Kerry County Council

Waste Licence Ref No. W0086-01

REPORT TITLE

Kenmare Transfer Station
Annual Environmental Report

Reporting Period:

January – December 2013

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

March 2014

1.0 Introduction

Kerry County Council operates a waste transfer and recycling facility located in the townland of Claddanure West, approximately 1 km off the main Killarney/Kenmare Road, approximately 4.7 km north west of the town of Kenmare, Co. Kerry. The site is located at the western end of the county road L782.

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 Muingnaminane, Tralee.

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 B of Waste Licence W0086-01 issued by the Environmental Protection Agency (EPA).

2.0 Reporting Period

The reporting period for this Annual Environmental Report is 1st January– 31st December 2013.

3.0 Waste Activities

Waste disposal activities carried out at Kenmare Transfer Station are in accordance with Part 1 of Waste Licence W0086-01 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 Kenmare Transfer Station are in accordance with Part 1 of Waste Licence W0086-01 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 2013

Waste tonnage disposed of at Kenmare Transfer Station during the reporting year (2013) decreased by 10% on the previous year (2012). This is primarily due to a reduction in the quantity of waste being disposed of by members of the public.

The weight of the waste accepted into Kenmare Transfer Station Facility for disposal for the reporting period was 816.80 Tonnes. This comprises of the following breakdown:

Waste Category/Source	*2012*	*2013*
Household Waste	689.16	608.50
Commercial Waste	196.62	187.02
Road Sweeping	4.5	0
Flytipping	13.86	21.28
Total	**904.14**	**816.80**

Table 1 Waste Stream Break down for reporting Period.

Appendix I Waste by classification and source.

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 Kenmare Transfer Station will continue to decrease in the next reporting period mainly due to the weak economic environment and the increasingly competitive waste industry.

6.0 Summary Report on Emissions for the Reporting Period

a) Foul Water Emissions

A Puraflow Wastewater Treatment Unit is installed at the facility to treat all foul waters from the site including discharges from the transfer station shed, compactor and bin loading area. Foul water is treated in the Puraflow unit and discharged to the surface water drains.

The foul water discharge is monitored quarterly. The results are sent to the EPA and are also available at the Kenmare facility.

b) Surface Water Emissions

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

7.0 Summary of Results and Interpretations of Environmental Monitoring

a) Dust monitoring

Dust Monitoring was carried out at the facility at Stations 1-5 in October/November 2012. The dust monitoring results for the reporting period were within the dust deposition limits specified in the waste licence. There were no issues with dust during 2012 and no complaints were received in relation to dust at the facility.

b) Noise monitoring.

An analysis of the results, combined with on site observations indicates that the Kenmare Waste Transfer Station is not a noise nuisance and complies with the noise limit criteria set out in the waste licence.

The main contributing noise sources off site at the nearest dwelling in particular were not associated with the waste transfer station.

c) Monitoring of surface water.

Impact was noted judging from Ammonia levels at SW1 and SW3.However it is more probable that impact at this point is from old landfill activities rather than Transfer station.

An investigation into impact on groundwater from closed landfills, including Kenmare, is also currently underway.

The closest EPA monitoring point downstream of here i.e. Salaheen Bridge on Finnihy has consistently shown a Q value of 4 (***up to 2009)***, i.e. water of good quality, unchanged from upstream point. However an invertebrate study by KCC staff in September 2012 has shown

deterioration at this site to ***Q 3*** i.e. moderately polluted. Further investigation indicates that source of pollution seems to be emanating from a small tributary which flows into Finnihy upstream of Salaheen. This tributary however is not in main catchment of landfill activities. Present indications seem to point to source as coming from a farm, which is at present been investigated.

As can be seen from results of discharge point from Transfer station an effluent of acceptable quality is indicated.

d) Foul Water

The foul water emissions results are attached in Appendix II. The results of samples from the foul water emissions show an effluent of acceptable quality during the reporting period.

e) Landfill gas

The levels of methane gas and carbon dioxide recorded have reduced significantly (2013 average **CH_4** – 0.3% v/v & **CO_2** – 0.1% v/v) compared to previous years. The landfill gas monitoring results are attached in Appendix III.

8.0 Resource and Energy Consumption Summary

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

8.1 Diesel

The diesel usage for Kenmare Transfer Station for the reporting period 2012 was 1,409 litres. The primary usage of diesel is for the rubber tyred excavator on site, waste compactor and the oil burner in the steam washer.

8.2 Electricity

The electricity usage for the facility during the reporting period was 3,491 kilowatt hours. 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. While water consumption is not metered during the reporting period. Water is mainly used on site for power washing yards, office toilets and sinks, transfer station apron/hopper and washing of trucks and bins when required.

9.0 Report on Development Works Undertaken during the Reporting Period

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

10.0 Timescale for Proposed Development Works For Forthcoming Year

No development works are proposed at the facility for 2014.

11.0 Report on Progress toward achieved of the 2013 Environmental Objectives and Targets and Environmental Objectives and Targets for 2014

Target Area	2013 - Objective	2013 - Achievement	2014 - Objective
Surface Water Emissions	Keep surface water emissions from the site with the licenced limits	Raised Faecal Cloiforms sampled in Jan 2013. Investigation into possible cause carried out. Regular inspection of water drains carried out. Regular inspection of bunds carried out. Quarterly monitoring of surface water monitoring points carried out	Ensure that any raised emissions are dealt with in a timely manner, cause identified and were possible and practicable eliminated. Formalise the inspection of water drains. Formalise the inspection of bunds. Forward quarterly monitoring to Agency within timescale in licence.
Litter on public access roads to facility	Reduce the waste from lost loads on access roads to facilities	Regular litter monitoring carried out by on site staff	Continue regular litter patrols.
Energy Resources	Reduce the quantity of diesel and electricity used on site	Maintained electricity consumption level on site. Reduced diesel consumption on site.	Continue to maintain electricity consumption level on site. Continue to maintain diesel consumption on site.
Waste Records	Introduce new computer system to record waste transactions.	System in place and database connection back to KCC HQ.	Maintain database.

12.0 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

13.0 Reported Incidents and Complaints

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

14.0 Report on Financial Provision

a) Statement of Costs for Waste Operations at Facility

Accelem	Accelem (T)		EURO
60030	Wages	€	26,333.79
60040	Salaries	€	4,919.83
60100	ER PRSI	€	4,726.92
60200	Overtime	€	9,968.41
60500	Annual Leave	€	2,280.55
60510	Bank Holiday Leave	€	939.05
60600	Travel/Subsistence	€	2,687.16
61990	Other Allowances	€	1,658.34
65500	Minor Contracts- Trade Services & other works	€	33,606.79
68500	Non-Capital Equip Purchase - Other	€	45.44
69000	Hire (Ext) - Plant/Transport/Machinery & Equipme	€	388.49
69200	Repairs & Maint - Plant	€	0.88
69250	Repairs & Maint -Computer Equip	€	-
69260	Repairs & Maint - Other Equip	€	285.00
69400	Transfers from Machinery Yard	€	2,496.00
69600	Other Vehicle Expenses	€	102.00
70000	Materials	-€	5.51
70985	Issue from Fuel Stores	€	40.86
70990	Issues from Stores	€	3,712.15
70991	Returns to Stores	-€	164.89
71000	Insurance	€	-
73400	Staff Travelling & Subsistence Expenses	€	367.13
75000	Computer Software and Maintenance Fees	€	765.00
76000	Communication Expenses	€	229.08
76100	Postage	€	20.00
77100	Courier	€	-
77200	Security - Property	€	264.00
78000	Training	€	-
79900	Consultancy/Professional Fees and Expenses	€	70.00
80000	Advertising	€	-
81000	Printing & Office Consumables	€	10.45
82100	Statutory Contributions to Other Bodies	€	7,403.20
86000	Energy	€	2,229.68
	Total Cost 2013	**€**	**105,379.80**

b) Statement of Costs for Recycling Operations at Facility

Accelem	Accelem (T)		EURO
60030	Wages	€	8,310.20
60100	ER PRSI	€	1,522.63
60200	Overtime	€	3,609.38
60500	Annual Leave	€	2,498.54
60510	Bank Holiday Leave	€	268.30
60600	Travel/Subsistence	€	836.31
61990	Other Allowances	€	306.27
65500	Minor Contracts- Trade Services & other wo	€	4,823.91
68500	Non-Capital Equip Purchase - Other	€	-
69200	Repairs & Maint - Plant	€	-
69250	Repairs & Maint -Computer Equip	€	-
70000	Materials	€	569.52
70990	Issues from Stores	€	-
73400	Staff Travelling & Subsistence Expenses	€	207.30
75000	Computer Software and Maintenance Fees	€	-
76000	Communication Expenses	€	78.90
77100	Courier	€	3.00
77200	Security - Property	€	66.00
78000	Training	€	-
79900	Consultancy/Professional Fees and Expenses	€	30.00
80000	Advertising	€	-
81000	Printing & Office Consumables	€	10.45
82100	Statutory Contributions to Other Bodies	€	3,172.76
86000	Energy	€	246.44
99050	Refunds	€	-
	Total Cost 2013	**€**	**26,559.91**

