Kerry County Council

Waste Licence Ref No. W0087-01

REPORT TITLE

Caherciveen Transfer Station
Annual Environmental Report

Reporting Period:

January – December 2014

Prepared By:
Environmental Service Section,
Kerry County Council,
Maine Street,
Tralee
Co. Kerry.

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1.0 Introduction

Kerry County Council operates a waste transfer and recycling facility in the townland of Inchamacteige, approximately 3 km from the town of Caherciveen, Co. Kerry. The site is accessed via a small access road branching off the county road L7006.

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 in Muingnaminnane, Tralee. From the 12th July 2014, all waste from Caherciveen WTS was transferred to KWD Recycling for treatment/disposal as North Kerry Landfill ceased taking waste.

Other activities include the recycling or reclamation of inorganic materials including metals, glass, steel and aluminium cans, fluorescent tubes, household hazardous waste, cardboard, plastic bottles and newspapers.

This Annual Environment Report is prepared in accordance with Condition 2.8 and Schedule B of Waste Licence W0087-01 issued by the Environmental Protection Agency (EPA).

2.0 Reporting Period

The reporting period for this Annual Environmental Report is 1st January – 31st December 2014.

3.0 Waste Activities Carried out at the Facility

Waste disposal activities are carried out at Caherciveen Transfer Station in accordance with Part 1 of Waste Licence W0087-01 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 Caherciveen Transfer Station are in accordance with Part 1 of Waste Licence W0087-01 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 2014

Waste tonnage disposed of at Caherciveen Transfer Station during the reporting year (2014) increase of 8% on the previous year (2013).

The weight of the waste accepted into Caherciveen Transfer Station Facility for disposal for the reporting period was 547.32 tonnes. This comprises of the following breakdown:

Waste for Disposal	***Tonnes 2012***	***Tonnes 2013***	***Tonnes 2014***
Household Waste	472.86	423.86	449.54
Commercial Waste	37.64	32.42	39.44
Road Sweeping/Street Cleaning	28.88	25.06	31.44
Graveyard Waste	1.98	1.98	0.98
Flytipping	16.40	20.86	25.92
Total	**557.76**	**504.18**	**547.32**

Table 1 Waste Stream Breakdown for reporting Period.

Overall the quantities of waste sent for recycling is comparable to last year. Waste sent for recycling during the reporting period compared with previous years is outlined in Table 2 below.

Waste for Recycling & Recovery	***Tonnes 2012***	***Tonnes 2013***	***Tonnes 2014***
Metals	20	26.44	27.98
Glass	23.48	28.634	33.672
Aluminium and Steel Cans	3.64	4.692	5.111
Batteries	0.03	0.44	1.22
Newspapers	52.88	51.04	50.87
Cardboard	10.26	13.92	23.36
Fluorescent Tubes	0.28	0.3	0.409
Plastic Bottles	11.58	15.72	21.58
Waste Engine Oil	0.98	1.28	1.15
WEEE	61.65	68.23	56.506
Dry Recyclables	12.68	11.84	15.02
Textiles	1	1.1	1.32
Total for Recycling/Recovery	**198.46**	**223.864**	**237.901**

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/ repackaged on 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 Caherciveen Transfer Station will continue to decrease in the next reporting period mainly due to the weak economic environment in the locality. However, the WEEE tonnage for 2015 should decrease with the change in the manner in which WEEE is collected from shops. The proposed Household Waste Regulations which are due to come into effect in July will have an impact on the total waste being disposed at this facility however, we are awaiting clarification from the Department of the Environment in relation to this in order assess the impact of this on our services.

6.0 Summary Report on Emissions for the Reporting Period

a) Foul Water Emissions

The foul water discharge is monitored quarterly. The results are sent to the EPA and are also available at the Caherciveen facility. Two exceedances were noted on the 3rd June and 24th November 2014 respectively where a sample taken, when tested on the 26th November showed a BOD of 32 and 45 mg/l (limit of 20 mg/l). Suspended solids readings at the outfall location are consistently high for the reporting period average of 192 mg/l (limit of 30 mg/l). This is primarily due to disturbance of water when tests are being taken. Both of these issues will be addressed during the coming reporting period. A Puraflow Wastewater Treatment Unit is installed at the facility to treat all foul waters from the site.

b) Surface Water Emissions

Surface water runoff 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 0.409 Tonnes of silt/sludge and wastewater were removed from the silt trap and the foul water treatment unit during the reporting period and disposed of at Tralee Wastewater Treatment Plant.

7.0 Summary of Results and Interpretations of Environmental Monitoring

a) Dust monitoring

Dust Monitoring was carried out at the facility in August/September 2014. The dust monitoring results were within the emission limit value specified in the licence.

There were no issues with dust during 2014 and no complaints were received in relation to dust at the facility. The results over the years have shown no significant nuisance from dust at the facility.

It is Kerry County Council's intension to seek a technical amendment in relation to the dust monitoring requirement of Waste Licence W0087 as past monitoring indicates that the site it not causing excessive dust to the surrounding environs.

b) Noise monitoring.

A noise survey to EPA NG4 was undertaken on the 11/02/2015. Noise Levels recorded at Noise Sensitive Locations are determined to be below the emission limit value. The site is therefore compliant as regard noise levels.

There were no issues with noise during 2014 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.

The waste transfer station does not generate noise at night-time when the facility is closed.

It is Kerry County Council's intension to seek a technical amendment in relation to the noise monitoring requirement of Waste Licence W0087 as past monitoring indicates that the site it not causing excessive noise to the surrounding environs.

Table 1. Noise Monitoring Results

Location Reference	Date and Time	L_{Aeq} dB	L_{A10} dB	L_{A90} dB	Tones	Description of Noise Sources
B1 (at main gate)	13:00-13:30	42	43	21	No	The main contributing noise source at this location included cars and traffic entering and exiting the facility. Birdsong also contributed to the noise build up. No tones were audible at this location
	13:30-14:00	40	40	20		
	14:00-14:30	40	44	22		
B2 (at weighbridge)	10:30-11:00	38	40	20	No	Customers and idling cars were the main contributing noise source at this location. No audible tones noted.
	11:00-11:30	40	42	21		
	11:30-12:00	38	40	20		
B3 (boundary location)	10:30-11:00	39	33	24	No	Occasional customer. Birdsong. No audible tones noted.
	11:00-11:30	36	35	25		
	11:30-12:00	34	35	24		
B4 (access road to facility)	13:00-13:30	51	38	23	No	No notable noise emissions from the facility. Cars passing the monitoring location were the main contributing noise sources to the ambient noise level. No audible tones noted.
	13:30-14:00	52	36	22		
	14:00-14:30	57	42	23		

Table 3 Daytime Noise Monitoring Results Caherciveen Waste Transfer Station.

c) Monitoring of surface water.

The surface water monitoring results are attached in Appendix II. Significant deterioration in status at SW5 was noted in recent years by high level of Ammonia. This has been borne out by recent measurements

An examination of discharge from transfer station since 2003 i.e. ***Se1*** shows ***an effluent of acceptable quality.***

The contamination at SW5 would therefore seem to indicate that elevated levels (***20.89 mg/L NH4***, on 23rd July last) are due to legacy or old landfill activities

As indicated in earlier reports the nearest point on Carhan downstream of landfill/transfer station still denotes a ***Q value =4*** which denotes a water of good quality.

The point on stream which is a tributary of Carhan stream , just downstream of transfer station also scores quiet highly on SSRS investigation. A summary of Biological report from 2010 is included with this report

However the impact from transfer station or old legacy landfill activities while they may not yet be evident on surface water quality does not eliminate possibility of a future impact. An investigation into impact on groundwater from closed landfills, including Cahersiveen, is currently underway and this will be submitted under a separate report.

d) Foul Water

The foul water discharge is monitored quarterly. The results are sent to the EPA and are also available at the Caherciveen facility. Two exceedances were noted on the 3rd June and 24th November 2014 respectively where a sample taken, when tested on the 26th November showed a BOD of 32 and 45 mg/l (limit of 20 mg/l). Suspended solids readings at the outfall location are consistently high for the reporting period average of 192 mg/l (limit of 30 mg/l). This is primarily due to disturbance of water when tests are being taken. Both of these issues will be addressed during the coming reporting period. A Puraflow Wastewater Treatment Unit is installed at the facility to treat all foul waters from the site.

e) Landfill gas

The levels of methane gas and carbon dioxide recorded have reduced significantly (2014 average **CH_4** – 0.8 % v/v, & **CO_2 -** 0.4% v/v) compared to 2008 and 2009. The landfill gas monitoring results are attached in Appendix III.

8.0 Resource and Energy Consumption Summary

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

8.1 Diesel

The diesel usage for Caherciveen Transfer Station for the reporting period 2014 was 1,400 litres. The primary usage of diesel is for the waste compactor.

