

ANNUAL ENVIRONMENTAL REPORT

Year End December 2012

Dunmore Recycling & Waste Disposal Centre Dunmore County Kilkenny

Waste Licence Register Number W0030-02



Kilkenny County Council
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1. Introduction

Kilkenny County Council's Landfill Site at Dunmore received its first Waste Licence (30/1) from the Environmental Protection Agency on the 23rd November 1999. In March 2001 an application was made to review this Licence, to incorporate an enhanced entrance, better infrastructural features and a further four cells. The EPA granted the review of the licence in May 2002 register no. 30/2. The reporting period for this Annual Environmental Report is from 01/01/12 to the 31/12/12.

Dunmore landfill site reached its full capacity in mid March 2010 and ceased operation. Capping works commenced in September 2010 and were completed by December 2010 with the exception of top soiling and seeding which were completed in March/ April 2011.

2. Waste Acceptance

2.1 Waste Activities

Since the landfill closure waste from households and small commercial businesses is presented at the Recycling & Waste Disposal Centre where it is packed into 35cy skips and then taken off site by Greenstar to their waste facility in Kilkenny City.

Waste is categorised in two forms on site. Mixed Municipal Waste (Wet Waste) and Dry Bulk Waste (C&I Waste).

2.2 Recycling

Many recycling streams are catered for at Dunmore such as:

- Mixed Paper
- Cardboard
- Glass (Brown, Green, Clear)



- Batteries (Primary, Lead Acid, fence batteries)
- White Goods
- Brown Goods
- Household Hazardous waste
- Waste Oils/filters
- Steel/Aluminium Cans
- Mixed Metal
- Textiles
- Tetra Pack
- Plastics
- Reading Books/Magazines

All the above recycling streams with the exception of glass & aluminium cans (Glasco) and WEEE (WEEE Ireland) are taken off site by Greenstar who are contracted under a regional contract to service the facility.

In 2012 Dunmore Recycling and Waste Disposal Centre was short listed as one of three facilities to be recognised nationally for the Repak Civic Amenity/Recycling Centre of the Year Award.

2.3 Green Waste

In May 2012 approval was given by the EPA to use one of the Waste Quarantine areas as a Green Waste collection point. This area holds approx. 15 – 20 tonnes of green waste i.e. grass, hedge clipping, plants, leaves etc.

2.4 Quantity and Composition

The quantities of waste accepted at Dunmore in 2012 and the categorised breakdown can be found in Appendix A. The recycling and green waste quantities are also listed.

2.5 Deposition Methods

Waste presented at Dunmore Recycling and waste disposal centre for disposal is handled in the following ways: -



Waste brought to the site by householders, contractors, or small businesses is placed by them in the compactor skips located in the recycling and waste disposal centre. When this container is full, it is collected, weighed and transported by Greenstar to their facility in Kilkenny City for pre-treatment and disposal. All recyclables brought to the site are directed to the appropriate location and are placed in the appropriate receptacle for temporary storage on site. As soon as these receptacles are full, site staff arrange for the removal of the material to an authorised materials recycling centre. Greenstar (paper, plastic, cardboard, metal, tetra pak). KMK (all WEEE on behalf of WEEE Ireland). Enva (Hazardous, oils and oil filters).

3. Environmental Monitoring

3.1 Landfill Gas

Landfill gas monitoring and migration results are submitted to the Agency biannually. Results for 2012 are available in Appendix B. All gas wells on the site are harnessed and the gas is burned off thus reducing the landfills contribution to ozone depleting gases by 90%, and also reduces landfill gas odours.

3.2 Surface Emissions Survey

Kilkenny Co. Council commissioned Odour Monitoring Ireland to perform a landfill gas surface emissions survey of Dunmore Landfill Facility W0030-02, in order to ascertain any likely sources of landfill gas surface emissions from the closed landfill. The survey was carried out on the 18th Oct. 2012.

During the surface emissions survey the following tasks were performed on site:

1. Identification of the key mechanisms that lead to the release of landfill gas surface emissions from the site.
2. Identify geographically on a site map, the locations of landfill gas surface emissions in order to perform remediation of the identified emissions areas.



The following conclusions were drawn from the survey.

- There were no surface emissions zones greater than or equal to 50 ppm averaged over the capped area.

3.3 Surface Water, Groundwater and Leachate

Surface Water: - Surface water is analysed quarterly and the results are submitted to the Agency. There were no surface water parameter trigger levels reached in 2012.

Groundwater: - Groundwater well quality is tested quarterly, and results are submitted to the Agency as set out in condition 9.1 and schedule F of the licence. Results throughout the year have shown no adverse effects to the ground water as a result of landfilling in the area, and a sample is available in Appendix C.

Leachate: - The composition of leachate is tested at leachate manholes and holding lagoons quarterly and results are submitted to the Agency as set out in condition 9.1 and schedule F of the licence. There were no Leachate parameter trigger levels reached in 2012.

3.4 Dust monitoring

Dust Monitoring: - Dust Monitoring takes place three times a year and the results are submitted to the Agency. No exceedences of the permitted level of 350mg/m²/day, from Schedule C of the waste licence conditions, were recorded. The results are shown in Appendix C:

4. Site Infrastructure and Development

4.1 Resource and Energy Consumption

4.1.1 Diesel Fuel: -The amount of fuel consumed on site in 2012 was approximately



400 litres, which has been used in the site forklift.