15.0 Management and Staffing Structure at Facility 2013

Kerry County Council

County Manager: Mr Tom Curran

Director of Services: Mr Oliver Ring

Senior Engineer Environmental Services:
Mr Tom Sheehy

Senior Executive Engineer &
Facility Engineer:
Mr John Ahern

Senior Executive Chemist:
Mr David Lenihan

Site Manager/
Weighbridge Operator:
Mr Pat o Shea

Relief Operatives:
Mr Denis Lenihan
Mr John Mannix

16.0 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 Collected at Kenmare Transfer Station and Recovered/Recycled offsite during reporting period

Kenmare Transfer Station Residual Waste - Tonnage Period 01/01/13 to 31/12/2013

							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 & Streetcleaning	Graveyard Waste	Clean Ups / F'tipping	Total Non levied	Total of Waste Over Weighbridge	Total Waste Out	No. Loads out of TS	Waste In @ NKL	No. Loads into NKL	Variance	Average Variance per Load
January 2013	**16.4**	**29.33**	**15.92**	**0**	**0.48**	**62.13**	**0**	**0**	**0.67**	**0.67**	**33.47**	**62.46**	**6**	**62.80**	**6**	**0.34**	**0.06**
January 2012	27.02	35.8	15.82	0	0	78.64	0	0	1.02	1.02	43.86	79.44	7	79.66	7	0.22	0.03
February 2013	**10.46**	**32.6**	**11.46**	**0**	**0.14**	**54.66**	**0**	**0**	**2.12**	**2.12**	**24.18**	**55.88**	**5**	**56.78**	**5**	**0.9**	**0.18**
February 2012	20.6	34.72	13	0	3.46	71.78	0	0	3.82	3.82	40.88	76.5	7	75.6	7	-0.9	-0.13
March 2013	**12.38**	**41.96**	**12.64**	**0**	**0.00**	**66.98**	**0**	**0**	**2.46**	**2.46**	**27.48**	**69.8**	**7**	**69.44**	**7**	**-0.36**	**-0.05**
March 2012	20.38	34.54	8.52	0	0	63.44	0.3	0	1.48	1.78	30.68	75.78	7	65.22	6	-10.56	-1.76
April 2013	**16.68**	**18.28**	**11.86**	**0**	**0**	**46.82**	**0**	**0**	**2.84**	**2.84**	**31.38**	**60.18**	**6**	**49.66**	**5**	**-10.52**	**-2.10**
April 2012	18.2	41.22	18.22	0	0	77.64	0	0	2.4	2.4	38.82	67.88	7	80.04	8	12.16	1.52
May 2013	**21.76**	**38.60**	**20.46**	**0**	**0**	**80.82**	**0**	**0**	**4.56**	**4.56**	**46.78**	**74.84**	**7**	**85.38**	**8**	**10.54**	**1.32**
May 2012	25.46	37.42	14.86	0	0.9	78.64	0	0	0.72	0.72	41.94	78.58	8	79.36	8	0.78	0.10
June 2013	**17.64**	**37.82**	**16.56**	**0**	**0**	**72.02**	**0**	**0**	**1.1**	**1.1**	**35.30**	**73.1**	**7**	**73.12**	**7**	**0.02**	**0.00**
June 2012	21.9	37.16	15.4	0	3.76	78.22	0	2.08	0.48	2.56	43.62	79.98	8	80.78	8	0.8	0.10
July 2013	**22.64**	**37.98**	**21.3**	**0**	**0.04**	**81.96**	**0**	**0**	**1.32**	**1.32**	**45.30**	**83.02**	**8**	**83.28**	**8**	**0.26**	**0.03**
July 2012	23.54	45.76	17.6	0	0.78	87.68	0	0	1.52	1.52	43.44	88.88	8	89.2	8	0.32	0.04
August 2013	**20.1**	**46.16**	**23.98**	**0**	**0**	**90.24**	**0**	**0**	**0.54**	**0.54**	**44.62**	**90.44**	**9**	**90.78**	**9**	**0.34**	**0.04**
August 2012	22.94	33.62	25.08	0	0	81.64	2.12	0	0.78	2.9	50.92	87.64	8	84.54	8	-3.1	-0.39
September 2013	**12.54**	**33.42**	**14.64**	**0.00**	**0**	**60.6**	**0**	**0**	**1.06**	**1.06**	**28.24**	**61.58**	**6**	**61.66**	**6**	**0.08**	**0.01**
September 2012	20.7	35.24	17.96	1.48	0.34	75.72	0	0	0.48	0.48	40.96	76.2	7	76.2	7	0	0.00
October 2013	**14.06**	**32.06**	**15.76**	**0**	**0**	**61.88**	**0**	**0**	**2.34**	**2.34**	**32.16**	**64.4**	**6**	**64.22**	**6**	**-0.18**	**-0.03**
October 2012	12.84	38.56	15.6	0.22	0	67.22	0	0	0.1	0.1	28.76	67.24	6	67.32	6	0.08	0.01
November 2013	**9.4**	**37.55**	**11.08**	**0**	**0**	**58.03**	**0**	**0**	**1.65**	**1.65**	**22.13**	**59.5**	**6**	**59.68**	**6**	**0.18**	**0.03**
November 2012	11.72	34.16	13.72	0	3.36	62.96	0	0	0.84	0.84	29.64	63.64	6	63.8	6	0.16	0.03
December 2013	**11.52**	**37.16**	**10.60**	**0.00**	**0.1**	**59.38**	**0**	**0.00**	**0.62**	**0.62**	**22.84**	**59.74**	**6**	**60.00**	**6**	**0.26**	**0.04**
December 2012	9.16	46.5	6.54	0	0	62.20	0	0	0.22	0.22	15.92	62.22	6	62.42	6	0.20	0.03
Total Tonnage 2013	**185.58**	**422.92**	**186.26**	**0.00**	**0.76**	**795.52**	**0.00**	**0.00**	**21.28**	**21.28**	**393.88**	**814.94**	**79**	**816.80**	**79**	**1.86**	
Total Tonnage 2012	**234.46**	**454.70**	**182.32**	**1.70**	**12.60**	**885.78**	**2.42**	**2.08**	**13.86**	**18.36**	**449.44**	**903.98**	**85**	**904.14**	**85**	**0.16**	
Grand Total								**21.28**			**Overall Average Variance Per Load**					**0.02**	