8.2 Electricity

The electricity usage for the facility during the reporting period was 4,900 kilowatt hours.

Year	Average Electricity Usage kWh/day
2014	10.76
2013	10.83
2012	11.85
2011	16.91
2009	16.99

Power is required for the office computer and lighting, weighbridge, waste compactor, storage heating, water pumping, cardboard baler and public lighting on the site.

8.3 Water

Water supply is from a groundwater borehole on site. Water usage for the facility during the reporting period was estimated to be 80 m^3. Water is mainly used on site for power washing yards, transfer station apron and hopper.

9.0 Resource and Energy Consumption Summary

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

10.0 Timescale for Proposed Development Works For Forthcoming Year

The proposed Household Waste regulations will have an impact on the operation and site layout of the Caherciveen Waste Transfer Station, once the regulations are published, it is Kerry County Council's intension to assess the impact of these regulations and adapt the site where necessary to meet the new requirements. The Agency shall be informed of any changes to the site layout etc.

11.0 Environmental Management System

There is an Environmental Management System on site. This system is due for review and changes to work practices on site will be reflected in the review of the document. Once the review is complete a copy will be forwarded to the Agency for its consideration.

12.0 Report Targets and Environmental Objectives and Targets for 2015.

Target Area	2015 - Objective	2015 – Expected Outcome to Indicate achievement of target
Odour Management	Continue to ensure that the waste facility does not cause a nuisance in terms of odour through good housekeeping practices on site	No odour complaints received due to onsite odour.
		No odour complaints received due to off site odour
Waste Storage Practices	Ensure good housekeeping on site to ensure that waste is stored corrected and collected in a timely fashion so not to cause nuisance to the surrounding areas and on site	No wind blown litter on site No overflowing bins on site Proper segregation of waste
Incident Prevention	Look at Fire Preventative and Emergency Response Procedure for the site	Revised procedures to be put in place mindful of EPA guidance document
Infrastructure integrity and drainage	Carry out integrity testing on site	Integrity testing carried out on site
Waste acceptance, Classification and records	Continue to record and document all waste types entering and leaving the site with monthly verifiable reports being produced	Monthly reports on waste streams produced and verified
Proposed Household Waste Regulations	Look at the proposed household waste regulations and implement the same on site in a timely manner	Draft Household Regs. implemented on site.

13.0 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

14.0 Reported Incidents and Complaints

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

15.0 Report on Financial Provision

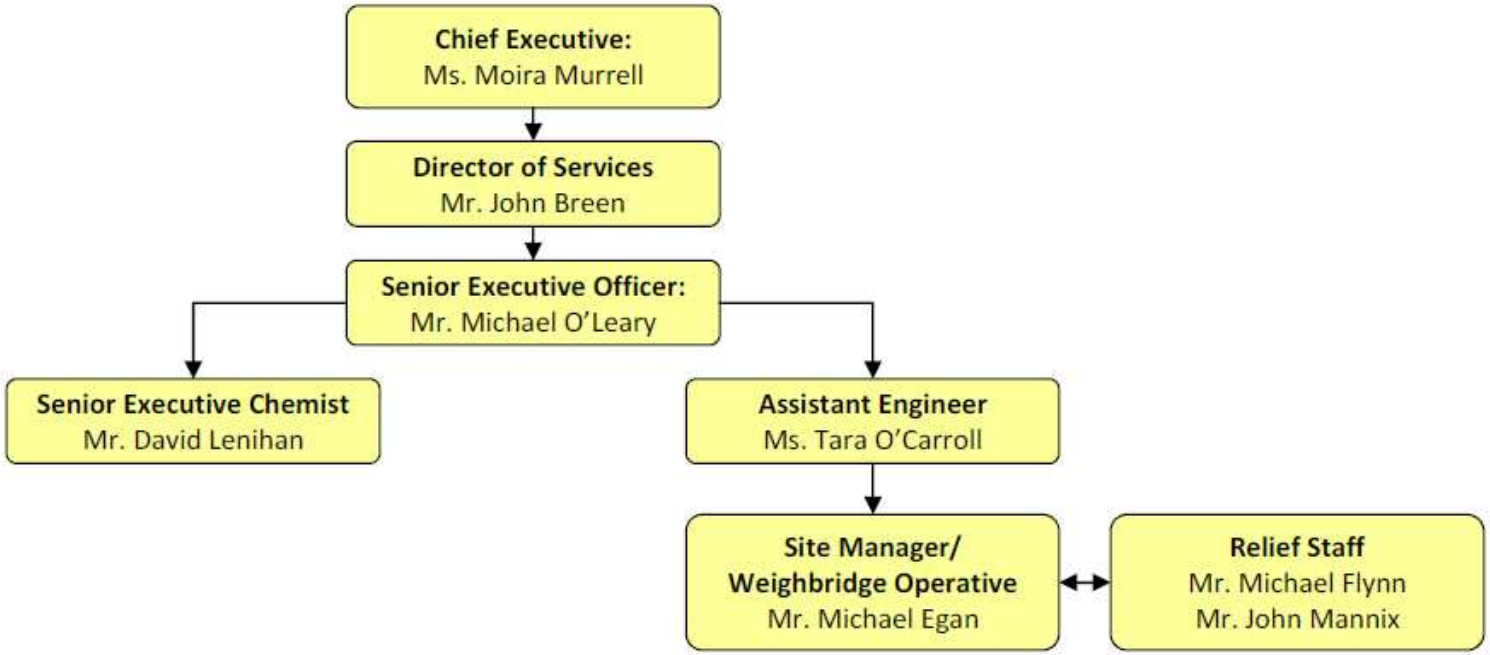
a) Statement of Costs for Waste Operations at Facility

Accelem	Accelem(T)	Total Charge Euro
60030	Wages	25,693.32
60040	Salaries	5,052.14
60100	ER PRSI	4,197.48
60200	Overtime	4,109.26
60500	Annual Leave	3,504.67
60510	Bank Holiday Leave	603.69
60600	Travel/Subsistence	2,673.45
65500	Minor Contracts- Trade Services & other works	30,725.22
68000	Non-Capital Equip Purchase - Office Equip/Furn	81.95
68500	Non-Capital Equip Purchase - Other	-3.45
69000	Hire (Ext) - Plant/Transport/Machinery & Equipment	5.00
69260	Repairs & Maint - Other Equip	4.52
69400	Transfers from Machinery Yard	4,719.00
69600	Other Vehicle Expenses	102.00
70000	Materials	609.89
70990	Issues from Stores	3,713.42
71000	Insurance	486.64
73400	Staff Travelling & Subsistence Expenses	575.11
76000	Communication Expenses	260.80
76100	Postage	48.40
77100	Courier	11.99
80000	Advertising	42.00
81000	Printing & Office Consumables	171.39
82100	Statutory Contributions to Other Bodies	3,756.50
86000	Energy	1,789.97
99050	Refunds	84.22
	Total Waste Operation Cost	**93,018.58**

b) <u>Statement of Costs for Recycling Operations at Facility</u>

Accelem	Accelem(T)	Total Charge Euro
60030	Wages	8,934.44
60040	Salaries	5,052.14
60100	ER PRSI	1,638.33
60200	Overtime	193.58
60500	Annual Leave	908.87
60510	Bank Holiday Leave	251.54
60600	Travel/Subsistence	884.30
65500	Minor Contracts- Trade Services & other works	6,961.20
69000	Hire (Ext) - Plant/Transport/Machinery & Equipment	5.00
69260	Repairs & Maint - Other Equip	18.09
69400	Transfers from Machinery Yard	2,494.50
70000	Materials	712.68
70990	Issues from Stores	1,544.52
70991	Returns to Stores	-229.42
73400	Staff Travelling & Subsistence Expenses	373.30
76000	Communication Expenses	240.17
77100	Courier	5.10
80000	Advertising	42.00
81000	Printing & Office Consumables	13.00
82100	Statutory Contributions to Other Bodies	3,756.46
86000	Energy	572.46
	Total Recycling Operational Cost	**34,372.26**

16.0 Management and Staffing Structure at Facility 2014



17.0 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 Categorisation and Statistics

Caherciveen Transfer Station Residual Waste - Tonnage Period 01/01/14 to 31/12/2014