4.1.2 Electricity: -. Electricity is used in the following buildings; weighbridge office, main offices and recycling centre office. It is also used to operate the weighbridge computer, pumps, lights, and heating, CCTV cameras etc. A three phase supply was installed to meet the demands of the revised licence and supply the recycling centre, gas flare, pumps, SCADA system and extended office.

4.2 Development Works

4.2.1. Development Works over the Reporting Period

Over the reporting period the following development works have been carried out at the facility:

- Security fencing was installed around recycling centre in Feb 2012.
- Installation of further signage in Recycling and Waste Disposal Centre.
- Improved layout and use of space in the Recycling & Waste Disposal Centre.
- Updated traffic management measures on site.
- Signage to be updated at the site entrance.
- Continued review of Health & Safety on site.
- Concrete bay utilised for green waste segregation.
- Improvements made to Green Waste access road.

4.2.2 Proposed Development Works

It is proposed to carry out the following developments at Dunmore in the year 2012.

- Installation of a third waste compactor receptacle.
- Future works will be prioritised by necessity but will have to fall within a tight financial budget.



Details of the status of the objectives and targets can be found in Appendix E.

4.3 Leachate Lagoon Integrity Tests

In respect of Condition 5.12.2, an integrity test on the leachate-holding lagoons was carried out. The objective of this survey was to determine the presence of defects within the lined containment area.

‘Geomembrane Testing Services Limited’, carried out an integrity test on the leachate holding lagoon which was submitted to the Agency in October 2012. This test is carried out using a Mobile Electrical Leak Location Survey (MELLS). The basic principle of MELLS involves impressing a high voltage DC supply across the geomembrane. The liner acts an electrical insulator between the cover material and the natural ground, and a uniformly potential field is distributed across the liner. If holes are present the current is channelled through the defects and the potential field is disturbed in these areas.

It was found that ‘the geomembrane liner was free of defects at the time of final inspection’. Detailed results of this integrity test were submitted to the agency in 2012.

4.4 Site Survey

The site topographical and slope stability survey is completed annually. This survey was submitted to the Agency under condition 8.8.1 and 8.10.1. Last topographical and SS surveys were carried out in July 2012 and have been sent to the Agency.

This Survey concluded that the landfill side slopes are considered stable in the short and long term providing that leachate levels are maintained close to the base of the cell at levels which are typically maintained by pumping.



5. Procedures

5.1 Emergency Response Procedure

Following an assessment of risk at the site in Dunmore, as part of our ongoing safety audits, procedures were put in place to deal with any emergency that may arise at the site.

The main risks identified at the site are explosion, fire, oil/leachate spillage and injury to persons. A tabled procedure and list of emergency contact details can be found in Appendix I.

6. Nuisance Control

6.1 Vermin Control: - 'Pestkill-Pest Control Services' visit the site on a monthly basis, to place bait for vermin control at the site. There are 12 no. specific and labelled locations at and surrounding the site where bait is placed in custom made boxes. Pestkill inspects these monitoring points monthly to see if the bait was taken or rodent activity if any are noted and bait is re-stocked if necessary. Monthly record sheets of the findings at the site are logged and kept on site..

6.2 Fly Control: - 'Pestkill-Pest Control Services' are also used if needed, for fly and wasp control in late Spring, Summer and early Autumn, and at other times if necessary.

7. Incidents and Complaints

7.1 Incident Reports

No incidents or complaints took place at Dunmore during the reporting period.



8. Staffing

8.1 Staffing Structure

Kilkenny County Council own and manage the landfill and recycling centre at Dunmore. The County Council with Philip O'Neill as Director of Service and Carol McCarthy as Senior Engineer are presently appointed as the project supervisors for design and construction phase.

The Environment Section manages the facility on behalf of Kilkenny County Council with Carol McCarty BA BAI, MIEI, as Senior Engineer of the Section.

On site Alan Rhatigan is A/Supervisor at the site. The operatives at the site also include one driver (Leachate Tanker), weighbridge operator, C.A. operator and a general operative.

The site is open Monday – Friday, 8.00 to 4.30 and on Saturday from 8.00 to 12.00. The phone numbers at the site are 056-7761999 and 056 7767848. Any queries or complaints may be made to the site or to the Environment Section in County Hall (056-7794470). A flow chart outlining the management structure is attached in Appendix G.

9. Public Information

9.1 Procedure for Public Consultation

Dunmore Landfill is established since 1989 and good communication has developed between the site staff and the local community. The site staff in a spirit of good neighbourliness promptly deals with any issues arising locally.

During the development of proposals for an extension to the landfill site at Dunmore, intensive consultation has taken place especially with the immediate neighbours of the



site and with other local residents. This consultation process commenced in November 2000 and was ongoing during the development stage. Arising out of these consultations, Kilkenny County Council had set up a Community Liaison Group.

In 2012 the community fund generated from landfill gate receipts was handed over to the local community. This fund is now being used to redevelop the community hall and its lands.

The full Council are briefed on all waste management issues on a regular basis including developments at Dunmore, pricing structure, staff changes etc.