Household Waste Deposited at Kenmare Civic Amentity Sites in 2013

Material type	Suggested EWC codes	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Mixed residual waste	20 03 01													
Organic waste (food and garden)														
food (compost waste Milltown TS)	*20 01 08*													0.00
garden	*20 02 01*													
Mixed dry recyclables (Ecosence Bags)	15 01 06	0.58	0.58	0.34	0.76	0.44	0.80	0.76	0.94	0.52	1.02	0.64	0.26	7.64
Cardboard, newspaper and other paper														
cardboard packaging	*15 01 01*	0.00	0.00	3.24	0.00	0.00	1.70	3.48	1.78	1.32			0.74	12.26
cardboard non-packaging	*20 01 01*													
paper packaging	*15 01 01*													
paper non-packaging	*20 01 01*													
newspaper and magazines	*20 01 01*	7.92	5.24	4.96	8.38	6.04	7.16	5.18	9.08	4.92	9.02	6.20	5.18	79.28
Glass														
glass packaging (bottles)	*15 01 07*	5.61	3.94	3.36		15.38		7.58	5.38	4.64	3.83	4.30	5.32	59.34
glass non-packaging (flat glass)	*20 01 02*													
Metals														
aluminium cans (packaging)	*15 01 04*	0.15	0.09	0.09		0.43		0.18	0.16	0.11	0.13	0.14	0.17	1.66
steel cans (packaging)	*15 01 04*	0.60	0.41	0.39		1.66		0.70	0.48	0.39	0.47	0.48	0.72	6.29
other metals (scrap metals)	*20 01 40*	2.00	4.00	0.00	5.08	3.14	4.26	6.88	3.16	1.94	3.90	3.36	2.84	40.56
Plastic														
plastic packaging (bottles)	*15 01 02*	3.14	2.72	2.72	2.84	3.26	1.92	2.72	3.92	2.62	2.90	2.36	2.08	33.20
plastic non-packaging	*20 01 39*													
polystyrene														
Composite packaging (e.g. tetrapaks)	*15 01 05*													
Textiles														
textiles, packaging	15 01 09													
textiles, non-packaging (clothes)	20 01 11													0.00
Wood														
wood packaging	15 01 03													
wood non-packaging	20 01 38													
mixed, uncontaminated wood packaging and non-packaging (collected at An Daingean)	15 01 03; 20 01 38													
wood, treated, hazardous	20 01 37*													
Batteries	*Portable batteries*													
lead acid batteries and accumulators (Car Batteries)	16 06 01*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ni-Cd batteries and accumulators	16 06 02*	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.72	0.00	0.00	0.00	0.56	1.63
Other (e.g. alkaline) batteries and accumulators (Small Batteries)	16 06 04													0.00
														0.00
Household Hazardous Waste														0.00
Waste mineral oils	13 02 04	0.00	0.00	0.00	0.00	0.00	0.00	1.08						1.08
Oil filters (vehicles)	13 08 99													0.00
Oil containers (mineral oil) - plastic + metal	13 08 99													0.00
Waste cooking or vegetable oils	20 01 25													0.00
Waste paint and varnish (including containers)	20 01 27		0.18											0.18
Aerosols	14 06 01		0.04											0.04
WEEE collected by compliance schemes														
CRT	20 01 35	*2.62*	*0.00*	*2.25*	*2.42*	*3.01*	*1.35*	*1.49*	*1.77*	*2.29*	*0.56*	*1.40*	*2.68*	*21.83*
SDA - Small Domestic Appliances	20 01 36	*1.92*	*0.00*	*2.27*	*2.02*	*1.61*	*2.38*	*1.21*	*1.92*	*2.30*	*1.20*	*2.30*	*2.58*	*21.71*
LDA - Large Domestic Appliances	16 02 14	*3.00*	*0.00*	*3.48*	*2.80*	*0.00*	*3.70*	*2.34*	*0.42*	*5.31*	*1.05*	*2.00*	*2.69*	*26.79*
Cold	16 02 11	*1.36*	*0.00*	*1.29*	*1.03*	*0.00*	*1.74*	*0.31*	*0.26*	*1.76*	*0.91*	*0.00*	*1.30*	*9.96*
		8.90	***0.00***	***9.29***	***8.27***	***4.62***	***9.17***	***5.36***	***4.37***	***11.66***	***3.72***	***5.70***	***9.25***	***80.29***
														0.00
Household hazardous waste (medicines, pesticides etc.)														
Commercial Glass (Kenmare TS only)	15 01 07		0.90			1.10	0.00	1.08	0.00	0.98	0.00	0.86		4.92
Fluorscent Tubes	20 01 21	0.04			0.06					0.38	0.02			0.50
Sludge	<enter EWC code>													0.00
Foul Water Septic Tanks														0.00

Appendix II - Results of Foul and Surface Water Monitoring

App 2

Invertebrate Monitoring Report on Finnihy River Dec 20th, 2012

Introduction:

Due to on-going concerns of ammonium spikes at Kenmare Transfer Station surface water sites, biological monitoring was requested on the Finnihy River at Sahaleen Bridge. This was to determine the overall quality of the river downstream of the transfer station. The Finnihy was also sampled upstream at Geran Bridge and between Geran Bridge and Sahaleen Bridge at N of Reenacallee. A tributary which enters the river Finnihy upstream of Sahaleen was sampled at two points downstream of Kenmare Transfer Station (SE Reenacallee) and upstream of confluence. (See map for sample site locations.)

Biological Q Rating:

The samples were classified using the Biological Quality Rating System for Rivers (Q Rating System) as outlined by the Environmental Protection Agency (EPA). The Biological Quality Rating System for Rivers (Q ratings) goes from Q1 to Q5 where a Q5 denotes a pristine river and Q1 indicates serious pollution. From the point of view of the Water Framework Directive all rivers and streams must be at least Good status i.e. Q4. High status river stations are not allowed to deteriorate. There are different classifications for depositing and eroding substrates. The Q system is aimed particularly at larger streams and rivers and is carried out between May and September. Three-minute kick samples are carried out at each station accompanied by stone examinations and weed sweeps. The abundance chart is shown in Appendix 1.

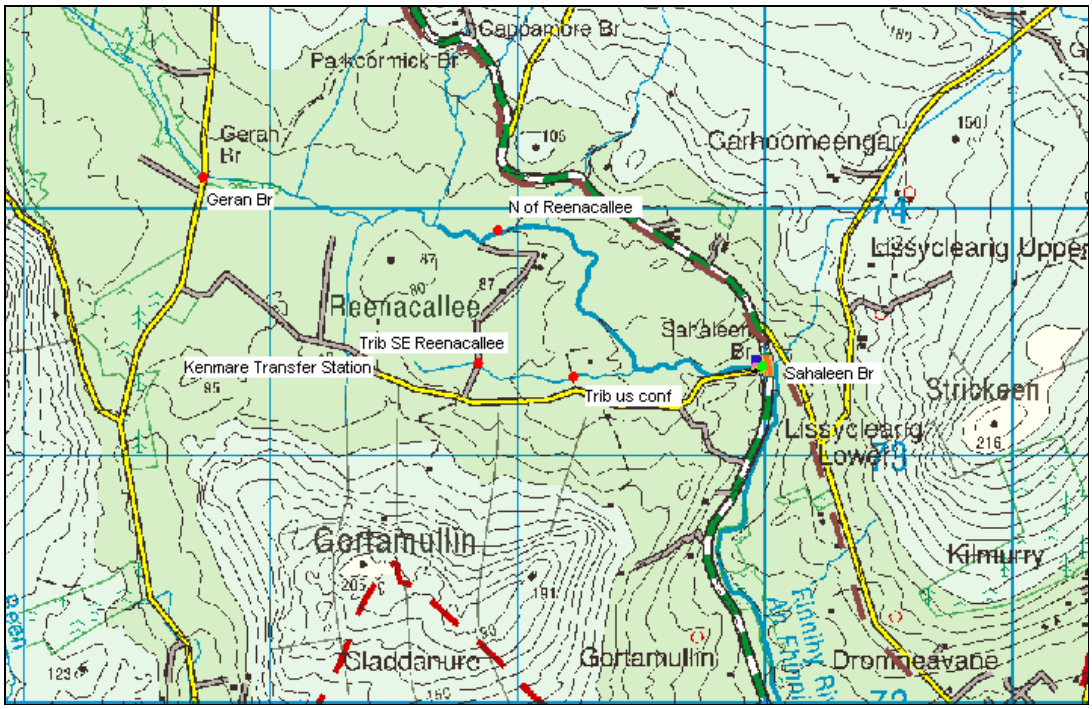
Discussion:

In September 2012 a biological assessment was carried out at Sahaleen Bridge and a Q rating of 3(moderate pollution) obtained. There is an absence of A group Ephemeroptera and Plecoptera. This result represents a drop from a Q 4 (unpolluted) at this site in an EPA survey of 2005. As a result of this poor quality further biological assessment was carried out upstream.