							Non Levied Waste											
	Public Car Household	* Non weighed waste inclusive of tickets	A/C Holders (VAT Inclusive)	A/C Holders (VAT Exempt)	KCC Internal Depts	Total Levied Waste	Road Sweeping/Street Cleaning	Graveyard Waste	KCC Clean Ups / F'tipping	Clean Ups / F'tipping Not Charged	Total Non - levied	Total of Waste Over Weighbridge Excluding Ticket Waste	Total Waste Out	No. Loads Out of TS	Waste In @ NKL	No. Loads Into NKL	Variance	Average Variance per Load
January 2014	**20.06**	**24.14**	**1.38**	**0**	**0.92**	**46.5**	**0.46**	**0**	**3.76**	**1.74**	**5.96**	**28.32**	**42.02**	**5**	**52.46**	**6**	**10.44**	**1.74**
January 2013	20.92	9.86	2.34	0	0.58	33.70	1.88	1.26	0.34	0.46	3.94	27.78	37.66	3	37.64	3	-0.02	-0.01
February 2014	**16.86**	**7.88**	**1.14**	**1.22**	**1.54**	**28.64**	**1.84**	**0**	**0.48**	**0.32**	**2.64**	**23.4**	**31.14**	**3**	**31.28**	**3**	**0.14**	**0.05**
February 2013	18.08	13.12	1.42	0	0	32.62	1.88	0	0.76	0.1	2.74	22.24	35.4	3	35.36	3	-0.04	-0.01
March 2014	**18.44**	**14.32**	**0.86**	**0.88**	**0.28**	**34.78**	**2.56**	**0**	**0.78**	**1.34**	**4.68**	**25.14**	**39.60**	**4**	**39.46**	**4**	**-0.14**	**-0.04**
March 2013	20.86	0.36	1.62	0	0	22.84	1.74	0	0.1	0.64	2.48	24.96	25.4	2	25.32	2	-0.08	-0.04
April 2014	**28.32**	**8.94**	**1.96**	**0**	**0.24**	**39.46**	**3.6**	**0**	**0.62**	**2.78**	**7.00**	**37.52**	**46.23**	**5**	**44.12**	**4**	**-2.11**	**-0.53**
April 2013	19.06	23.48	1.18	1.32	0	45.04	1.88	0.5	0.3	0.24	2.92	24.48	47.78	4	47.96	4	0.18	0.04
May 2014	**19.26**	**21.10**	**1.42**	**1.20**	**1.06**	**44.04**	**1.98**	**0.00**	**0.18**	**0.58**	**2.74**	**25.68**	**47.06**	**4**	**46.78**	**4**	**-0.28**	**-0.07**
May 2013	21.64	11.98	0.84	1.16	0	35.62	2.22	0	0.7	1.2	4.12	27.76	39.88	3	39.74	3	-0.14	-0.05
June 2014	**23.54**	**16.48**	**1.12**	**0**	**0.92**	**42.06**	**1.98**	**0.2**	**1.36**	**0.54**	**4.08**	**29.66**	**46.32**	**4**	**46.14**	**4**	**-0.18**	**-0.04**
June 2013	24.7	13.62	1.92	0	0	40.24	1.8	0.06	2.66	0.42	4.94	31.56	45.50	4	45.18	4	-0.32	-0.08
1st - 11th July 2014	10.72	-1.42	0.42	0	0.9	10.62	0.82	0	0.66	0.32	1.8	13.84	12.32	1	12.42	1	0.10	0.10
12th - 31st July 2014	20.38	22.88	2.2	1.22	0	46.68	1.34	0	2.00	0	3.34	27.14	50.02	4	0.00	0.00	0.00	0.00
July 2014	**31.1**	**21.46**	**2.62**	**1.22**	**0.9**	**57.3**	**2.16**	**0**	**2.66**	**0.32**	**5.14**	**40.98**	**62.34**	**5**	**12.42**	**1**	**0.1**	**0.1**
July 2013	29.46	5.02	3.34	1.36	1.72	40.90	1.28	0	3.92	0.62	5.82	41.7	59.00	5	46.72	4	-12.28	-3.07
August 2014	**28.2**	**7.22**	**5.58**	**0**	**0.44**	**41.44**	**6.2**	**0.6**	**3.7**	**0.8**	**11.30**	**45.52**	**52.74**	**5**				
August 2013	28.3	30.86	3	0	0.28	62.44	4.64	0	3.7	0.78	9.12	40.70	72.38	6	71.56	6	-0.82	-0.14
September 2014	**22.98**	**15.88**	**1.02**	**0.68**	**0.28**	**40.84**	**2.64**	**0**	**2.16**	**0.36**	**5.16**	**30.12**	**46.00**	**4**				
September 2013	19.32	9.66	2.04	1.24	0.98	33.24	0.92	0	2.6	0.28	3.8	27.38	36.02	3	37.04	3	1.02	0.34
October 2014	**19.16**	**17.72**	**1.32**	**1.54**	**0.48**	**40.22**	**2.74**	**0**	**0.28**	**0.22**	**3.24**	**25.74**	**43.46**	**4**				
October 2013	20.3	27.86	1.5	0	0.68	50.34	2.52	0	0.46	0.1	3.08	25.56	42.24	4	53.42	5	11.18	2.24
November 2014	**19.18**	**9.32**	**2.1**	**0.88**	**1.64**	**33.12**	**2.68**	**0.18**	**0**	**0.48**	**3.34**	**27.14**	**36.46**	**3**				
November 2013	19.4	19.36	1.38	0	0.32	40.46	2.48	0	0.26	0.08	2.82	23.92	43.08	4	43.28	4	0.20	0.05
December 2014	**18.98**	**19**	**0.4**	**0.5**	**1.7**	**40.58**	**2.6**	**0**	**0.46**	**0**	**3.06**	**24.64**	**43.64**	**4**				
December 2013	17.74	-1.1	0.24	1.1	0.86	18.84	1.82	0.16	0	0.14	2.12	22.06	31.12	3	20.96	2	-10.16	-5.08
Total Tonnage 2014	**266.08**	**183.46**	**20.92**	**8.12**	**10.40**	**488.98**	**31.44**	**0.98**	**16.44**	**9.48**	**58.34**	**363.86**	**537.01**	**50**	**272.66**	**26**	**7.97**	
Total Tonnage 2013	**259.78**	**164.08**	**20.82**	**6.18**	**5.42**	**456.28**	**25.06**	**1.98**	**15.80**	**5.06**	**47.90**	**340.10**	**515.46**	**44**	**504.18**	**43**	**-11.28**	
Grand Total							**58.34**					**Overall Total Average Variance Per Load 1st Jan - 11th July 2014**			**0.31**			

Household Waste Deposited at Caherciveen Civic Amentity Sites in 2014

Material type	Suggested EWC codes	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Mixed residual waste (Trans Waste out of facility)	20 03 01	52.46	31.28	39.46	44.12	46.78	46.14	62.44	52.74	46.00	43.46	36.46	43.64	544.98
Organic waste (food and garden)														0.00
food (compost waste Milltown TS)	*20 01 08*													0.00
garden	*20 02 01*													0.00
Mixed dry recyclables (Ecosence Bags)	20 03 01	1.40	1.00	0.60	1.96	0.82	1.16	1.02	1.68	1.04	1.08	1.26	2.00	15.02
Cardboard, newspaper and other paper														0.00
cardboard packaging	*15 01 01*	2.78	2.48					9.08	1.20	2.82	2.48	0.88	1.64	23.36
cardboard non-packaging	*20 01 01*													0.00
paper packaging	*15 01 01*													0.00
paper non-packaging	*20 01 01*													0.00
newspaper and magazines	*20 01 01*	5.64	3.56	3.10	3.76	4.88	3.90	4.92	4.12	4.00	5.60	3.84	3.50	50.82
Glass														0.00
glass packaging (bottles)	*15 01 07*	1.9890	2.3600	1.9550	2.4710	3.8620	2.0550	2.9610	4.8860	1.8420	5.0290	1.3150	2.9470	33.6720
glass non-packaging (flat glass)	*20 01 02*													0.0000
Metals														0.0000
aluminium cans (packaging)	*15 01 04*	0.0570	0.0980	0.0550	0.0960	0.0830	0.0910	0.1370	0.1480	0.1290	0.2000	0.1060	0.1300	1.3300
steel cans (packaging)	*15 01 04*	0.1330	0.3510	0.2200	0.3030	0.2260	0.2270	0.4370	0.4790	0.3150	0.4100	0.2070	0.4730	3.7810
other metals (scrap metals)	*20 01 40*	1.82	0.00	2.20	2.04	4.70	1.62	4.04	2.48	3.90	1.84	1.96	1.38	27.98
Plastic														0.00
plastic packaging (bottles)	*15 01 02*	1.76	1.08	1.06	1.24	1.64	1.44	2.38	2.32	1.44	1.78	1.42	4.02	21.58
plastic non-packaging	*20 01 39*													0.00
polystyrene														0.00
Composite packaging (e.g. tetrapaks)	*15 01 05*													0.00
Textiles														0.00
textiles, packaging	15 01 09													0.00
textiles, non-packaging (clothes)	20 01 11							1.32						1.32
Wood														0.00
wood packaging	15 01 03													0.00
wood non-packaging	20 01 38													0.00
mixed, uncontaminated wood packaging and non-packaging (collected at An Daingean)	15 01 03; 20 01 38													0.00
wood, treated, hazardous	20 01 37*													0.00
Batteries	*Portable batteries*													0.00
lead acid batteries and accumulators (Car Batteries)	16 06 01*													0.000
Ni-Cd batteries and accumulators	16 06 02*	0.0000	0.6820	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5380	0.0000	0.0000	0.0000	1.2200
Other (e.g. alkaline) batteries and accumulators (Small Batteries)	16 06 04													0.00
														0.00
Household Hazardous Waste														0.00
Waste mineral oils (Engine Oil)	13.02 08							1.15						1.15
Oil filters (vehicles)	13 08 99													0.00
Oil containers (mineral oil) - plastic + metal	13 08 99													0.00
Waste cooking or vegetable oils (Tadgh Buckley Eco Fuels)	20 01 25				0.16									0.16
Waste paint and varnish (including containers)	20 01 27													0.00
Aerosols	14 06 01													0.00
WEEE collected by compliance schemes														0.00
CRT	20 01 36	1.531	0.566	1.388	1.012	0.969	1.022	0.000	1.481	1.807	0.943	1.240	0.899	12.858
SDA - Small Domestic Appliances	20 01 36	1.740	0.860	1.780	1.320	1.060	1.680	0.000	1.460	2.690	1.030	1.430	3.260	18.310
LDA - Large Domestic Appliances	20 01 36	1.360	1.740	0.960	2.200	1.640	1.460	0.000	1.320	0.360	1.070	1.620	1.360	15.090
Cold	20 01 36	0.451	0.392	0.738	0.476	1.090	0.907	0.000	0.172	2.090	0.659	2.074	1.199	10.248
														0.00
														0.00
WEEE taken off-site by charities (e.g. mobile phones)	20 01 35													0.00
Dry Recyclables Customer Caherciveen CA	20 03 01													0.00
Flourscent Tubes	20 01 11	0.1360						0.1720					0.1010	0.4090
Foul Water Septic Tanks Caherciveen CA	19 07 03													0.00