The Strategic Policy Committee on Environment (SPC 3), which comprises of council officials elected representatives and community representatives are briefed on developments at the landfill site and policy decisions are drafted as a result of the meetings.

All environmental monitoring results are held in the Dunmore Landfill, Dunmore, Co. Kilkenny and any member of the public is free to inspect them at any time during normal office hours (08:00 to 16:30 hours). Arrangements can be made to view the information at an alternative location by prior arrangement.

There is a fax and phone located at the site where queries can be made during opening hours i.e. 08:00 to 16:30, or a message can be left on the answering machine and if required will be contacted as soon as the message is received.

9.2 Complaints

A complaints register is located on site and any complaint regarding the operation of the facility is recorded and the action taken to address the complaint/observation. No complaints were received during 2012.



Appendix A

Waste & Recycling Quantities

Waste Quantities 2012

	Weights In				Weights Out			
	Domestic	Commercial	Litter & Street Sweepings	Total	Mixed Municipal Waste	Dry Bulk Waste	Total	
Jan	96.54	20.94	1.78	119.26	133.63	63.98	197.61	
Feb	89.20	15.76	5.36	110.32	180.88	16.46	197.34	
Mar	103.54	15.66	11.46	130.66	180.09	39.36	219.45	
Apr	83.62	18.38	9.88	111.88	166.64	28.78	195.42	
May	91.50	18.26	11.30	121.06	201.93	19.08	221.01	
Jun	88.22	20.84	2.90	111.96	179.46	26.02	205.48	
Jul	107.10	21.62	4.88	133.60	191.06	33.46	224.52	
Aug	109.98	26.44	2.16	138.58	216.08	15.92	232	
Sep	88.40	14.20	7.40	110.00	157.18	30.42	187.6	
Oct	86.42	11.82	21.10	119.34	166.9	25.72	192.62	
Nov	89.64	17.56	15.36	122.56	182.5	25.86	208.36	
Dec	71.70	10.24	11.88	93.82	169.34	7.24	176.58	
Subtotal	1105.86	211.72	105.46	1423.04	2125.69	332.3	2457.99	

The difference between IN and OUT represents the black sacks not weighed, but charged for by the bag.

Recycling Quantities 2012

	Cardboard	Mixed Paper	Newsprint	Plastic	Metal Cans	Metal	Timber	Lead Acid Batteries	Alkaline Batteries	Textiles	Hazardous	Flourescent tubes	Glass	white & brown goods	Monitors & TV's	tetra	Cooking Oil	Mineral Oil	Green waste	Total	Total WEEE
Jan	6.56	15.44	0	5.96	0.74	5.1	0	0	0.24	0.84	0.28	0.08	7.2	7.12	7.82	0.76	0.16	0	0	58.3	14.94
Feb	2.34	22.95	0	5.22	0.42	4.7	0	0	0.1	0.36	0.04	0.16	4.9	16.94	6.32	0.62	0	0	0	65.07	23.26
Mar	4.76	7.22	1.38	4.03	0	5.22	0	0	0.18	0.52	0.4	0	4.2	8.32	4.76	0.48	0	1.14	0	42.61	13.08
Apr	4.52	15.3	0	6.28	0.4	5.06	0	0	0.2	0.54	0.3	0	8.54	7.96	6.52	0.9	0.12	0	0	56.64	14.48
May	3.2	15.5	1.72	4.03	0.34	3.42	0	0	0.2	0.8	0.18	0.04	3.64	7.08	6.36	0.64	0	0	0	47.15	13.44
Jun	5.02	14.56	1.6	8.04	0	6.44	0	0	0.14	0.48	0.08	0	7.86	7.1	3.8	1.28	0	0	17.82	74.22	10.9
Jul	4.7	28.01	2.26	5.12	0.5	6.32	1.08	0	0	0.78	0.3	0	7.3	16.36	9.44	0.64	0	1.6	19.44	103.85	25.8
Aug	4.18	7.92	2.06	5.38	0.6	6.42	5.54	0	0.54	1.16	0	0	7.3	7.34	9.12	0.66	0.08	0	17.00	75.3	16.46
Sep	7.4	19.6	2.22	4.58	0	3.46	1.46	0	0.2	0.64	0.3	0	2.22	7.1	5.26	0.54	0	0	4.82	59.8	12.36
Oct	2.68	19.54	2.5	3.82	0.22	4.06	5.64	0	0	0.82	0.02	0.04	10.3	18.8	4.8	0.76	0	0.9	17.38	92.28	23.6
Nov	9.38	13.54	2.46	6.78	0.32	6.00	1.92	0.46	0.04	1.4	0.02	0.1	5.28	9.52	10.72	0.96	0	0	15.58	84.48	20.24
Dec	3.82	12.42	2.54	1.98	0.3	4.56	1.8	0.18	0.02	0.76	0.08	0.2	2.42	0	5.18	0.56	0	0	19.26	56.08	5.18
Subtotal	58.56	192	18.74	61.22	3.84	60.76	17.44	0.64	1.86	9.1	2	0.62	71.16	113.64	80.1	8.8	0.36	3.64	111.3	815.78	193.74

