 1	139	46
SCP 039	CH-0ct 583	Station 2	89	84
SCP 039	CH-0ct 584	Station 3	110	39

Karen Lavery
Karen Lavery
Chemistry Laboratory

- The results relate only to the items tested.
- The analysis report shall not be reproduced except in full without written approval of the laboratory.

(registered office)

duirine | KILLARNEY | COUNTY KERRY | IRELAND | telephone +353 (0)64 6633922 | fax +353 (0)64 6635022
web site: www.southernscientificireland.com | e-mail: info@southernscientificireland.com

directors: K. Murphy, M. Murphy & C. Murphy
registered in Ireland no 323196 | vat reg no IE 6343196 M

Appendix V - AER/PRTR Return 2011

Sheet : Facility ID Activities

AER Returns Workbook

29/6/2012 14:28



| PRTR# : W0069 | Facility Name : Milltown Transfer Station | Filename : W0069
AER PRTR 2011 V3.xls | Return Year : 2011 |

[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.13

REFERENCE YEAR	2011
-----------------------	------

1. FACILITY IDENTIFICATION

Parent Company Name	Kerry County Council
Facility Name	Milltown Transfer Station
PRTR Identification Number	W0069
Licence Number	W0069-01

Waste or IPPC Classes of Activity

No.	class_name
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.
4.1	Solvent reclamation or regeneration.
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.
4.2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
4.3	Recycling or reclamation of metals and metal compounds.
4.4	Recycling or reclamation of other inorganic materials.
Address 1	Ballyvirrane
Address 2	Milltown
Address 3	Co Kerry
Address 4	
	Kerry
Country	Ireland
Coordinates of Location	-9.70743 52.1285
River Basin District	IESW
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Brian Lennon
AER Returns Contact Email Address	blennon@kerrycoco.ie
AER Returns Contact Position	Executive Engineer
AER Returns Contact Telephone Number	066 7162000
AER Returns Contact Mobile Phone Number	087 8173683
AER Returns Contact Fax Number	066 7162001
Production Volume	0.0
Production Volume Units	
Number of Installations	0

| PRTR# : W0069 | Facility Name : Milltown Transfer Station | Filename : W0069 AER PRTR 2011 V3.xls | Return Year : 2011 | Page 1 of 2

Sheet : Facility ID Activities

AER Returns Workbook

29/6/2012 14:21

Number of Operating Hours in Year	0
Number of Employees	0
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 ?	No
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

Sheet : Releases to Air

AER Returns Workbook

29/6/2012 14:30

4.1 RELEASES TO AIR [Link to previous years emissions data](#)

| PRTR#: W0069 | Facility Name : Milltown Transfer Station | Filename : W0069 AER PRTR 2011 V3.xls | Return Year : 2011 |

28/06/2012 14:30

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

RELEASERS TO AIR		METHOD			Please enter all quantities in this section in KGs			
No. Annex II	POLLUTANT Name	M/C/E	Method Used		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
03	Carbon dioxide (CO2)	C	OTH	GasSim V1.54		0.0	190000.0	0.0
01	Methane (CH4)	C	OTH	GasSim V1.54		0.0	128000.0	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)

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

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 flared methane (CH4) emission to the environment under 'Fugitive' (KG/yr) for Section A, Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Please enter summary data on the quantities of methane flared and / or utilised	Milltown Transfer Station				Facility Total Capacity m3 per hour
	T (Total) kg/Year	M/C/E	Method Used		
			Method Code	Designation or Description	
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

Sheet : Releases to Waters

AER Returns Workbook

29/6/2012 14:31

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

| PRTR# : W0069 | Facility Name : Milltown Transfer Station | Filename : W0069 AER PRTR 2011 V3.xls | Return Year : 2011 |

29/06/2012 14:31

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 this

POLLUTANT		RELEASES TO WATERS			Please enter all quantities in this section in KGs			QUANTITY		
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	0.0

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

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT		RELEASES TO WATERS			Please enter all quantities in this section in KGs			QUANTITY		
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	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)

POLLUTANT		RELEASES TO WATERS			Please enter all quantities in this section in KGs			QUANTITY		
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	0.0

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

Sheet : Releases to Wastewater or Sewer

AER Returns Workbook

29/6/2012 14:32

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0069 | Facility Name : Milltown Transfer Station | Filename : W0069 AER PRTR 2011 V3.X | 29/06/2012 14:32

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			
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 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			
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

[Link to previous years emissions data](#)

Page 1 of 1

Sheet : Releases to Land

AER Returns Workbook

29/06/2012 14:32

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : W0069 | Facility Name : Milltown Transfer Station | Filename : W0069 AER PRTR 2011 V3.xls | Return Year : 2011 |

29/06/2012 14:32

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND				Please enter all quantities in this section in KGs		
POLLUTANT		METHOD		QUANTITY		
No. Annex II	Name	M/C/E	Method Used 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		
Pollutant No.	Name	M/C/E	Method Used 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

Sheet : Treatment Transfers of Waste

AER Returns Workbook

29/6/2012 14:32

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE (PRTR# : W0059 | Facility Name : Milltown Transfer Station | Filename : W0069 AER PRTR 2011 V3.xls | Return Year : 2011)