Appendix II - Results of Foul and Surface Water Monitoring

SW1

							Parameter	Ammonium	pH	BOD (5day)	Conductivity @ 20 oC	Chemical Oxygen Demand	Chloride	Dissolved Oxygen	Suspended Solids	Temperature	Appearance	Odour	Oils/Fats & Grease
								NH4	Physchem	O2	Physchem	O2	Cl	O2	Physchem	Physchem		Physchem	OFG
							Max.	Varies	Varies	--	Varies	--	Varies	Varies	--	--	--	--	--
							Target	--	--	--	--	--	--	--	--	--	--	--	--
							Min.	--	Varies	--	--	--	--	Varies	--	--	--	--	--
Project	Location	Location Ea	Location Northing	Sample Refe	Sample Date	Sample Time	Comments	mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l	mg/l	Degrees C	Descriptive	Descriptive	mg/l
Caherciveen	Sw1	50364.7	78554.9	2014/0346	29-Jan-14	14:08		0.03	6.9	1.1	163	13	45.7	11.3	< 1	7.6			
Caherciveen	Sw1	50364.7	78554.9	2014/1305	01-Apr-14	15:10		0.09	6.9	< 1	160	20	42.2	10.4	< 1	9.8	Clear	N/D	

				Parameter	Odour	Temperature	pH	Conductivity	B.O.D.	C.O.D.	Ammonia	Chloride	Dissolved Oxygen	Suspended Solids	Visual Inspection
				Reported Name											
SAMPLING POINT	Sampling Point	Sampled Date	Sampled Time												
CAHERCIVEEN_SW1	Caherciveen Sw1	23-Jul-14	14:05		Normal	20.1	7.3	132	<1.0	61	0.06	30.7	7.6	3	Clear/ Brown
	Caherciveen Sw1	23-Jul-14	14:05		Normal	18.1	7.0	125	<1.0	63	0.11	28.3	7.7	2	Clear/Brown
	Caherciveen Sw1	05-Nov-14	13:45		Not Detected	10.0	6.4	130	<1.0	50	0.05	33.1	10.4	2	clear
	Caherciveen Sw1	05-Nov-14	13:48		Not Detected	10.0	7.0	141	<1.0	41	0.02	33.6	10.5	2	clear
	Caherciveen Sw1	28-Jan-15	13:13		Not Detected	7.0	6.9	137	1.1	15	0.10	36.4	11.4	4	Clear

SW3

	Parameter	Ammonium	pH	BOD (5day)	Conductivity @ 20 oC	Chemical Oxygen Demand	Chloride	Dissolved Oxygen	Suspended Solids	Temperature	Appearance	Odour	Oils/Fats & Grease
		NH4	Physchem	O2	Physchem	O2	Cl	O2	Physchem	Physchem		Physchem	OFG
	Max.	Varies	Varies	--	Varies	--	Varies	Varies	--	--	--	--	--
	Target	--	--	--	--	--	--	--	--	--	--	--	--
	Min.	--	Varies	--	--	--	--	Varies	--	--	--	--	--
Project	Location	Location Ea	Location Northing	Sample Refe	Sample Date	Sample Time	Comments	mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l	mg/l	Degrees C	Descriptive	Descriptive	mg/l
Caherciveen	SW3	50057.4	78929.6	2014/0347	29-Jan-14	13:36		0.06	6.9	1	236	19	64.4	11.1	3	7.7			
Caherciveen	SW3	50057.4	78929.6	2014/1306	01-Apr-14	14:50		0.04	7.2	< 1	276	24	71.8	10.6	15	9.1	Clear	N/D	

				Parameter	Odour	Temperature	pH	Conductivity	B.O.D.	C.O.D.	Ammonia	Chloride	Dissolved Oxygen	Suspended Solids	Visual Inspection
				Reported Name											
				Units	*NONE*	*DEG_C*	*PH*	*USCM*	*BOD*	*MGL*	*MGLN*	*MGL*	*MGL*	*MGL*	*NONE*
SAMPLING POINT	Sampling Point	Sampled Date	Sampled Time												
CAHERCIVEEN_SW3	Caherciveen SW3	23-Jul-14	13:25		Normal	18.5	7.3	171	4.1	70	0.10	37.4	7.6	68	Clear/ Brown
	Caherciveen SW3	05-Nov-14	12:40		Not Detected	11.4	6.7	252	<1.0	45	<0.02	60.5	9.9	2	clear
	Caherciveen SW3	28-Jan-15	13:51		Not Detected	7.1	6.9	221	<1.0	23	0.05	53.7	11.0	<1	Clear

SW4

	Parameter	Ammonium	pH	BOD (5day)	Conductivity @ 20 oC	Chemical Oxygen Demand	Chloride	Dissolved Oxygen	Suspended Solids	Temperature	Appearance	Odour	Oils/Fats & Grease
		NH4	Physchem	O2	Physchem	O2	Cl	O2	Physchem	Physchem		Physchem	OFG
	Max.	Varies	Varies	--	Varies	--	Varies	Varies	--	--	--	--	--
	Target	--	--	--	--	--	--	--	--	--	--	--	--
	Min.	--	Varies	--	--	--	--	Varies	--	--	--	--	--
Project	Location	Location Ea	Location Northing	Sample Refe	Sample Date	Sample Time	Comments	mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l	mg/l	Degrees C	Descriptive	Descriptive	mg/l
Caherciveen	Sw4	50061.3	78733.3	2014/0348	29-Jan-14	13:25		0.03	5.5	< 1	271	27	79.7	8.8	3	7.2			
Caherciveen	Sw4	50061.3	78733.3	2014/1307	01-Apr-14	14:20		0.19	5.2	< 1	244	40	65.1	8.1	3	10.6	Clear	N/D	

				Parameter	Odour	Temperature	pH	Conductivity	B.O.D.	C.O.D.	Ammonia	Chloride	Dissolved Oxygen	Suspended Solids	Visual Inspection
				Reported Name											
				Units	*NONE*	*DEG_C*	*PH*	*USCM*	*BOD*	*MGL*	*MGLN*	*MGL*	*MGL*	*MGL*	*NONE*
SAMPLING POINT	Sampling Point	Sampled Date	Sampled Time												
CAHERCIVEEN_SW4	Caherciveen Sw4	23-Jul-14	13:15		Normal	18.4	6.3	140	2.7	94	0.18	33.2	6.2	81	sediment present
	Caherciveen Sw4	05-Nov-14	13:08		Not Detected	10.5	5.9	192	<1.0	50	<0.02	42.2	7.8	18	clear
	Caherciveen Sw4	28-Jan-15	13:36		Not Detected	7.1	5.9	191	<1.0	21	<0.02	45.2	8.6	6	Clear