Appendix B

Gas Monitoring

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Gas Migration

LANDFILL GAS MONITORING FORM

Site Name: Dunmore Landfill Site		Site Address: Dunmore, Co. Kilkenny	
Operator: Kilkenny County Council		National Grid Reference: 160572N 249519E	
Site Status: Closed		Date: 02/02/12	Time: 11:30
Instrument Used: Infra Red Gas Analyser - GA 94		Date of Calibration: Jul 2010 Next Calibration Due: Jan 2011	
Monitoring Personnel: Alan Rhatigan		Weather: dry	Barometric Pressure (mb) : 1027

RESULTS

Sample Station Number	Borehole/ Spike/ Other	Initial Flow Rate mbar	Adjusted Flow Rate mbar	CH ₄ % v/v	CO ₂ % v/v	O ₂ % v/v	Comments
VP1	Cell No. 1 Vent	0.25	0.50	33.00	25.80	1.20	Flow increased due to high CH4
VP2	Cell No. 1 Vent	0.25	0.50	34.60	20.10	1.60	Flow increased due to high CH4
VP3	Cell No. 1 Vent	0.30	0.30	26.60	23.70	0.90	Flow not adjusted
VP4	Cell No. 3 Vent	0.80	0.80	34.10	22.40	3.10	Flow not adjusted
VP5	Cell No. 2 Vent	0.80	1.00	50.90	27.00	2.60	Flow increased due to high CH4
VP6	Cell No. 2 Vent	1.00	1.00	35.10	22.40	4.10	Flow not adjusted
VP7	Cell No. 3 Vent	1.10	1.10	38.50	25.50	2.80	Flow not adjusted
VP8	Cell No. 7 Vent	14.00	14.00	27.70	22.10	3.10	Flow not adjusted
VP9	Cell No. 7 Vent	1.00	1.00	30.80	20.50	4.90	Flow not adjusted
VP10	Cell No. 6 Vent	0.40	0.00	5.30	12.10	8.20	Closed due to low CH4
VP11	Cell No. 6 Vent	1.00	1.00	31.00	20.40	3.40	Flow not adjusted
VP12	Cell No. 5 Vent	4.00	4.00	40.90	24.80	0.60	Flow not adjusted
VP13	Cell No. 5 Vent	0.30	0.30	28.20	16.10	2.60	Flow not adjusted
VP14	Cell No. 7 Vent	0.00	0.00	12.30	10.60	6.40	Closed due to low CH4
VP15	Cell No. 7 Vent	0.60	0.60	32.10	17.80	3.60	Flow not adjusted
VP16	Cell No. 4 Vent	0.50	0.50	29.20	18.10	3.20	Flow not adjusted
VP17	Cell No. 4 Vent	0.00	0.30	26.20	18.20	3.10	Open
VP18	Cell No. 10 Vent	1.00	1.00	33.10	22.00	3.80	Flow not adjusted
VP19	Cell No. 10 Vent	0.00	0.00	8.00	9.50	11.30	Closed
VP20	Cell No. 10 Vent	0.80	0.80	32.10	23.20	2.30	Flow not adjusted
VP21	Cell No. 9 Vent	0.50	0.30	23.00	16.30	6.40	Flow decreased due to high O2
VP22	Cell No. 8 Vent	0.80	0.50	25.00	16.90	7.00	Flow decreased due to high O2
VP23	Cell No. 11 Vent	21.50	21.50	35.10	23.10	0.50	Flow not adjusted
VP24	Cell No. 11 Vent	21.50	21.50	59.20	21.90	0.40	Flow not adjusted
VP25	Cell No. 11 Vent	21.20	21.20	67.00	30.90	0.80	Flow not adjusted
VP26	Cell No. 11 Vent	12.00	12.00	26.50	21.20	0.20	Flow not adjusted