At Geran bridge a Q rating of 4 was obtained with Plecoptera and Ephemeroptera both represented. Downstream of Geran Bridge at site North of Reenacallee a Q of 4-5 was scored (denoting unpolluted – pristine conditions). Four different species of the highly sensitive A group were found in good numbers. The tributary stream at SE Reenacallee scores a Q rating of 3(moderate pollution). The same tributary is assessed upstream of its confluence with the Finnihy and scores a Q rating of 1-2(heavy pollution) with the most tolerant E group superabundant and an abundance of algal growth on stones.

Conclusion:

There is deterioration in the river Finnihy between N of Reenacallee and Sahaleen Br from very clean unpolluted conditions to moderately polluted. The tributary entering the Finnihy just upstream of Sahaleen bridge has deteriorated in status along its length from moderately polluted at SE Reenacallee to heavily polluted just upstream of the confluence. Further investigation is needed to identify the source of pollution.



Map of Sampling Station

Table of Results

			MRP	SS	TON	Colour	NH4	Nitrite
			P		N	Hz	N	N
			--	--	--	20	--	--
			--	--	--	--	--	--
			--	--	--	--	--	--
Location	Lab Ref no	Date	mg/l	mg/l	mg/l	Hazen	mg/l	mg/l
Sahaleen Bridge	2012/4216	03-Sep-12	< 0.005	1	0.07	81	0.02	< 0.001
R Finnihy N of Reenacallee	2012/4259	04-Sep-12	< 0.005	< 1	0.06	70	0.04	
Geran Bridge	2012/4258	04-Sep-12	< 0.005	< 1	0.05	55	0.03	
Trib to Finnihy u/s of confl	2012/4260	04-Sep-12	0.029	3	0.08	135	0.02	
Trib to Finnihy SE of Reenacallee	2012/4385	11-Sep-12	0.012		< 0.01	178	0.02	< 0.001

			pH	Cond	DO	%DO	Temp	Q
					O2			
			9	--	15	150	--	--
			--	--	--	--	--	--
			6	--	5	50	--	4
			pH units	µS/cm	mg/l	% O2	^{o} C	Rating
Sahaleen Bridge	2012/4216	03-Sep-12	7.1	68	9.3	100	19.1	3
R Finnihy N of Reenacallee	2012/4259	04-Sep-12	6.7	58	8.8	97	21.1	4.5
Geran Bridge	2012/4258	04-Sep-12	6.7	60	8.6	94	20.2	4
Trib to Finnihy u/s of confl	2012/4260	04-Sep-12	7	114	8	88	20.3	1.5
Trib to Finnihy SE of Reenacallee	2012/4385	11-Sep-12	6.1	55	8.1	78	14.1	3

Surface Water Monitoring Results

								Parameter	Ammonium	pH	BOD (5day	Conductivit	Chemical C	Chloride	Dissolved C	Suspended	Temperatu
									NH4	Physchem	O2	Physchem	O2	Cl	O2	Physchem	Physchem
								Max.	--	9	--	--	--	--	15	--	--
								Target	--	--	--	--	--	--	--	--	--
								Min.	--	6	--	--	--	--	5	--	--
	Project	Location	Location Ea	Location No	Sample Re	Sample Date	Sample Tir	Comments	mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l	mg/l	Degrees C
	Kenmare	Sw1	88320	73367	2013/0138	09-Jan-13	14:30		1.15	6.6	1.2	99	31	12.6	8.5	3	6.9
	Kenmare	Sw1	88320	73367	2013/1470	09-Apr-13	14:10		1.27	6.6	< 1	109	15	18.4	7.2	< 1	7.2
	Kenmare	Sw1	88320	73367	2013/2819	03-Jul-13	13:35		1.73	6.3	1.3	129	19	17.3	5.9	3.5	11.9
	Kenmare	Sw1	88320	73367	2013/4547	16-Oct-13	13:50		0.09	6.5	1	66	29	14.7	9.3	< 1	13.2

								Parameter	Ammonium	pH	BOD (5day	Conductivit	Chemical C	Chloride	Dissolved C	Suspended	Temperatu
									NH4	Physchem	O2	Physchem	O2	Cl	O2	Physchem	Physchem
								Max.	--	9	--	--	--	--	15	--	--
								Target	--	--	--	--	--	--	--	--	--
								Min.	--	6	--	--	--	--	5	--	--
	Project	Location	Location Ea	Location No	Sample Reference	Sample Date	Sample Tir	Comments	mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l	mg/l	Degrees C
	Kenmare	Sw2	88309	73232.4	2013/0139	09-Jan-13	14:00		< 0.02	6.6	< 1	46	17	10.1	11.1	2	7.4
	Kenmare	Sw2	88309	73232.4	2013/1471	09-Apr-13	13:52		0.04	7.5	< 1	72	19	17	6.4	< 1	6.4
	Kenmare	Sw2	88309	73232.4	2013/2820	03-Jul-13	14:05		0.03	6.8	1.2	89	< 10	16.8	9.2	< 1	14.6
	Kenmare	Sw2	88309	73232.4	2013/4548	16-Oct-13	13:37		0.02	6.5	< 1	54	32	13.1	10.2	< 1	12.6

	Parameter	Ammonium	pH	BOD (5day	Conductivit	Chemical C	Chloride	Dissolved C	Suspended	Temperatu
		NH4	Physchem	O2	Physchem	O2	Cl	O2	Physchem	Physchem
	Max.	--	9	--	--	--	--	15	--	--
	Target	--	--	--	--	--	--	--	--	--
	Min.	--	6	--	--	--	--	5	--	--
Project	Location	Location E	Location N	Sample Reference	Sample Date	Comments	mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l	mg/l	Degrees C
Kenmare	Sw3	88301	73462.5	2013/0140	09-Jan-13		1.59	6.7	1	90	26	11.5	9.1	6	7.2
Kenmare	Sw3	88301	73462.5	2013/1472	09-Apr-13		1.8	6.9	< 1	120	23	18.6	6.8	2	6.8
Kenmare	Sw3	88301	73462.5	2013/2821	03-Jul-13		1.3	6.4	2.2	110	39	16.8	6.5	18.5	14.4
Kenmare	Sw3	88301	73462.5	2013/4549	16-Oct-13		0.2	6.3	1.2	66	44	13.9	8.8	< 1	12.6

Foul Water Monitoring Results

							Parameter	Ammonium	pH	BOD (5day	Conductivit	Chemical C	Chloride	Dissolved C	Suspended	Temperatu	Appearanc	Odour	Oils/Fats &
								NH4	Physchem	O2	Physchem	O2	Cl	O2	Physchem	Physchem		Physchem	OFG
							Max.	--	9	--	--	--	--	15	--	--	--	--	--
							Target	--	--	--	--	--	--	--	--	--	--	--	--
							Min.	--	6	--	--	--	--	5	--	--	--	--	--
Project	Location	Location E	Location N	Sample Reference	Sample Date	Sample Tir	Comments	mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l	mg/l	Degrees C	Descriptive	Descriptive	mg/l
Kenmare	Se1	88375.1	73303.8	2013/0373	22-Jan-13	13:40		0.07	7.1	1.2	116	52			3	7	/ river like	No odour	< 0.5
Kenmare	Se1	88375.1	73303.8	2013/1616	16-Apr-13	11:05	bottles fro	0.25	6.9	3.5	139	38			5	10		ND	< 0.5
Kenmare	Se1	88375.1	73303.8	2013/4948	19-Nov-13	11:15	sample coll	0.08	6.9	47	136	174			94	8	own/ riverlit	sewage o	

Appendix III - <u>Landfill Gas Summary</u>

Kenmare 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
14/10/08	L1	52.3	28.5	1.1	1002	14
20/5/09	L1	48.7	29.3	2.4	998	16
10/12/09	L1	50.9	27.4	1.6	1004	8
14/4/10	L1	0.3	0.2	20.5	1012	13
7/10/11	L1	0.3	0.3	19.9	1021	15
11/11/11	L1	0.2	5.6	18.1	990	13
20/06/12	L1	0.4	4.8	17.1	1005	18
22/11/12	L1	0.3	0.2	20.3	988	8
18/09/13	L1	0.3	0.2	20.3	1009	8
31/10/13	L1	0.3	0	19.7	1001	9
22/11/13	L1	0.2	0.1	19.1	1004	8

Appendix IV – Dust Monitoring Results

southern scientific services ltd.