SW5

	Parameter	Ammonium	pH	BOD (5day)	Conductivity @ 20 oC	Chemical Oxygen Demand	Chloride	Dissolved Oxygen	Suspended Solids	Temperature	Appearance	Odour	Oils/Fats & Grease
		NH4	Physchem	O2	Physchem	O2	Cl	O2	Physchem	Physchem		Physchem	OFG
	Max.	Varies	Varies	--	Varies	--	Varies	Varies	--	--	--	--	--
	Target	--	--	--	--	--	--	--	--	--	--	--	--
	Min.	--	Varies	--	--	--	--	Varies	--	--	--	--	--
Project	Location	Location Ea	Location Northing	Sample Refe	Sample Date	Sample Time	Comments	mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l	mg/l	Degrees C	Descriptive	Descriptive	mg/l
Caherciveen	Sw5	50054.6	79046.1	2014/0349	29-Jan-14	13:43		8.33	6.6	1.3	357	21	63.1	9.9	7	7.6			
Caherciveen	Sw5	50054.6	79046.1	2014/1308	01-Apr-14	14:36		0.04	***4.8***	1	138	71	37.8	8.3	11	10.2	Clear	N/D	

				Parameter	Odour	Temperature	pH	Conductivity	B.O.D.	C.O.D.	Ammonia	Chloride	Dissolved Oxygen	Suspended Solids	Visual Inspection
				Reported Name											
				Units	*NONE*	*DEG_C*	*PH*	*USCM*	*BOD*	*MGL*	*MGLN*	*MGL*	*MGL*	*MGL*	*NONE*
SAMPLING POINT	Sampling Point	Sampled Date	Sampled Time												
CAHERCIVEEN_SW5	Caherciveen Sw5	23-Jul-14	13:35		Normal	18.7	7.0	692	2.5	42	20.89	51.3	5.9	15	Clear
	Caherciveen Sw5	05-Nov-14	12:55		Not Detected	10.5	6.5	249	<1.0	47	0.24	58.2	9.5	2	clear
	Caherciveen Sw5	28-Jan-15	14:01		Not Detected	6.9	6.5	248	1.0	24	1.44	54.3	10.8	2	Clear
	Caherciveen Sw5	28-Jan-15	14:01		Not Detected	6.9	6.8	253	1.1	26	1.50	52.8	10.8	5	Clear

SE1

							Parameter	Ammonium	pH	BOD (5day)	Conductivity @ 20 oC	Chemical Oxygen Demand	Chloride	Dissolved Oxygen	Suspended Solids	Temperature	Appearance	Odour	Oils/Fats & Grease
								NH4	Physchem	O2	Physchem	O2	Cl	O2	Physchem	Physchem		Physchem	OFG
							Max.	Varies	Varies	--	Varies	--	Varies	Varies	--	--	--	--	--
							Target	--	--	--	--	--	--	--	--	--	--	--	--
							Min.	--	Varies	--	--	--	--	Varies	--	--	--	--	--
	Project	Location	Location Ei	Location Northing	Sample Refe	Sample Date	Sample Time	Comments	mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l	Degrees C	Descriptive	Descriptive	mg/l
	Caherciveen	Se1	50105	78767	2014/0496	13-Feb-14	12:08	Foul water.	1.24	6.7	8.9	611	338		220	6.1	Brown/solids	ND	< 0.5
	Caherciveen	Se1	50105	78767	2014/2156	03-Jun-14	15:23		6.5	7.4	32	769	617		289	12		Slight sludge odour	

Invertebrate Monitoring Report : Carhan Stream

SSRS and Q index Monitoring of Carhan stream 19 July 2010

A request was made by the Environment Department to check if old landfill activities at Cahersiveen Transfer Station were having an effect on the River Carhan. It was decided that biological sampling was the only method which would give a full picture of the water quality in the area.

The Biological Quality Rating System for Rivers (Q ratings) as outlined by the Environmental Protection Agency (EPA) is carried out on rivers. The rating system goes from Q1 to Q5 where a Q5 denotes a pristine river and Q1 indicates serious pollution. This system is based on the differing tolerances of invertebrates to pollution. Three-minute kick samples are carried out at each station accompanied by stone examinations and weed sweeps which are generally done from May to September. It is important to note there are different classifications for depositing and eroding substrates.

First of all an SSRS study was carried out on the tributaries upstream of the transfer station as they are too small for Biological Quality Rating System described above. One of the tributaries was also sampled downstream of the transfer station. The Small Streams Risk Score (SSRS) is a relatively new biological risk assessment system for detecting potential sources of pollution in rivers and is usually carried out on first and second order streams from October to April. It was developed by the Environmental Protection Agency (EPA) in association with Western River Basin District (WRBD). The SSRS is of particular value in detecting hard to find diffuse sources of pollution within catchments. The basic principle of the SSRS is similar, i.e. that aquatic insects and other invertebrates living in streams have varying sensitivities to pollution and therefore, can be used as continuous monitors of water quality. This method was devised to describe the status of a stream with the score indicating the probability of risk as follows:

SSRS Scores: >8 Probably not at risk
6.5-8 Probably at risk
<6.5 At risk

A further explanation of the SSRS tool will help in understanding the results. It is divided into 5 groups of invertebrates, the mayflies, stoneflies, caseless and cased caddis flies, the GOLD species which consist of snails and worms and Asellus. It is important to note that the SSRS tool has been statistically designed to give more weight greater abundance of the pollution sensitive groups (i.e. mayflies and stoneflies). On the other hand the converse is true for the GOLD species and Asellus, which are more tolerant to pollution.

The SSRS tool was carried out on three tributaries while a Q rating was done on the main river upstream and downstream of the transfer station. One of the tributaries north (downstream) of the footbridge was unsuitable for sampling. All sites sampled are shown in the map at the end of the report. A results table shows results obtained at all these sites and corresponding biological ratings also. An adjoining file shows the species identified and other information for both the SSRS sites and the Q rating sites. Three of the four SSRS sites scored well indicating they are 'probably not at risk'. However, the Gurteen stream upstream of the transfer station only scored 6.4 deeming it 'at risk'. It should be noted that this stream flowed through bog which may be a factor.

It had recovered downstream gaining a score of 9.6. The main difference in the two sites was the absence of mayflies and the abundance of the GOLD group which were plentiful upstream.

The Q rating upstream of the transfer station was Q3 - 4. This site at the Footbridge E of Inchimacteige is also sampled by the EPA. In 2007 they obtained a Q rating of 3-4 also. However, when previously done in 2004 it scored a Q4 so there has been some deterioration over the last few years. It is difficult to see where the source of the problem is as the tributaries upstream all had good SSRS scores.

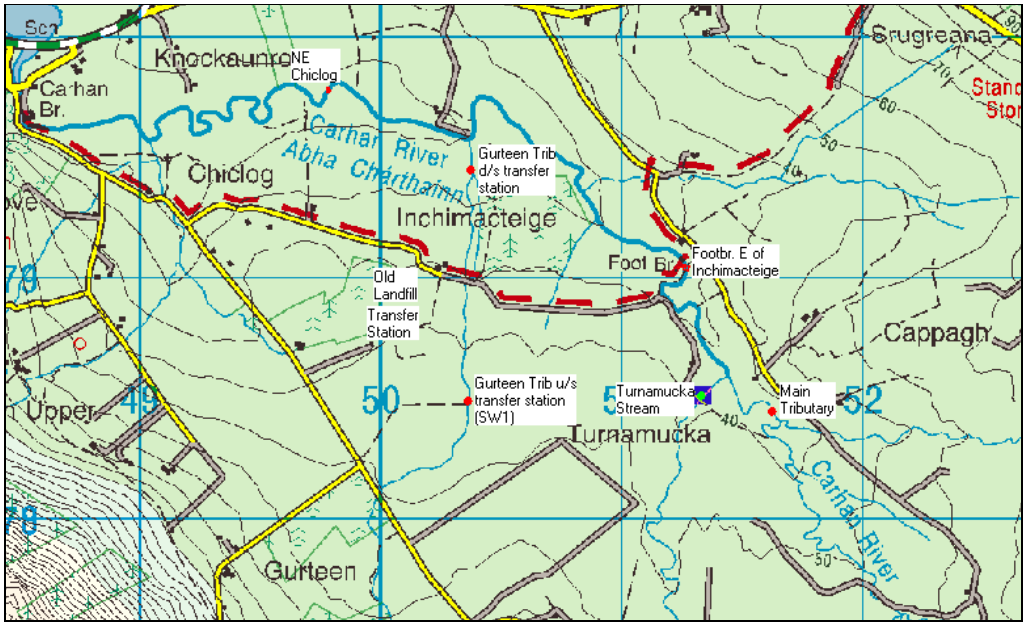
The Q rating downstream was carried out northeast of Chiclog where access was gained at the end of a track. The river had improved here scoring a Q4.

It would appear that any old landfill activities or the transfer station itself are not causing any deterioration in the river.