VP27	Cell No. 11 Vent	21.50	21.50	62.50	31.10	0.40	Flow not adjusted
VP28	Cell No. 11 Vent	2.00	2.00	34.00	22.80	0.40	Flow not adjusted
VP29	Cell No. 11 Vent	1.00	1.00	28.50	22.90	0.80	Flow not adjusted
VP30	Cell No. 8 Vent	21.80	21.80	37.90	26.70	1.20	Flow not adjusted
VP31	Cell No. 8 Vent	21.00	21.00	34.80	24.30	1.60	Flow not adjusted
VP32	Cell No. 9 Vent	21.00	21.00	53.90	22.90	3.00	Flow not adjusted
VP33	Cell No. 9 Vent	21.80	21.80	61.70	33.00	0.90	Flow not adjusted
VP34	Cell No. 10 Vent	19.00	19.00	32.10	23.20	2.30	Flow not adjusted
VP35	Cell No. 10 Vent	21.10	21.10	60.70	28.90	1.60	Flow not adjusted
VP36	Cell No. 10 Vent	21.50	21.50	61.30	28.20	0.50	Flow not adjusted
VP37	Cell No. 11 Vent	21.50	21.50	42.70	25.60	0.70	Flow not adjusted
VP38	Cell No. 12 Vent	2.80	2.70	23.00	20.80	0.30	Flow not adjusted
VP39	Cell No. 12 Vent	21.80	21.80	52.80	23.65	2.40	Flow not adjusted
VP40	Cell No. 12 Vent	0.00	0.00	13.70	21.00	8.50	Closed
VP41	Cell No. 12 Vent	1.80	1.80	23.40	20.60	0.80	Flow not adjusted
VP42	Cell No. 12 Vent	21.80	12.00	34.70	23.30	7.00	Flow decreased due to high O2
VP43	Cell No. 12 Vent	21.80	21.80	38.00	25.20	0.80	Flow not adjusted
VP44	Cell No. 12 Vent	2.00	2.00	20.10	20.20	1.20	Flow not adjusted
VP45	Cell No. 12 Vent	4.00	0.00	11.40	14.60	8.70	Closed due to low CH4
VP46	Cell No. 12 Vent	0.80	1.00	46.60	28.10	0.50	Flow increased due to high CH4
VP47	Cell No. 12 Vent	1.00	0.80	25.10	21.20	3.20	Flow decreased due to high O2
VP48	Cell No. 12 Vent	14.00	8.00	28.30	14.20	8.40	Flow decreased due to high O2
VP49	Cell No. 12 Vent	0.40	0.40	34.80	19.80	1.70	Flow not adjusted
VP50	Cell No. 12 Vent	2.00	2.00	31.80	18.10	2.20	Flow not adjusted
VP51	Cell No. 12 Vent	19.00	19.00	46.60	28.10	0.50	Flow not adjusted
VP52	Cell No. 14 Vent	2.40	2.40	30.10	22.60	1.70	Flow not adjusted
VP53	Cell No. 14 Vent	2.00	2.00	38.30	23.60	3.20	Flow not adjusted
VP54	Cell No. 14 Vent	17.00	17.00	43.60	26.40	1.00	Flow not adjusted
VP55	Cell No. 14 Vent	22.20	22.20	61.10	32.10	1.23	Flow not adjusted
VP56	Cell No. 14 Vent	22.30	22.30	44.60	27.20	0.60	Flow not adjusted
HOR1	Cell No. 14 Vent	0.00	0.00	0.00	0.00	0.00	To be Used for Leachate Recirculation
HOR2	Cell No. 14 Vent	0.00	0.00	0.00	0.00	0.00	To be Used for Leachate Recirculation

LANDFILL GAS MONITORING FORM

Site Name: Dunmore Landfill Site		Site Address: Dunmore, Co. Kilkenny	
Operator: Kilkenny County Council		National Grid Reference: 160572N 249519E	
Site Status: Closed		Date: 27/06/12	Time: 09:00
Instrument Used: Infra Red Gas Analyser - GA 94		Date of Calibration: Jul 2011 Next Calibration Due: Jan 2012	
Monitoring Personnel: Alan Rhatigan		Weather: Wet	Barometric Pressure (mb) : 996

RESULTS

Sample Station Number	Borehole/ Spike/ Other	Initial Flow Rate mbar	Adjusted Flow Rate mbar	CH ₄ % v/v	CO ₂ % v/v	O ₂ % v/v	Comments
VP1	Cell No. 1 Vent	0.50	0.80	31.20	20.20	0.90	Flow increased, improved CH4
VP2	Cell No. 1 Vent	0.80	0.50	24.10	16.80	1.80	Flow decreased due to low CH4
VP3	Cell No. 1 Vent	0.70	0.70	35.70	24.10	1.20	Flow not adjusted
VP4	Cell No. 3 Vent	0.60	0.60	32.00	19.40	1.60	Flow not adjusted
VP5	Cell No. 2 Vent	1.00	1.00	47.40	25.10	1.90	Flow not adjusted
VP6	Cell No. 2 Vent	1.00	1.00	37.20	22.90	2.10	Flow not adjusted
VP7	Cell No. 3 Vent	1.20	1.20	39.10	25.40	1.70	Flow not adjusted
VP8	Cell No. 7 Vent	1.00	1.00	33.90	20.60	1.40	Flow not adjusted
VP9	Cell No. 7 Vent	0.80	1.00	36.30	20.90	1.70	Flow increased, improved CH4
VP10	Cell No. 6 Vent	0.50	0.50	25.60	18.50	6.80	Flow not adjusted
VP11	Cell No. 6 Vent	1.00	1.00	32.70	23.80	1.50	Flow not adjusted
VP12	Cell No. 5 Vent	4.00	4.00	36.20	24.90	0.50	Flow not adjusted
VP13	Cell No. 5 Vent	0.30	0.30	24.20	16.10	2.20	Flow not adjusted
VP14	Cell No. 7 Vent	0.30	0.00	18.40	14.20	11.60	Closed, low CH4, high O2
VP15	Cell No. 7 Vent	0.60	0.30	25.80	18.10	2.00	Flow decreased due to low CH4
VP16	Cell No. 4 Vent	0.50	0.00	18.40	18.80	6.70	Closed, low CH4
VP17	Cell No. 4 Vent	0.30	0.30	24.30	17.60	2.40	Flow not adjusted
VP18	Cell No. 10 Vent	0.80	0.80	34.00	29.90	1.60	Flow not adjusted
VP19	Cell No. 10 Vent	0.50	0.00	9.60	10.60	10.70	Closed, low CH4, high O2
VP20	Cell No. 10 Vent	0.50	0.50	24.70	20.90	4.90	Flow not adjusted
VP21	Cell No. 9 Vent	0.30	0.00	15.50	15.60	6.70	Closed, low CH4, high O2
VP22	Cell No. 8 Vent	0.30	0.50	35.20	19.30	3.90	Flow increased, improved CH4
VP23	Cell No. 11 Vent	21.50	21.50	36.40	26.80	1.20	Flow not adjusted
VP24	Cell No. 11 Vent	21.50	21.50	47.20	20.10	0.90	Flow not adjusted
VP25	Cell No. 11 Vent	21.20	21.20	65.60	30.60	0.90	Flow not adjusted