OUR REF: RP 2011 | KERRY COUNTY COUNCIL – KENMARE | 01 – 02 PAGE 01 | 02

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:	30 days
REPORT TO:	BRIAN LENNON	DATE RECEIVED:	22 November 2012
SAMPLED BY:	Brian Lennon	DATE ANALYSED:	05 – 11 December 2012
SAMPLING PT:	KENMARE TRANSFER STATION	DATE REPORTED:	12 December 2012
ORDER NO:		WORK NO.:	27563 C | 12P-101 |

TABLE OF RESULTS

METHOD:	LAB REF:	YOUR REF:	TOTAL PARTICULATES mg/m²/day	INORGANIC PARTICULATES mg/m²/day
SCP 039	C12-Nov 491	Station 1	501	81
SCP 039	C12-Nov 492	Station 2	1047	270
SCP 039	C12-Nov 493	Station 3	576	108
SCP 039	C12-Nov 494	Station 4	398	73
SCP 039	C12-Nov 495	Station 5	48	26

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.**

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

COMMENT:

C12-NOV 491 – STATION 1

Prior to analysis a large amount of leaves were removed from collector gauge.
The collector gauge contained brown coloured water and a small amount of brown particulates. The dried dish contained a large amount of brown particulates and brown fine powder residue. The ashed dish contained a large amount of brown particulates and white fine powder residue. The ashed residue underwent no effervescence on addition of acid indicating the absence of carbonate in the residue.

C12-NOV 492 – STATION 2

Prior to analysis a large amount of leaves were removed from collector gauge.
The collector gauge contained brown coloured water and a large amount of brown particulates. The dried dish contained a large amount of brown particulates and brown fine powder residue. The ashed dish contained a large amount of brown particulates and white fine powder residue. The ashed residue underwent no effervescence on addition of acid indicating the absence of carbonate in the residue.

C12-NOV 493 – STATION 3

Prior to analysis a large amount of leaves were removed from collector gauge.
The collector gauge contained brown coloured water and a small amount of brown-black particulates. The dried dish contained a large amount of brown particulates and brown fine powder residue. The ashed dish contained a large amount of grey particulates and orange fine powder residue. The ashed residue underwent no effervescence on addition of acid indicating the presence of carbonate in the residue.

C12-NOV 494 – STATION 4

Prior to analysis a large amount of leaves were removed from collector gauge.
The collector gauge contained brown coloured water. The dried dish contained a large amount of brown particulates and brown fine powder residue. The ashed dish contained a large amount of brown particulates and grey fine powder residue. The ashed residue underwent no effervescence on addition of acid indicating the absence of carbonate in the residue.

In accordance to standard laboratory practice a blank sample and a QC standard were analysed with the batch of samples.

Appendix V – <u>Noise Report</u>

Environmental Efficiency
Consulting Engineers
Bray (Co. Wicklow) 01 276 1428
Lisburn (Co. Antrim) 028 9262 6733

Environmental Noise Survey 2013

at

Kenmare WTS, Cladanure, Kenmare, Co. Kerry

for

Kerry County Council

Waste licence: W086-01

Document Number: 1492-04

Email: energy@iol.ie www.enviro-consult.com Registered Office as above. Registered Number 243 412
Directors: Noel J. McGrath Robert B. Sutcliffe

QF 1. v2 Document Lead Sheet

Document Title	Environmental Noise Survey 2013 at Kenmare WTS, Cladanure, Kenmare, Co. Kerry
Project No.	1492
Document No.	1492-04
Client	Kerry County Council
Address	Cladanure, Kenmare, Co. Kerry

Issue	Status	Date	Author	Signed for and on behalf of	
				Environmental Efficiency	Client
1.00	Approved	19/12/2013	GB		

SR04 v2.2

Where it is a requirement that this report be issued to a regulatory or other authority, then the client should sign the appropriate place in the above table and, unless specifically agreed in writing to the contrary, forward copies to the appropriate authority (e.g. EPA).

EEC Project Manager: Bob Sutcliffe, CEng, MIEI

EEC Document Author: George Byrne, MSc Biosystems Engineering

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Table of Contents

1. Introduction

Kerry County Council has a Waste Licence (W086-01) at their Waste Transfer Facility (WTF) at Cladanure, Kenmare, Co. Kerry issued by the EPA. This requires that, amongst other things, a noise survey carried out in accordance to EPA Guidance Note NG4. The noise survey is required to be carried out at various specified locations in the vicinity of the site. This document reports the results of the noise survey undertaken.

2. Executive Summary

A noise survey to EPA NG4 was undertaken on the 12/12/2013.

Noise levels recorded at Noise Sensitive Locations (NSL's) are determined to be below the emission limit value. The site is therefore in compliant as regards noise levels. The compliance status at each location is shown in the table below.

Table 2-1 Summary of compliance

Location	NSL	Daytime
N1	No	N/A
N2	No	N/A
N3	No	N/A
N4	Yes	Compliant

3. Facility Description

The principal activity of the Transfer Station is the compaction of solid waste into 30 cubic meter closed containers. 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. The facility is operational between the hours of 09:00 to 17:00 Monday to Friday; the waste transfer station does not generate noise at night-time when the facility is closed.

4. Monitoring requirements

Noise is required to be monitored at the locations shown in the table immediately below. The noise limits applicable are also shown in the second table below. Note that noise monitoring was only carried out during periods where there was activity or equipment running on the site.

Table 4-1 Locations monitored

Location	Location Description	Noise sensitive location
N1	Boundary location west	No
N2	Weighbridge	No
N3	Offsite at forest entrance	No
N4	NSL dwelling to the North East of the facility	Yes

Photographs of the monitoring locations are shown in Appendices.

Table 4-2 Parameters monitored

	dBA	T	Frequency
Daytime	55	30	Annual
Night-time	N/A	N/A	Annual
Third Band Octave	N/A	N/A	Not required

5. Sampling Methodology

5.1 Instrumentation Used

The equipment shown in the table below was used during the noise survey. All Sound Level Meters are Type I. Due to the number of noise monitoring locations two sets of similar equipment were used. Calibration certificates for the equipment, where appropriate, are shown in the appendices.

Table 5-1: Equipment Used

	First Set			Second set		
Equipment	Model	Serial Number	Cal cert	Model	Serial Number	Cal cert
SLM	CR:811C	D21736FD	Yes	CR:811C	D21736FD	Yes
Microphone	MK: 224	20044265	Yes	MK: 224	20044265	Yes
Calibrator	CR: 511E	51431	Yes	CR: 511E	51431	Yes
Tripod	N/A	N/A	N/A	N/A	N/A	N/A
Windshield	N/A	N/A	N/A	N/A	N/A	N/A
Anemometer	Kestral	N/A	N/A	Kestral	N/A	N/A

All noise measurements were 'A' weighted and the time-weighting 'Fast' was applied (to equate to human ear hearing). Each SLM is calibrated in the field before the start of each monitoring run and again at the end of the monitoring run. Unless stated otherwise in this report, there was no discrepancy greater than 0.1 dB between the SLM reading and the calibration noise level of 93.7 dB.

The SLM used is capable of third band octave measurement. Where monitoring is during daytime or evening, a penalty is added in cases where the presence of tonal is verified. The simplified methodology for the objective identification of tones specified in Annex D of ISO 1996K2:2007(E) is used for this purpose. However as No tonal noise was subjectively noted during any of the monitoring events at the NSL, no noise recoding was taken.

5.2 Noise Survey Personnel

The noise survey was undertaken by Environmental Efficiency Consultants (Ire) Ltd. Staff as follows

- Lead consultant George Byrne, MSc Biosystems Engineering

5.3 Meteorological Conditions

Weather conditions on the day of monitoring were considered appropriate for surveying purposes and therefore did not affect the readings i.e. conditions were dry and wind speed was less than 5 m/s (the normal upper limit for taking measurements). The Sound Level Meter was also fitted with a windshield to minimise interference from potential meteorological conditions, in keeping with good practice. The meteorological conditions during the survey periods are shown below.