			Parameter	Ammonium	Colour	Conductivity	MRP	TON	D.O.	D.O.	Temp	pH	SSRS	Q Rating
				NH4	Hz	at 20 degC	P	NO3	O2	% sat			Score	
			Max.	--	20	--	0.03	--	15	150	--	9	--	
			Target	--	--	--	--	--	--	--	--	--	--	
			Min.	--	--	--	--	--	5	50	--	6	6.5	
Location	Lab Ref	Date	Time	mg/l	Hazen	µS/cm	mg/l	mg/l	mg/l	% O2	DegC	pH units	Score	Rating
Carhan River (Main tributary)	2010/0354	27.1.10	12:30	< 0.02	57	85	< 0.005	1.09	12.5	95	5.1	7	9.6	
Turnamucka Tributary	2010/0353	27.1.10	11:15	< 0.02	79	89	< 0.005	0.67	13.1	100	5	6.9	8.8	
Gurteen Tributary (SW1) u/s Transfer St.	2010/1490	8.4.10	11:07	< 0.02	91	92	< 0.005	0.97	11.5	96	8.1	6.6	6.4	
Gurteen Tributary d/s Transfer Station	2010/1491	8.4.10	14:25	< 0.02	94	98	0.008	1	11.3	101	10.7	6.6	9.6	
End of path NE Chiclog Foot-bridge	2010/2643	16.6.10	14:00	< 0.02	64	204	< 0.005	0.35	10	107	16.2	7.4		4
East Of Inchimacteige	2010/2642	16.6.10	10:50	< 0.02	72	113	< 0.005	0.6	11	109	15.6	7.3		3.5

Chemical Results & Biological Scores

Map of Sampling Points



Appendix III - Landfill Gas Summary

Caherciveen 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	L1a	6.8	2.5	20.1	1008	15
13/5/09	L1a	5.4	3.3	21.4	1010	16
3/12/09	L1a	6.9	3.4	20.9	1005	8
20/4/10	L1a	1.0	0.3	20.1	1017	15
20/7/11	L1a	0.1	0.0	20.8	1011	14
1/11/11	L1a	0.4	0.2	20.5	997	12
17/07/12	L1a	0.8	0.4	19.6	1017	17

Appendix IV – <u>Results of Dust Monitoring</u>

southern scientific services ltd.

22 OCT 2014

OUR REF: RP 2014 | KERRY COUNTY COUNCIL – CAHERCIVEEN | 001 PAGE 01 | 01

ANALYSIS REPORT

CUSTOMER:	**KERRY COUNTY COUNCIL**	**SAMPLE TYPE:**	**DUST**
ADDRESS:	Environment Section, Main Street, Tralee, County Kerry	**CONDITION OF SAMPLE ON RECEIPT:**	Satisfactory
		DATE SAMPLED:	26 August – 26 September 2014
REPORT TO:	**TARA MC CARTHY**	**DATE RECEIVED:**	29 September 2014
SAMPLED BY:	John Mannix	**DATE ANALYSED:**	08 – 10 October 2014
SAMPLING PT:	**CAHERCIVEEN TRANSFER STATION**	**DATE REPORTED:**	14 October 2014
ORDER NO:		**WORK NO.:**	**31340 C | 12P-101 |**

TABLE OF RESULTS

METHOD:	LAB REF:	YOUR REF:	TOTAL PARTICULATES $mg/m^2/day$	INORGANIC PARTICULATES $mg/m^2/day$
SCP 039	C14-Oct 669	Station 1	**95**	**16**
SCP 039	C14-Oct 670	Station 2	**173**	**85**

Jennifer Keane

Jennifer Keane
Chemistry Laboratory Manager

- **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)
dunrine | killarney | county kerry | ireland | telephone +353 (0)64 6633922 | fax +353 (0)64 6639022
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 – <u>Results of Noise Monitoring</u>

Malachy Walsh and Partners
Engineering and Environmental Consultants

Noise Survey 2014

Caherciveen Waste Transfer Station

ISSUE FORM	
Project number	16490
Document number	6001
Document revision	A
Document title	Noise Survey
Document status	Draft
Document prepared by	Peter Barry
Document checked by	MR (MWP) / 2015-02-16

Table of contents

List of appendices

1 INTRODUCTION

Kerry County Council operates a waste transfer station in Inchamacteige, near Caherciveen. The facility operates within the conditions set out in the waster licence register number W087-01. Under the terms of this licence the facility is required to carry out an annual environmental noise survey. The results of this survey are described below.

2 METHODOLOGY

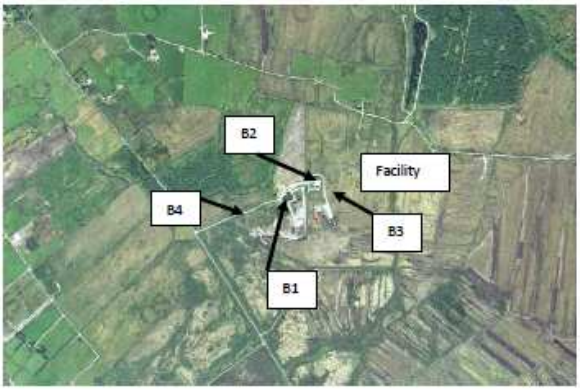
2.1 MONITORING PERIODS

The survey was carried out in accordance with the EPA guidance document, EPA guidance note 4- Guidance Note for Noise: Licence Applications, Surveys and Assessments in relation to Scheduled Activities. In accordance with the guidance note the noise surveys were carried out over three monitoring periods during the normal daytime operating times. Monitoring was undertaken for 30 minutes at each location. Noise monitoring was undertaken by Peter Barry (AMIOA) of Malachy Walsh and Partners on the 11th February 2015.

2.2 MONITORING LOCATIONS

Monitoring was undertaken at locations B1, B2, B3 and B4. The locations are shown on Figure 1.

Figure1: NOISE MONITORING LOCATIONS



2.2.1 Photographs of Noise Monitoring Locations

Location B1	Location B2
	
Location B3	**Location B4**
	

2.3 SURVEY EQUIPMENT

The measurements were made using a Bruel & Kjaer type 2250 Light and a Larson Davis 820 Logging integrating Sound Level Meter. These are Type 1 instruments in accordance with IEC 651 regulations. The Time Weighting used was Fast and the Frequency Weighting was A-weighted as per IEC 651. The sound level meters (SLM) were mounted on a tripod at 1.5m above ground level and at least 2m away from any sound reflecting objects. A windshield was placed on the microphone to reduce any wind interference during measurements.

Factory calibration certificates for the noise level meter and acoustic calibrator, detailing equipment serial numbers, calibration traceability and re-calibration dates are attached as Appendix A.

2.4 MEASUREMENT PARAMETERS

In order to be able to interpret the noise levels correctly several parameters were measured. These include the;

- L_{Aeq} Time-averaged A weighted noise level.
- L_{A90} Noise level exceeded for 90 % of measurement period (steady underlying noise level).
- L_{A10} Noise level exceeded for 10 % of measurement period.

A subjective analysis for the presence of tones and impulsive noise was also undertaken at each location.

2.5 METEOROLOGICAL CONDITIONS

Meteorological conditions were noted as dry, cool with light winds not exceeding 5 meters per second (ms^{-1}) at any time during the surveys. It is recommended that outdoor noise monitoring is not undertaken in adverse weather conditions as the wind or rain can elevate the readings. Ideally there should be no rain and wind speeds should generally not exceed 5 ms^{-1}.

3 NOISE SOURCES

The main noise sources at this facility include:

- A tipping shed where costumers tip rubbish from cars and trailers. The rubbish is deposited into a compaction area and is compacted and a container filled for removal off site. This tipping shed has a motor which operates the compactor. The tipping shed is not in continuous operation, rather infrequently as needed.
- Customers vehicles entering and existing the facility
- Customers using the various recycling and waste skips and areas.

4 RESULTS

Table 1. Noise Monitoring Results

Location Reference	Date and Time	L_{Aeq} dB	L_{A10} dB	L_{A90} dB	Tones	Description of Noise Sources
B1 (at main gate)	13:00-13:30	42	43	21	No	The main contributing noise source at this location included cars and traffic entering and exiting the facility. Birdsong also contributed to the noise build up. No tones were audible at this location
	13:30-14:00	40	40	20		
	14:00-14:30	40	44	22		
B2 (at weighbridge)	10:30-11:00	38	40	20	No	Customers and idling cars were the main contributing noise source at this location. No audible tones noted.
	11:00-11:30	40	42	21		
	11:30-12:00	38	40	20		
B3 (boundary location)	10:30-11:00	39	33	24	No	Occasional customer. Birdsong. No audible tones noted.
	11:00-11:30	36	35	25		
	11:30-12:00	34	35	24		
B4 (access road to facility)	13:00-13:30	51	38	23	No	No notable noise emissions from the facility. Cars passing the monitoring location were the main contributing noise sources to the ambient noise level. No audible tones noted.
	13:30-14:00	52	36	22		
	14:00-14:30	57	42	23		

5 CONCLUSION

In conclusion the Caherciveen waste transfer station was not a significant contributor to the ambient noise environment in the area.