VP26	Cell No. 11 Vent	18.00	1.00	22.10	20.40	0.70	Flow decreased due to low CH4
VP27	Cell No. 11 Vent	21.50	21.50	62.20	32.00	0.90	Flow not adjusted
VP28	Cell No. 11 Vent	0.40	0.40	23.40	22.60	0.40	Flow not adjusted
VP29	Cell No. 11 Vent	1.00	2.00	52.90	35.30	0.30	Flow increased, improved CH4
VP30	Cell No. 8 Vent	12.00	2.00	24.70	25.10	1.80	Flow decreased due to low CH4
VP31	Cell No. 8 Vent	21.00	21.00	32.60	26.20	1.20	Flow not adjusted
VP32	Cell No. 9 Vent	21.00	21.00	35.80	19.60	5.10	Flow not adjusted
VP33	Cell No. 9 Vent	21.80	21.80	60.50	33.40	1.50	Flow not adjusted
VP34	Cell No. 10 Vent	19.00	19.00	37.30	25.20	2.20	Flow not adjusted
VP35	Cell No. 10 Vent	21.10	21.10	59.40	28.60	2.10	Flow not adjusted
VP36	Cell No. 10 Vent	21.50	21.50	61.30	28.80	0.40	Flow not adjusted
VP37	Cell No. 11 Vent	1.00	1.00	34.00	28.30	0.90	Flow not adjusted
VP38	Cell No. 12 Vent	2.00	0.00	14.90	16.80	1.60	Closed, low CH4
VP39	Cell No. 12 Vent	21.80	21.80	66.80	27.40	1.50	Closed, low CH4
VP40	Cell No. 12 Vent	0.30	0.00	16.80	12.90	9.70	Closed, low CH4, high O2
VP41	Cell No. 12 Vent	0.80	0.80	29.10	23.20	1.20	Flow not adjusted
VP42	Cell No. 12 Vent	8.00	8.00	43.40	27.00	3.30	Flow not adjusted
VP43	Cell No. 12 Vent	21.80	21.80	27.90	24.10	1.40	Flow not adjusted
VP44	Cell No. 12 Vent	1.80	0.80	20.60	23.00	1.00	Flow decreased due to low CH4
VP45	Cell No. 12 Vent	1.00	0.00	16.80	16.90	7.10	Closed, low CH4, high O2
VP46	Cell No. 12 Vent	0.80	0.00	18.00	17.50	5.50	Closed, low CH4, high O2
VP47	Cell No. 12 Vent	0.80	1.80	64.30	29.30	1.30	Flow increased, improved CH4
VP48	Cell No. 12 Vent	1.00	1.00	33.20	20.10	2.10	Flow not adjusted
VP49	Cell No. 12 Vent	0.60	0.00	16.40	19.90	1.40	Closed, low CH4
VP50	Cell No. 12 Vent	1.00	1.00	29.50	20.50	2.20	Flow not adjusted
VP51	Cell No. 12 Vent	1.00	0.80	26.20	22.50	0.60	Flow decreased due to low CH4
VP52	Cell No. 14 Vent	2.00	2.00	61.50	30.70	0.30	Flow not adjusted
VP53	Cell No. 14 Vent	0.80	0.60	21.70	21.00	0.80	Flow decreased due to low CH4
VP54	Cell No. 14 Vent	2.00	0.80	23.60	21.80	1.20	Flow decreased due to low CH4
VP55	Cell No. 14 Vent	22.00	22.00	63.80	31.30	0.80	Flow not adjusted
VP56	Cell No. 14 Vent	22.20	22.20	47.60	25.10	0.80	Flow not adjusted
HOR1	Cell No. 14 Vent	0.00	0.00	0.00	0.00	0.00	Used for Leachate Recirculation
HOR2	Cell No. 14 Vent	0.00	0.00	0.00	0.00	0.00	Used for Leachate Recirculation

LANDFILL GAS MONITORING FORM

Site Name: Dunmore Landfill Site		Site Address: Dunmore, Co. Kilkenny	
Operator: Kilkenny County Council		National Grid Reference: 160572N 249519E	
Site Status: Closed		Date: 06/01/13	Time: 11:30
Instrument Used: Infra Red Gas Analyser - GA 94		Date of Calibration: Jul 2012 Next Calibration Due: Jan 2013	
Monitoring Personnel: Alan Rhatigan		Weather: dry	Barometric Pressure (mb) : 998