Table 5-2: Weather Conditions Day 1

	Date and time	Av. wind speed, m/s	Temp, C	Prevailing weather conditions
Start survey	12/12/2013 15:40	1.1	9.0	Mostly cloudy
Mid survey	12/12/2013 16:59	1.5	9.0	Mostly cloudy
End survey	12/12/2013 16:16	0.7	9.0	Mostly cloudy

5.4 Measurement duration

The EPA specified minimum runs and survey duration are shown in the table below.

Table 5-3: Number of runs and monitoring duration

	Number of runs	NSL survey duration, (mins)	Boundary survey duration (mins)
Daytime (07:00 to 19:00)	3	90	30
Evening (19:00 to 23:00)	N/A	N/A	N/A
Night-time (23:00 to 07:00)	N/A	N/A	N/A

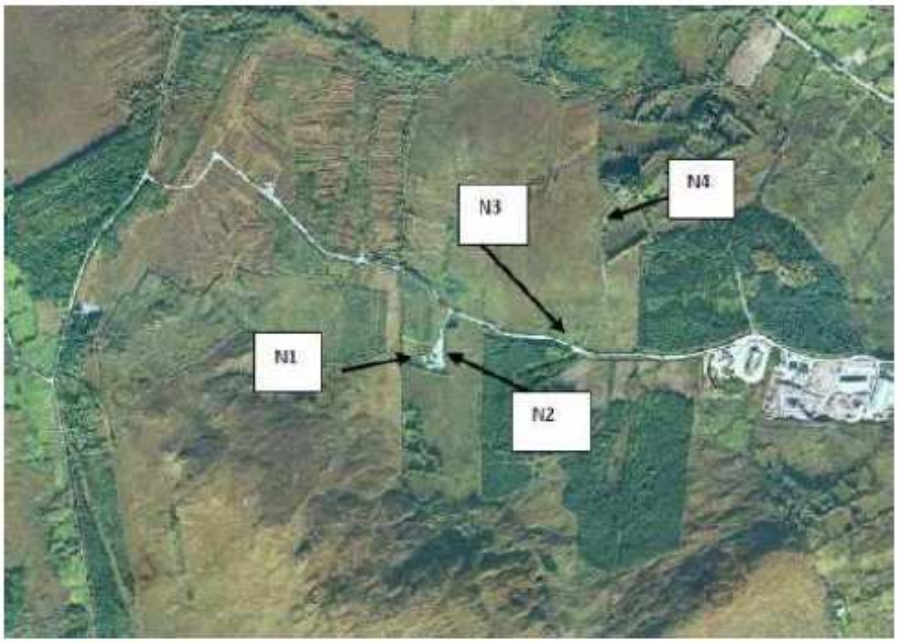

Figure 5-1 Site map

5.5 Ground attenuation

If the intervening ground between a noise source and a measurement location is acoustically absorptive, this can result in a reduction in noise level at the receptor due to absorption of sound energy by the ground itself. On contrary, if the intervening ground is acoustically reflective ground, its products the opposite effect.

The details of the intervening ground between sources and measurement positions are described in the following table:

Table 5-4: Ground attenuation

Location	% Soft Ground	% Hard Ground	Comments
N1	0	100	N/A
N2	0	100	N/A
N3	50	50	N/A
N4	90	10	N/A

6. Noise Survey

The measurement parameters $L_{Aeq,T}$, L_{AF90} and L_{AF10} plus the derived parameter $L_{Ar,T}$ are tabulated below in the tables for each monitoring location. Associated particulars such as a description of the on-site noise and off-site noise noticed at each location are also provided. A graphical representation of the parameters $L_{Aeq,T}$, L_{AF90} and $L_{Ar,T}$ over each monitoring period is provided in the graphs following each table.

The derived noise parameter $L_{Ar,T}$, termed the Rated Noise Level, includes a penalty of 5 dBA for tonal or impulsive noise where such noise is present. This penalty is normally added to $L_{Aeq,T}$. Where traffic or other off site intermittent noise sources are significant, the parameter L_{AF90} may be a better descriptor of site noise and where this is the case the Rated Noise Level is equal to L_{AF90}, plus the penalty. In the tables below, where L_{AF90} is considered a better descriptor of site noise, an asterisk is appended to the measurement.

The penalty for on-site tonal noise and/or on-site impulsive noise is only applied during the daytime and evening periods. No tonal or impulsive noise is permitted during night-time; if such noise is present then this is a breach regardless of the $L_{Aeq,T}$ or L_{AF90} noise level.

Where on site tonal is heard this is noted in the tables below in the column 'On site tonal?' In all cases where on-site tonal is heard the simplified methodology for the objective identification of tones specified in Annex D of ISO 1996K2:2007(E) is used to confirm the presence of tonal. Where on site tonal is confirmed, this is shown in the tables below in the column 'Tonal confirmed'. The third octave graphs used to confirm on site tonal are shown in the discussion section.

The column headed 'On site impulsive' states whether impulsive noise was heard by the monitoring personnel.

6.1 N1

Period	Run	Equipment	Date/Time	LAeq,T	LAF90	LAF10	L_{AFmax}	On site tonal?	On site impulsive ?	Rated Noise Level, LAr,T	Description of On-site Noise Sources	Description of Off-site Noise Interference	Compliant
Daytime	1	Second set	12/12/2013 15:40	45	29	44	76	N/A	N/A	45	Rubbish being out in to compactor.	Flowing water in stream nearby. Bird song	N/A

6.2 N2

Period	Run	Equipment	Date/Time	LAeq,T	LAF90	LAF10	L_{AFmax}	On site tonal?	On site impulsive ?	Rated Noise Level, LAr,T	Description of On-site Noise Sources	Description of Off-site Noise Interference	Compliant
Daytime	1	First set	12/12/2013 15:42	48	29	72	74	N/A	N/A	48	Rubbish being out in to compactor.	Flowing water in stream nearby. Bird song. Distant traffic	N/A

6.3 N3

Period	Run	Equipment	Date/Time	LAeq,T	LAF90	LAF10	L_{AFmax}	On site tonal?	On site impulsive ?	Rated Noise Level, LAr,T	Description of On-site Noise Sources	Description of Off-site Noise Interference	Compliant
Daytime	1	Second set	12/12/2013 16:25	50	34 *	46	74	N/A	N/A	34	None	Passing cars on local road	N/A

6.4 N4 (NSL)

Period	Run	Equipment	Date/Time	LAeq,T	LAF90	LAF10	L_{AFmax}	On site tonal?	On site impulsive?	Rated Noise Level, LAr,T	Description of On-site Noise Sources	Description of Off-site Noise Interference	Compliant
Daytime	1	First set	12/12/2013 16:15	49	32 *	41	79	No	No	32	None	Passing cars on local road	Yes
Daytime	2	First set	12/12/2013 16:45	48	32 *	45	79	No	No	32	None	Passing cars on local road	Yes
Daytime	3	First set	12/12/2013 17:15	48	33 *	45	78	No	No	33	None	Passing cars on local road	Yes

Notes

1. Rated Noise Level is equal to $L_{Aeq,T}$ (or L_{AF90} where this is a better descriptor) plus any adjustments for tonal or impulsive characteristics. Note that no adjustments for tonal are permitted for night-time monitoring as no tonal is permitted at night
2. Where L_{AF90} is a better descriptor of on site noise, the value is marked with an asterisk

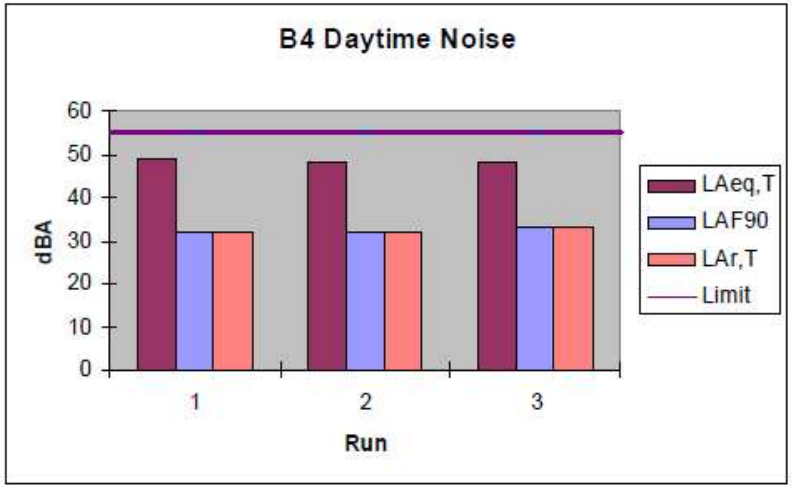

Figure 6-1 B4 Noise Graph

7. Discussion

At the two Noise Sensitive Locations; NSL5 and NSL6, the results for the day-time noise monitoring did not exceed the ELV according to company's Waste Licence.