The main sources of noise included the tipping shed and customers entering and exiting the facility and using the various waste and recycling areas. The tipping shed is not in continuous operation, only for short periods at infrequent intervals throughout the day. The facility only operates three days a week.

There were no steady or continuous noise emissions from the facility. The facility does not constitute a nuisance for the nearest noise sensitive receptors.

The ambient noise level (LAeq) did not exceed the licence conditions at any location, bar one location, N4 LAeq 57 dB, however this was attributable to traffic, cars, jeeps and tractors, passing the measurement location, and is representative of any rural roadside location.

The measured L_{A90} or background noise levels, which excludes noise from traffic and aircraft, were well below the 55 dB(A) noise limit, ranging between L_{90} 22dB(A) to 25dB(A), reflecting the quiet and rural nature of the location.

No distinctly audible tones were noted at any location. At the boundary locations there were occasional impact noises from waste material being dropped into skips and bins, however this impulsive noise would not cause disturbance or annoyance at any off site location and does not warrant a penalty.

Caherciveen Waste Transfer Station is operating within the waste licence noise emission criteria.

Appendix 1

Calibration Certificates

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2014-189699

Instrument Model PRM828, Serial Number 2952, was calibrated on 16 Apr 2014. The instrument meets factory specifications per Procedure D0001.8135.

New Instrument
Date Calibrated: 16 Apr 2014
Calibration due:

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY NO.
Agilent Technologies	34401A	MY41044529	12 Months	4 Feb 2015	6396720
Larson Davis	LDSigGn/2209	0277 / 0109	12 Months	12 Mar 2015	2014-187602

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Temperature: 23 ° Centigrade

Relative Humidity: 50 %

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE) Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated to their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds the manufacturer's published specification unless noted.

The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrated unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibration interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the written approval of the issuer.

Signed: Ron Harris

Technician: Ron Harris

Provo Engineering and Manufacturing Center, 1681 West 820 North, Provo, Utah 84601
Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2008 Certified

PCB PIEZOTRONICS
A PCB GROUP COMPANY

Certificate of Calibration and Conformance

Certificate Number 2014-189710

Instrument Model 820, Serial Number 1915, was calibrated on 16 Apr 2014. The instrument meets factory specifications per Procedure D0001.8160, ANSI S1.4 1983, IEC 651-Type 1 1979, and IEC 804-Type 1 1985.

New Instrument
Date Calibrated: 16 Apr 2014
Calibration due:

Calibration Standards Used

MANUFACTURER	MODEL	SERIAL NUMBER	INTERVAL	CAL. DUE	TRACEABILITY
Larson Davis	LDSigGn/2209	0277 / 0109	12 Months	12 Mar 2015	2014-187602

Reference Standards are traceable to the National Institute of Standards and Technology (NIST)

Calibration Environmental Conditions

Temperature: 23 ° Centigrade

Relative Humidity: 50 %

Affirmations

This Certificate attests that this instrument has been calibrated under the stated conditions with Measurement and Test Equipment (M&TE Standards traceable to the U.S. National Institute of Standards and Technology (NIST). All of the Measurement Standards have been calibrated t their manufacturers' specified accuracy / uncertainty. Evidence of traceability and accuracy is on file at Provo Engineering & Manufacturing Center. An acceptable accuracy ratio between the Standard(s) and the item calibrated has been maintained. This instrument meets or exceeds th manufacturer's published specification unless noted.

The collective uncertainty of the Measurement Standard used does not exceed 25% of the applicable tolerance for each characteristic calibrate unless otherwise noted.

The results documented in this certificate relate only to the item(s) calibrated or tested. A one year calibration is recommended, however calibratio interval assignment and adjustment are the responsibility of the end user. This certificate may not be reproduced, except in full, without the writte approval of the issuer.

Tested with PRM828-2952

Signed: Ron Harris
Technician: Ron Harris

Page 1 of

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Toll Free: 888.258.3222 Telephone: 716.926.8243 Fax: 716.926.8215
ISO 9001-2008 Certified

NSAI
National Metrology Laboratory

Certificate of Calibration

Issued to	Calmet Limited 1E Three Rock Road Sandyford Industrial Estate Dublin 18
Attention of	Gerry Segrave

Certificate Number	E14202
Item Calibrated	Bruel & Kjaer Type 4231 Sound Level Calibrator
Serial Number	2665058
Client ID Number	--------
Order Number	71135
Date Received	10 Apr 2014
NML Procedure Number	AP-NM-13
Method	The above calibrator was allowed to stabilize for a suitable period in laboratory conditions. It was then calibrated by measuring the sound pressure level generated in its measuring cavity (half-inch configuration). The calibrator's operating frequency was also measured.
Calibration Standards	Norsonic 1504A Calibration System incorporating: Agilent 34401A Multimeter, No. 0736 [Cal due date: 10 Jul 2014] B & K 4134 Measuring Microphone, No. 0743 [Cal due date: 23 Jan 2015] B & K 4228 Pistonphone, No. 0740 [Cal due: 23 Jan 2015]

Calibrated by	Sam Boles	**Approved by**	Paul Hetherington
Date of Calibration	14 Apr 2014	**Date of Issue**	22 Apr 2014

CIPM MRA

This certificate is consistent with Calibration and Measurement Capabilities (CMC's) that are included in Appendix C of the Mutual Recognition Arrangement (MRA) drawn up by the International Committee for Weights and Measures. Under the MRA, all participating institutes recognize the validity of each other's calibration certificates and measurement reports for quantities, ranges and measurement uncertainties specified in Appendix C (for details see www.bipm.org)

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Glasnevin | Dublin 11 | Ireland T+ 353 1 808 2609 | F+353 1 808 2603 | NSAI.ie

NSAI
National Metrology Laboratory

Certificate of Calibration

Issued to	Malachy Walsh & Partners Reen Point Blennerville Tralee, Co Kerry
Attention of	Peter Barry

Certificate Number	**E13011B**
Item Calibrated	Bruel & Kjaer Type 2250 "Light"Sound Level Meter and 4950 Microphone
Serial Number	2654709 and 2657422 (microphone)
Client ID Number	---------
Order Number	MWP130108
Date Received	09 Jan 2013
NML Procedure Number	AP-NM-09
Method	The above sound level meter was allowed to stabilise for a suitable period in laboratory conditions. The verification checks performed are those outlined in BS7580:Pt 1 (1997), *Specification for the verification of sound level meters*. This British Standard specifies a procedure for the periodic verification of conformance of a sound level meter or integrating-averaging meter to IEC60651 (1994) and IEC60804 (2000), respectively. Prior to calibration the instrument was tested, and its overall sensitivity adjusted in accordance with Clause 5.4 of BS 7580. Pt 1 using its associated sound level calibrator.
Calibration Standards	Norsonic 1504A Calibration System Incorporating: SR DS360 Signal Generator, No. 0735, [Cal. Due Date: 17 Jul 2013] Agilent 34401A Digital Multimeter, No. 0736 [Cal Due Date: 11 Jul 2013] B&K 4134 Measuring Microphone, No. 0743 [Cal Due Date: 17 Apr 2014] B&K 4228 Pistonphone, No. 0740 [Cal. Due Date: 08 Aug 2014] B&K 4226 Acoustical Calibrator, No. 0150, [Cal. Due Date: 30 Oct 2013]

Calibrated by	Oliver Power	**Approved by**	Paul Hetherington
Date of Calibration	16 Jan 2013	**Date of Issue**	16 Jan 2013

CIPM MRA

This certificate is consistent with Calibration and Measurement Capabilities (CMC's) that are included in Appendix C of the Mutual Recognition Arrangement (MRA) drawn up by the International Committee for Weights and Measures. Under the MRA, all participating institutes recognize the validity of each other's calibration certificates and measurement reports for quantities, ranges and measurement uncertainties specified in Appendix C (for details see www.bipm.org)

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Appendix 2

Glossary of Noise Related Terms

Ambient Noise

Totally encompassing sound in a given situation at a given time usually composed of a sound from many sources near and far.

Background noise level

The A-weighted sound pressure level of the residual noise at the assessment position that is exceeded for 90% of a given time interval, T measured using time weighting F, and quoted to the nearest whole number of decibels.

EPA

Day:	Night:
0800 hrs to 2200 hrs	2200 hrs to 0800 hrs

Decibel (dB)

The unit of sound pressure level, calculated as a logarithm of the intensity of sound. 0 dB is the threshold of hearing, 140 dB is the threshold of pain. A change of 1 dB is detectable only under laboratory conditions. A change of 10 dB corresponds approximately to halving or doubling the loudness of sound.

dB(A)

Decibels measured on a sound level meter incorporating a frequency weighting (A weighting) which differentiates between sound of different frequency (pitch) in a similar way to the human ear. Measurements in dB(A) broadly agree with peoples assessment of loudness.