29/06/2012 14:32

Please enter all quantities on this sheet in Tonnes

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	The Waste Name and Licence/Permit No. of the Receiving Facility (Name and Licence/Permit No. of Receiver/Operator)	The Waste Address of the Receiving Facility (Name and Licence/Permit No. of Receiver/Operator)	Name and Licence / Permit No. and Address of Final Recycler / Disposer (Hazardous Waste Only)	Actual Address of Final Destination (i.e. Final Recycler / Disposal Site) (Hazardous Waste Only)
						M/C/E	Method Used					
Within the Country	20 01 08	No	3.72	biodegradable kitchen and canteen waste	R3	M	Weighted	Offsite in Ireland	Killarney Waste Disposal Ltd, W0217-01	Aughacureen, Killarney Waste Disposal Ltd, County Kerry, Ireland		
Within the Country	15 01 06	No	54.02	mixed packaging	R3	M	Weighted	Offsite in Ireland	Killarney Waste Disposal Ltd, W0217-01	Aughacureen, Killarney Waste Disposal Ltd, County Kerry, Ireland		
Within the Country	15 01 01	No	84.46	paper and cardboard packaging	R3	M	Weighted	Offsite in Ireland	Greenstar, WFP-CK-10-0047-02	Sandfield Court Industrial Estate, Glanmire, County Cork, Ireland		
Within the Country	20 01 01	No	173.32	paper and cardboard	R3	M	Weighted	Offsite in Ireland	Dillon Waste Ltd, WFP KY 10-001	The Kermies, Tralee, County Kerry, Ireland		
Within the Country	15 01 07	No	72.59	glass packaging	R5	M	Weighted	Offsite in Ireland	Rehab Glassco Ltd, WFP-KE 05-0357-01	Road, Naas, County Kildare, Ireland	Unit 4 Osberstown Business Park, Carragh	
Within the Country	15 01 04	No	10.81	metallic packaging	R4	M	Weighted	Offsite in Ireland	Rehab Glassco Ltd, WFP-KE 05-0357-01	Road, Naas, County Kildare, Ireland	Unit 4 Osberstown Business Park, Carragh	
Within the Country	20 01 40	No	51.66	metals	R4	M	Weighted	Offsite in Ireland	Hegarty Metals, WFP-LC-11-001-01	Ballysinton Road, Limerick, Ireland		
Within the Country	15 01 02	No	28.0	plastic packaging	R3	M	Weighted	Offsite in Ireland	Dillon Waste Ltd, WFP KY 10-001	The Kermies, Tralee, County Kerry, Ireland		
Within the Country	20 01 11	No	1.92	textiles	R3	M	Weighted	Offsite in Ireland	Textile Recycling Ltd, WPR-0142	Road, Tallaght, Dublin, 24, Ireland		
To Other Countries	20 01 34	No	2.75	batteries and accumulators other than those mentioned in 20 01 33	R4	M	Weighted	Abroad	EWM Ltd, WFP-DG-09-0012-01	Block 648, Jordanstown Drive, Greenogue Industrial Estate, Rathcoole, County Dublin, Ireland		
To Other Countries	16 02 11	Yes	15.58	discarded equipment containing onorofluorocarbons, HCFC, HFC	R4	M	Weighted	Abroad	KMK Metals, WD113-01	Cappincur Industrial Estate, Tullamore, County Offaly, Ireland	EVR, EAML40099, ...Daraio on, ...United Kingdom	...Daraio, ...United Kingdom
Within the Country	20 01 36	No	27.1	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R4	M	Weighted	Offsite in Ireland	KMK Metals, WD113-01	Cappincur Industrial Estate, Tullamore, County Offaly, Ireland		
Within the Country	20 01 38	Yes	22.91	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	R4	M	Weighted	Offsite in Ireland	EWM Ltd, WFP-DG-09-0012-01	Block 648, Jordanstown Drive, Greenogue Industrial Estate, Rathcoole, County Dublin, Ireland	The Recycling Village, WFP-KE1110005/01, Unit 21 Duleek Business Park, Commons, Duleek, County Meath, Ireland	Unit 21 Duleek Business Park, Commons, Duleek, County Meath, Ireland
To Other Countries	16 02 14	No	4.48	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighted	Abroad	EWM Ltd, WFP-DG-09-0012-01	Block 648, Jordanstown Drive, Greenogue Industrial Estate, Rathcoole, County Dublin, Ireland		
To Other Countries	20 01 36	No	28.24	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R4	M	Weighted	Abroad	EWM Ltd, WFP-DG-09-0012-01	Block 648, Jordanstown Drive, Greenogue Industrial Estate, Rathcoole, County Dublin, Ireland		
To Other Countries	20 01 21	Yes	0.54	fluorescent tubes and other mercury-containing waste	R5	M	Weighted	Abroad	KMK Metals, WD113-01	Cappincur Industrial Estate, Tullamore, County Offaly, Ireland	Alta Service GmbH & Co. KG, E56657020, Kanalstrasse 54, Rheine, 49432, Germany	Kanalstrasse 64, Rheine, 49432, Germany
Within the Country	20 03 01	No	2376.86	mixed municipal waste	D5	M	Weighted	Offsite in Ireland	North Kerry Landfill, W001-04	North Kerry, Ireland		

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