RESULTS

Sample Station Number	Borehole/ Spike/ Other	Initial Flow Rate mbar	Adjusted Flow Rate mbar	CH ₄ % v/v	CO ₂ % v/v	O ₂ % v/v	Comments
VP1	Cell No. 1 Vent	0.30	0.10	13.40	19.50	4.40	Flow decreased due to high O2
VP2	Cell No. 1 Vent	0.30	0.00	11.20	15.80	8.60	Flow decreased due to high O2
VP3	Cell No. 1 Vent	0.30	0.10	27.30	16.90	5.30	Flow decreased due to high O2
VP4	Cell No. 3 Vent	0.30	0.10	27.30	16.90	5.30	Flow decreased due to high O2
VP5	Cell No. 2 Vent	0.20	0.20	24.90	18.20	0.70	Flow not adjusted
VP6	Cell No. 2 Vent	1.30	1.30	34.00	24.00	1.20	Flow not adjusted
VP7	Cell No. 3 Vent	2.70	2.70	36.50	26.70	1.30	Flow not adjusted
VP8	Cell No. 7 Vent	2.70	1.20	26.20	22.10	1.60	Flow decreased due to high O2
VP9	Cell No. 7 Vent	0.70	0.70	30.20	22.00	1.80	Flow not adjusted
VP10	Cell No. 6 Vent	0.00	0.00	11.20	14.30	6.00	Closed, low CH4, high O2
VP11	Cell No. 6 Vent	0.50	0.00	4.60	9.00	11.50	Closed, low CH4, high O2
VP12	Cell No. 5 Vent	6.00	6.00	32.30	24.40	1.40	Flow not adjusted
VP13	Cell No. 5 Vent	0.70	0.00	21.10	18.50	2.10	Closed, low CH4, high O2
VP14	Cell No. 7 Vent	0.00	0.00	10.70	11.10	9.90	Closed, low CH4, high O2
VP15	Cell No. 7 Vent	0.00	0.30	26.80	18.20	3.10	Flow increased, improved CH4
VP16	Cell No. 4 Vent	0.70	0.30	23.50	19.20	3.60	Flow decreased due to high O2
VP17	Cell No. 4 Vent	0.00	0.10	24.20	18.10	2.90	Flow increased, improved CH4
VP18	Cell No. 10 Vent	0.50	0.00	19.20	17.10	3.90	Closed, low CH4, high O2
VP19	Cell No. 10 Vent	1.50	1.00	32.10	21.20	2.90	Flow decreased due to high O2
VP20	Cell No. 10 Vent	17.00	6.00	29.20	22.50	1.80	Flow decreased due to high O2
VP21	Cell No. 9 Vent	2.00	2.00	26.20	23.00	1.70	Flow not adjusted
VP22	Cell No. 8 Vent	1.00	0.50	21.30	18.20	6.00	Flow decreased due to high O2
VP23	Cell No. 11 Vent	33.40	33.40	58.00	26.70	0.50	Flow not adjusted
VP24	Cell No. 11 Vent	33.40	33.40	51.90	20.00	0.90	Flow not adjusted
VP25	Cell No. 11 Vent	33.40	33.40	64.80	30.60	0.40	Flow not adjusted

VP26	Cell No. 11 Vent	9.50	9.50	49.70	24.90	1.00	Flow not adjusted
VP27	Cell No. 11 Vent	33.20	33.20	66.30	31.00	0.50	Flow not adjusted
VP28	Cell No. 11 Vent	6.00	6.00	49.70	26.70	0.20	Flow not adjusted
VP29	Cell No. 11 Vent	1.00	0.80	37.70	26.00	2.10	Flow decreased due to high O2
VP30	Cell No. 8 Vent	28.90	28.90	44.60	26.20	0.40	Flow not adjusted
VP31	Cell No. 8 Vent	32.90	32.90	43.20	26.30	0.50	Flow not adjusted
VP32	Cell No. 9 Vent	32.90	32.90	58.00	27.10	0.50	Flow not adjusted
VP33	Cell No. 9 Vent	32.60	32.60	59.40	31.60	2.20	Flow not adjusted
VP34	Cell No. 10 Vent	30.40	30.40	41.80	27.20	0.70	Flow not adjusted
VP35	Cell No. 10 Vent	32.90	35.90	64.80	31.40	0.80	Flow not adjusted
VP36	Cell No. 10 Vent	33.10	33.10	61.90	29.10	0.50	Flow not adjusted
VP37	Cell No. 11 Vent	20.00	2.00	28.60	20.30	1.40	Flow decreased due to high O2
VP38	Cell No. 12 Vent	3.00	3.00	42.80	23.70	0.80	Flow not adjusted
VP39	Cell No. 12 Vent	32.40	32.40	67.20	27.10	0.80	Flow not adjusted
VP40	Cell No. 12 Vent	0.00	0.00	14.50	16.20	3.20	Closed, low CH4, high O2
VP41	Cell No. 12 Vent	33.60	33.60	35.80	24.50	0.70	Flow not adjusted
VP42	Cell No. 12 Vent	12.00	4.00	27.10	18.80	3.60	Flow decreased due to high O2
VP43	Cell No. 12 Vent	21.00	21.00	42.10	25.80	1.00	Flow not adjusted
VP44	Cell No. 12 Vent	6.30	6.30	32.60	21.00	1.50	Flow not adjusted
VP45	Cell No. 12 Vent	6.50	6.50	44.50	26.20	0.80	Flow not adjusted
VP46	Cell No. 12 Vent	0.50	0.00	21.00	19.70	1.90	Closed, low CH4, high O2
VP47	Cell No. 12 Vent	5.00	5.00	31.20	18.20	1.20	Flow not adjusted
VP48	Cell No. 12 Vent	1.00	0.30	23.20	15.50	6.00	Flow decreased due to high O2
VP49	Cell No. 12 Vent	0.30	0.00	19.10	18.60	0.50	Closed, low CH4, high O2
VP50	Cell No. 12 Vent	3.00	3.00	33.50	20.40	2.20	Flow not adjusted
VP51	Cell No. 12 Vent	5.00	5.00	47.40	27.00	1.20	Flow not adjusted
VP52	Cell No. 14 Vent	10.00	5.00	27.40	20.80	1.90	Flow not adjusted
VP53	Cell No. 14 Vent	1.00	1.00	33.60	21.30	3.40	Flow not adjusted
VP54	Cell No. 14 Vent	3.00	3.00	28.90	20.20	0.60	Flow not adjusted
VP55	Cell No. 14 Vent	32.50	32.50	39.60	23.10	2.80	Flow not adjusted
VP56	Cell No. 14 Vent	32.50	32.50	23.30	19.00	2.80	Flow not adjusted
HOR1	Cell No. 14 Vent	0.00	0.00	0.00	0.00	0.00	Used for Leachate Recirculation
HOR2	Cell No. 14 Vent	0.00	0.00	0.00	0.00	0.00	Used for Leachate Recirculation