Hertz (Hz)

Unit of frequency (pitch) of a sound

Impulsive Noise

A noise which is of short duration (typically less than one second), the sound pressure level of which is significantly higher than the background

1/3 Octave band analysis

Frequency analysis of sound such that the frequency spectrum is sub divided into bands of one third of an octave each. An octave is taken to be the frequency interval, the upper limit of which is twice the lower limit (in Hertz).

LAeq

Equivalent Continuous A-weighted Sound Level. The continuous steady noise level, which would have the same total A-weighted acoustic energy as the real fluctuating noise measured over the same period of time.

$L(A)_{10}$

The noise level that is equaled or exceeded for 10% of the measurement period

$L(A)_{90}$

The noise level that is equaled or exceeded for 90% of the measurement period

Noise

Unwanted sound. Any sound which has the potential to cause disturbance, discomfort or psychological stress to a subject exposed to it, or any sound which has the potential to cause actual physiological harm to a subject exposed to it or physical damage to any structure exposed to it, is known as noise

Noise Sensitive Receptor

A noise sensitive receptor is regarded as any dwelling house, hotel or hostel, health building, educational establishment, places of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels

Rating level L_{ArTr}

The specific noise level plus any adjustment for the characteristic features of the noise

Residual Noise

The ambient noise remaining at a given position in a given situation when the specific noise source is suppressed to a degree such that it does not contribute to the ambient noise

Sound Power

The energy output from a source. It is measured in Watts (W)

Specific Noise Source

The noise source under investigation for assessing the likelihood of complaints

Tone

A noise with a narrow frequency composition.

Appendix VI - AER/PRTR Return 2014

Environmental Protection Agency

| PRTR# : W0087 | Facility Name : Caherciveen Transfer Station | Filename : W0087_2014.xls | Return Year : 2014 |

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.18

REFERENCE YEAR	2014

1. FACILITY IDENTIFICATION

Parent Company Name	Kerry County Council
Facility Name	Caherciveen Transfer Station
PRTR Identification Number	W0087
Licence Number	W0087-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Inchamacteige
Address 2	Caherciveen
Address 3	
Address 4	
	Kerry
Country	Ireland
Coordinates of Location	-10.182 51.9418
River Basin District	IESW
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Tara O'Carroll
AER Returns Contact Email Address	tara.ocarroll@kerrycoco.ie
AER Returns Contact Position	Assistant Engineer
AER Returns Contact Telephone Number	0667162000
AER Returns Contact Mobile Phone Number	0879129535
AER Returns Contact Fax Number	0667162001
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	1706
Number of Employees	1
User Feedback/Comments	Comparison to 2013 return 13 07 03 nothing to report 15 01 01 +9.44t 15 01 02 +5.86t
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?	
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) ?	

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : W0087 | Facility Name : Caherciveen Transfer Station | Filename : W0087_2014.xls | Return Year : 2014 | 19/02/2015 13:59

Please enter all quantities on this sheet in Tonnes

22

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	20 03 01	No	270.32	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	North Kerry Landfill,W001-04	Muingnaminnane,,,Tralee,County Kerry,Ireland		
Within the Country	20 03 01	No	2.34	mixed municipal waste	R12	M	Weighed	Offsite in Ireland	Dillon Waste Ltd,WFP-KY-10-001	The Kerries ,,,Tralee,County Kerry,Ireland		
Within the Country	20 03 01	No	272.32	mixed municipal waste	R3	M	Weighed	Offsite in Ireland	Killarney waste Disposal,W0217-01	Aughacureen,,,Killarney ,County Kerry,Ireland		
Within the Country	15 01 06	No	15.02	mixed packaging	R3	M	Weighed	Offsite in Ireland	Killarney waste Disposal,W0217-01	Aughacureen,,,Killarney ,County Kerry,Ireland		
Within the Country	15 01 01	No	5.26	paper and cardboard packaging	R3	M	Weighed	Offsite in Ireland	Greenstar,WFP-CK-10-0047-02	Sarsfield Court Industrial Estate,,,Glanmire,County Cork,Ireland		
Within the Country	15 01 01	No	18.1	paper and cardboard packaging	R3	M	Weighed	Offsite in Ireland	Dillon Waste Ltd,WFP-KY-10-001	The Kerries ,,,Tralee,County Kerry,Ireland		
Within the Country	20 01 01	No	50.82	paper and cardboard	R3	M	Weighed	Offsite in Ireland	Dillon Waste Ltd,WFP-KY-10-001	The Kerries ,,,Tralee,County Kerry,Ireland		
Within the Country	15 01 07	No	33.672	glass packaging	R5	M	Weighed	Offsite in Ireland	Dillon Waste Ltd,WFP-KY-10-001	The Kerries ,,,Tralee,County Kerry,Ireland		
Within the Country	15 01 04	No	5.111	metallic packaging	R4	M	Weighed	Offsite in Ireland	Dillon Waste Ltd,WFP-KY-10-001	The Kerries ,,,Tralee,County Kerry,Ireland		
Within the Country	20 01 40	No	27.98	metals	R4	M	Weighed	Offsite in Ireland	United Metals,WFP-LK-2013-147A-R1	East Way Business pk,Ballysimon Road,Limerick,,,Ireland		
Within the Country	15 01 02	No	21.58	plastic packaging	R3	M	Weighed	Offsite in Ireland	Dillon Waste Ltd,WFP-KY-10-001	The Kerries ,,,Tralee,County Kerry,Ireland		
Within the Country	20 01 11	No	1.32	textiles	R3	M	Weighed	Offsite in Ireland	Textile Recycling,WPR 014/2	Belgard Road,Tallaght,Dublin,24,Ireland		
Within the Country	20 01 34	No	1.22	batteries and accumulators other than those mentioned in 20 01 33	R4	M	Weighed	Offsite in Ireland	Enva,W0184-1	Clonminam Industrial Estate,,,Portlaoise,County Laois,Ireland		
Within the Country	13 02 08	Yes	1.15	other engine, gear and lubricating oils	R1	M	Weighed	Offsite in Ireland	Enva,W0184-1	Clonminam Industrial Estate,,,Portlaoise,County Laois,Ireland	ENVA Ireland,W0184-01,Clonmamin,Portlaoise,Co Laois,,,Ireland	Clonmamin,Portlaoise,Co Laois,,,Ireland
Within the Country	20 01 25	No	0.16	edible oil and fat	R1	M	Weighed	Offsite in Ireland	Eco Fuels Ltd,WFP/KY/11/005-01	Fossa,Killarney,Kerry,,,Ireland		
To Other Countries	20 01 21	Yes	0.409	fluorescent tubes and other mercury-containing waste	R5	M	Weighed	Abroad	KMK Metals,W0113-01	Cappincur Industrial estate,,,Tullamore,County Offaly,Ireland	Alba Serviooe GmbH & Co KG,E57757020,Kanalstrasse 64,,,Rheine,48432,Germany	Kanalstrasse 64,,,Rheine,48432,Germany
Within the Country	20 01 35	Yes	12.858	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and and 20 01 23 containing hazardous components	R4	M	Weighed	Offsite in Ireland	Electrical Waste Management,WFP-DS-11-0014-04	Block 648,Jordanstown Drive,Greenogue Ind Estate,Dublin,Ireland	The Recycling Village,WFP/MH/11/0005/01, Unit 21 Duleek Business Park,Commons,Duleek,County Meath,Ireland	Unit 21 Duleek Business Park,Commons,Duleek,County Meath,Ireland
To Other Countries	**20 01 35**	**Yes**	18.31	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and and 20 01 23 containing hazardous components	R4	M	Weighed	Abroad	Electrical Waste Management,WFP-DS-11-0014-04	Block 648,Jordanstown Drive,Greenogue Ind Estate,Dublin,Ireland	European Metal Recycling,WML 101767,Alexander Dock 1,Bootle,Liverpool,L201BX,United Kingdom	Alexander Dock 1,Bootle,Liverpool,L201BX,United Kingdom
To Other Countries	16 02 14	No	15.09	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighed	Abroad	Electrical Waste Management,WFP-DS-11-0014-04	Block 648,Jordanstown Drive,Greenogue Ind Estate,Dublin,Ireland	European Metal Recycling,WML 101767,Alexander Dock 1,Bootle,Liverpool,L201BX,United Kingdom	Alexander Dock 1,Bootle,Liverpool,L201BX,United Kingdom
To Other Countries	16 02 11	Yes	10.248	discarded equipment containing chlorofluorocarbons, HCFC, HFC	R4	M	Weighed	Abroad	Electrical Waste Management,WFP-DS-11-0014-04	Block 648,Jordanstown Drive,Greenogue Ind Estate,Dublin,Ireland	European Metal Recycling,WML 101767,Alexander Dock 1,Bootle,Liverpool,L201BX,United Kingdom	Alexander Dock 1,Bootle,Liverpool,L201BX,United Kingdom