There were no tonal or impulsive noise subjectively noted at any noise sensitive location.

Table 7-1 Summary of discussion

Location	Period	NSL	Tonal noise subjectively noted	Impulsive noise is subjectively noted	Noise Level breaches ELV
B4	Daytime	Yes	No	No	No

8. Conclusion

Noise levels recorded at Kenmare Waste Transfer Station are deemed to be below the Exceedance Limit Value set out in the companies Waste Licence

Appendix 1 Report Terminology

Noise Monitoring Parameters	
Survey	The measurement of noise over one or more days and is made up of a number of monitoring runs with one or more noise meters.
Run or monitoring run	A single measurement at one location to determine noise level. A number of monitoring runs will be typically be made at each location. The duration of a monitoring run is typically 15 or 30 minutes and is stipulated in the licence.
dB(A)	This is the unit used to quantify noise measurements. "dB" stands for decibel and the "A" indicates that the noise reading is A-weighted and therefore is a measurement of noise audible to the human ear. The scale is logarithmic.
$L_{Aeq,T}$	This parameter is measured on-site using a noise meter for a specified time period (T minutes). It represents the average noise level that occurred over that period.
Rated Noise Level or $L_{Ar,T}$	The Rated Noise Level is equal to $L_{Aeq,T}$ plus any penalty for confirmed tonal and/or subjective impulsive. The penalty is only added for daytime and evening monitoring.
L_{AF10} and L_{AF90}	The L_{AF10} and L_{AF900} are both statistical noise levels. L_{AF10} indicates that for 10% of the monitoring period, the sound levels were greater than the quoted value. L_{AF90} indicates that for 90% of the monitoring period, the sound levels were greater than the quoted value. The L_{AF90} indicates the background noise levels if short-term, intermittent noise sources were ignored e.g. a passing car. The L_{AF10} can be used to determine the effect to which these short-term noise sources effect the overall average reading i.e. if the L_{AF10} is very different to the L_{AF90}, then intermittent noise is a significant source of noise
Continuous	Noise produced without interruption.
Impulsive Noise	A noise of short duration (typically less than one second), the sound pressure of which is significantly higher than the background; brief and abrupt
Intermittent Noise	Noise produced on discontinuous basis e.g. equipment operating in cycles or events such as single passing vehicle or aircraft.
Tonal Noise	Noise, which contains a clearly audible, tone i.e. a distinguishable, discrete or continuous note (whine, hum, drone, screech, etc.).

Appendix 2 Certificates of Calibration CR:811B

NSAI
National Metrology Laboratory

Certificate of Calibration

Issued to	Environmental Efficiency Consultants Ireland Ltd. Parnell House, 19 Quinsboro Bray Co. Wicklow
Attention of	Mr. Ronan Sutcliffe

Certificate Number	E13353B
Item Calibrated	Cirrus CR:511E Acoustic Calibrator
Serial Number	035066
Client ID Number	LEN CO3
Order Number	LSPO1448
Date Received	30 Jul 2013
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 Digital Multimeter, File No. 0736 [Cal due: 10 Jul 2014] B & K 4134 Measuring Microphone, File No. 0743 [Cal due: 17 Apr 2014] B & K 4228 Pistonphone, File No. 0740 [Cal due: 08 Aug 2014]

Calibrated by	Sam Boles	Approved by	Paul Hetherington
Date of Calibration	07 Aug 2013	Date of issue	12 Aug 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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Glasnevin | Dublin 11 | Ireland T+353 1 808 2600 F+353 1 808 2601 | NSAI.ie

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NSAI
National Metrology Laboratory

Certificate of Calibration

Issued to	Environmental Efficiency Consultants Ireland Ltd. Parnell House, 19 Quinsboro Bray Co. Wicklow
Attention of	Mr. Ronan Sutcliffe

Certificate Number	E13353A
Item Calibrated	Cirrus CR:811B Sound Level Meter, complete with Cirrus Type CR:MV200C Pre-amplifier and Cirrus Type UK 224 Microphone
Serial Numbers	C16569FD (Sound Level Meter), 2533 (Pre-amplifier) and 20041382 (Microphone)
Client ID Number	LEN 002 (Sound Level Meter)
Order Number	LSP01448
Date Received	30 Jul 2013
NML Procedure Number	AP-NM-09
Method	The above sound level meter was allowed to stabilise for a suitable period in laboratory conditions. It was then calibrated by carrying out the verification tests detailed in IEC 61672-3 (2006), *Periodic tests. specification for the verification of sound level meters*. This standard specifies a procedure for the periodic verification of conformance of a sound level meter or integrating-averaging meter to IEC 61672-1 (2003).
Calibration Standards	Norsonic 1504A Calibration System incorporating: SR DS360 Signal Generator, No. 0735, [Cal. Due Date: 16 Jul 2014] 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	Sam Boles	Approved by	Paul Hetherington
Date of Calibration	12 Aug 2013	Date of Issue	12 Aug 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 recognise 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 3 Certificates of Calibration CR:811C

Certificate of Calibration

Cirrus Research plc
dedicated to noise measurement

Equipment Details

Instrument Manufacturer	Cirrus Research plc
Instrument Type	CR:515
Description	Acoustic Calibrator
Serial Number	51431

Calibration Procedure

The acoustic calibrator detailed above has been calibrated to the published data as described in the operating manual. The procedures and techniques used to follow the recommendations of the IEC standard Electroacoustics – Sound Calibrators IEC 60942:2003, IEC 60942:1997, BS EN 60942:1998 and BS EN 60942:2003 where applicable.. The calibrator's main output is 94.00 dB (1 Pa) and this was set within the 0.01 dB resolution of the test system, i.e. one hundredth of a decibel. Numbers in (parenthesis) refer to the paragraph in IEC 60942.

Calibration Traceability

The calibrator above was calibrated against the calibration laboratory standards held by Cirrus Research plc. These are traceable to International Standards (A.0.6). The standards are:

Microphone Type	B&K4180	Serial Number	1893453	Calibration Ref.	S 6009
Pistonphone Type	B&K4220	Serial Number	613843	Calibration Ref.	S 5964

Calibration Climate Conditions

The climatic test conditions were all maintained within the permitted limits of IEC 60942:1997.

Temperature	(B.3.2)	Permitted band 15°C to 25°C
Humidity	(B.3.2)	Permitted band 30% to 90% RH
Static Pressure	(B.3.2)	Permitted band 85 kPa to 105 kPa
Ambient Noise Level	(B.3.3.6)	Max permitted level 64 dB(Z)

Measurement Results

The figures below are the Calibration Laboratory test limits for this model calibrator and have a smaller tolerance than those permitted in IEC 60942.

94 dB Output	94.00 dB	Permitted band	93.95 to 94.05dB
104 dB Output	dB	Permitted band	103.80 to 104.30dB
Frequency	1000 Hz	Permitted band	990 to 1010Hz

Uncertainty

With an uncertainty coefficient of k=2, i.e. a 95% confidence level, the uncertainty of each measure is

94 dB Output	± 0.13 dB	104 dB Output	± 0.14 dB
Frequency	± 0.1 Hz	Level Stability	± 0.04 dB

Calibrated by T.A. Goodrich

Calibration Date 30 October 2013

Calibration Certificate Number 212008

This Calibration Certificate is valid for 12 months from the date above.

Cirrus Research plc, Acoustic House, Bridlington Road, Hurmanby, North Yorkshire. YO14 0PH
Telephone: +44 (0) 1723 891655 Fax. +44 (0) 1723 891742
Email: sales@cirrusresearch.co.uk

Certificate of Calibration

Cirrus Research plc
dedicated to noise measurement

Equipment Details

Instrument Manufacturer	Cirrus Research plc
Instrument Type	CR:811C
Description	Sound Level Meter
Serial Number	D21736FD

Calibration Procedure

The instrument detailed above has been calibrated to the publish test and calibration data as detailed in the instrument hand book, using the techniques recommended in the latest revisions of the International Standards IEC 61672-1:2002, IEC 60651:1979, IEC 60804:2001,IEC 61260:1995, IEC 60942:1997, IEC 61252:1993, ANSI S1.4-1983, ANSI S1.11-1986 and ANSI S1.43-1997 where applicable.
Sound Level Meters: All Calibration procedures were carried out by substituting the microphone capsule with a suitable electrical signal, apart from the final acoustic calibration.

Calibration Traceability

The equipment detailed above was calibrated against the calibration laboratory standards held by Cirrus Research plc. These are traceable to International Standards (A.I.S.). The standards are:

Microphone Type	B&K4180	Serial Number	1893453	Calibration Ref.	S 6009
Pistonphone Type	B&K4220	Serial Number	613843	Calibration Ref.	S 5961

Calibrated by T. A. Goodlet

Calibration Date	30 October 2013
Calibration Certificate Number	212009

This Calibration Certificate is valid for 12 months from the date above.

Cirrus Research plc, Acoustic House, Bridlington Road, Hunmanby, North Yorkshire, YO14 0PH
Telephone: +44 (0) 1723 891655 Fax: +44 (0) 1723 891742
Email: sales@cirrusresearch.co.uk

Appendix 4 Photographs of Monitoring Locations

Figure 8-1 N1

Figure 8-2 N2

Figure 8-3 N3

Figure 8-4 N3

Appendix VI - AER/PRTR Return 2013

| PRTR# : W0086 | Facility Name : Kenmare Transfer Station | Filename : w0086_2013(1).xlsm | Return Year : 2013 |

Environmental Protection Agency

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.17

REFERENCE YEAR	2013

1. FACILITY IDENTIFICATION

Parent Company Name	Kerry County Council
Facility Name	Kenmare Transfer Station
PRTR Identification Number	W0086
Licence Number	W0086-01

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	Claddanure West
Address 2	Kenmare
Address 3	Co Kerry
Address 4	
	Kerry
Country	Ireland
Coordinates of Location	-9.6227 51.9012
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	0667162020
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	0
Number of Employees	1
User Feedback/Comments	Changed 130204 to 130703 +0.34t 150101 +1.2t 150102 +0.45t 150104 +3.45t 150106 +1.88t 150107 +37.97t 160211 +0.61t 160214 +3.72t 200101 -1.9t 200121 +0.36t 200134 +0.56t 200135 +0.64t 200136 +2.47t 200140 +7.92t destination changed to United Metals 200301 -87.34t

Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General
50.1	General

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

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

4. WASTE IMPORTED/ACCEPTED ONTO SITE Guidance on waste imported/accepted onto site

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : W0086 | Facility Name : Kenmare Transfer Station | Filename : w0086_2013(1).xlsm | Return Year : 2013 | 17/02/2014 17:26

Please enter all quantities on this sheet in Tonnes

0

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used: M/C/E	Method Used: 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)
To Other Countries	13 02 04	Yes	1.2	mineral-based chlorinated engine, gear and lubricating oils	R9	M	Weighed	Abroad	Enva,W0184-1	Clonminam Industrial Estate,,,Portlaoise,County Laois,Ireland	Nehlsen GmbH & Co KG,D3330040,,,,Bremen,,,Germany	,,,Bremen,,,Germany
Within the Country	15 01 01	No	12.26	cardborad	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 02	No	33.2	plastic packaging	R3	M	Weighed	Offsite in Ireland	Dillon Waste,WFP/KY/10/0001/01	The Kerries,,,Tralee,County Kerry,Ireland		
Within the Country	15 01 04	No	7.95	metallic packaging	R4	M	Weighed	Offsite in Ireland	Dillon Waste,WFP/KY/10/0001/01	The Kerries,,,Tralee,County Kerry,Ireland		
Within the Country	15 01 06	No	7.64	mixed packaging	R3	M	Weighed	Offsite in Ireland	Killarney Waste Disposal,W0217-01	Aughacureen,,,Killarney,County Kerry,Ireland		
Within the Country	15 01 07	No	64.26	glass packaging	R5	M	Weighed	Offsite in Ireland	Dillon Waste,WFP/KY/10/0001/01	The Kerries,,,Tralee,County Kerry,Ireland		
To Other Countries	16 02 11	Yes	9.96	discarded equipment containing chlorofluorocarbons, HCFC, HFC	R4	M	Weighed	Abroad	EWM Ltd,WFP-DS-09-0012-01	Block 648 Jordanstown Drive,Greenogue Industrial Estate,Rathcoole,County Dublin,Ireland	EMR,EAM/40099,Bentley Road South,,,Darlston,WS10 8LW West Midlands,United Kingdom	Bentley Road South,,,Darlston,WS10 8LW West Midlands,United Kingdom
To Other Countries	16 02 14	No	26.79	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighed	Abroad	EWM Ltd,WFP-DS-09-0012-01	Block 648 Jordanstown Drive,Greenogue Industrial Estate,Rathcoole,County Dublin,Ireland		
Within the Country	20 01 01	No	79.28	newspapers and pams	R3	M	Weighed	Offsite in Ireland	Dillon Waste,WFP/KY/10/0001/01	The Kerries,,,Tralee,County Kerry,Ireland		
To Other Countries	20 01 21	Yes	0.5	fluorescent tubes and other mercury-containing waste	R5	M	Weighed	Abroad	KMK Metals,W0113-01	Cappincur Industrial estate,,,Tullamore,County Offaly,Ireland	Alba Service GmbH & Co. KG,E56657020,Kanalstrasse 64,,,Rheine,48432,Germany	Kanalstrasse 64,,,Rheine,48432,Germany
To Other Countries	20 01 34	No	1.63	batteries and accumulators other than those mentioned in 20 01 33	R4	M	Weighed	Abroad	EWM Ltd,WFP-DS-09-0012-01	Block 648 Jordanstown Drive,Greenogue Industrial Estate,Rathcoole,County Dublin,Ireland		
Within the Country	20 01 35	Yes	21.83	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	EWM Ltd,WFP-DS-09-0012-01	Block 648 Jordanstown Drive,Greenogue Industrial Estate,Rathcoole,County Dublin,Ireland	The Recycling Village,WFP/LH/10/W010/01,,,,Monasterboise,County Louth,Ireland	,,,Monasterboise,County Louth,Ireland
To Other Countries	20 01 36	No	21.71	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R4	M	Weighed	Abroad	EWM Ltd,WFP-DS-09-0012-01	Block 648 Jordanstown Drive,Greenogue Industrial Estate,Rathcoole,County Dublin,Ireland		
Within the Country	20 01 40	No	40.56	metals	R4	M	Weighed	Offsite in Ireland	United Metals,WFP-LK-2013-147A-R1	Eastway Business Pk,Ballysimon Rd,Limerick,,,Ireland		
Within the Country	20 03 01	No	816.8	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	North Kerry Landfill,W001-04	Muingnaminnane,,,Tralee,County Kerry,Ireland		
To Other Countries	20 01 27	Yes	0.18	paint, inks, adhesives and resins containing dangerous substances	R1	M	Weighed	Abroad	Enva,W0184-1	Clonminam Industrial Estate,,,Portlaoise,County Laois,Ireland	Nehlsen GmbH & Co KG,D3330040,,,,Bremen,,,Germany	,,,Bremen,,,Germany
To Other Countries	16 05 04	Yes	0.04	gases in pressure containers (including halons) containing dangerous substances	R1	M	Weighed	Abroad	Enva,W0184-1	Clonminam Industrial Estate,,,Portlaoise,County Laois,Ireland	Remondis,HRDB590346,Aus trasse 5,D-74238,Krautheim,,,Germany	Austrasse 5,D-74238,Krautheim,,,Germany

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