LANDFILL GAS MIGRATION MONITORING FORM						
Site Name: Dunmore Landfill Site			Site Address: Dunmore, Co. Kilkenny			
Operator: Kilkenny County Council			National Grid Reference: 160572N 249519E			
Site Status: Closed			Date: 31-Jan-12		Time: 08:00	
Instrument Used: Infra red Gas Analyser - GA 94				Date Of Calibration: Jul '11 Next Calibration Due: Jan'12		
Monitoring Personnel: Alan Rhatigan			Weather: Dry		Barometric Pressure (mb): 1001	
RESULTS						
Sample Station Number	Borehole/ Spike/ Other	Survey Depth	CH ₄ % v/v	CO ₂ % v/v	O ₂ % v/v	Comments
GM1	Spike	600mm	0.00	0.50	18.80	
GM2	Spike	600mm	0.00	2.00	18.30	
GM3	Spike	600mm	0.00	0.40	18.80	
GM4	Spike	600mm	0.00	0.60	20.00	
GM5	Spike	600mm	0.00	0.50	19.20	
GM7	Spike	600mm	0.00	0.00	20.40	
GM8	Spike	600mm	0.00	0.50	20.40	
GM9	Spike	600mm	0.00	0.60	18.70	
GM10	Spike	600mm	0.00	1.30	16.70	
GM11	Spike	600mm	0.00	0.80	17.10	
GM12	Spike	600mm	0.00	1.40	18.10	
GM13	Spike	600mm	0.00	0.70	16.00	
GM14	Spike	600mm	0.00	0.70	18.30	
GM15	Spike	600mm	0.00	0.20	18.60	
GM16	Spike	600mm	0.00	0.50	18.40	
GM17	Spike	600mm	0.00	1.20	18.10	
GM18	Spike	600mm	0.00	2.10	17.30	
GM19	Spike	600mm	0.00	2.30	16.90	
GM20	Spike	600mm	0.00	0.60	20.20	
GM21	Spike	600mm	0.00	0.60	20.00	
GM22	Spike	600mm	0.00	0.80	19.40	
GM23	Spike	600mm	0.00	0.60	19.50	

January, June and December have been given as sample readings taken in 2012. However no trigger levels were reached during the reporting year.

The upper CO₂ limit of 3% was not exceeded at any stage in 2012

CH₄ was not detected at any of the monitoring points in 2012

LANDFILL GAS MIGRATION MONITORING FORM

Site Name: Dunmore Landfill Site		Site Address: Dunmore, Co. Kilkenny	
Operator: Kilkenny County Council		National Grid Reference: 160572N 249519E	
Site Status: Closed		Date: 29-Jun-12	Time: 09:00
Instrument Used: Infra red Gas Analyser - GA 94		Date Of Calibration: Jul '11 Next Calibration Due: Jan'12	
Monitoring Personnel: Alan Rhatigan		Weather: Wet	Barometric Pressure (mb): 997

RESULTS

Sample Station Number	Borehole/ Spike/ Other	Survey Depth	CH ₄ % v/v	CO ₂ % v/v	O ₂ % v/v	Comments
GM1	Spike	600mm	0.00	0.60	17.50	
GM2	Spike	600mm	0.00	2.20	16.60	
GM3	Spike	600mm	0.00	0.20	18.10	
GM4	Spike	600mm	0.00	0.20	17.80	
GM5	Spike	600mm	0.00	0.70	16.80	
GM7	Spike	600mm	0.00	0.10	17.70	
GM8	Spike	600mm	0.00	0.50	17.80	
GM9	Spike	600mm	0.00	0.60	18.10	
GM10	Spike	600mm	0.00	1.30	16.60	
GM11	Spike	600mm	0.00	0.70	17.10	
GM12	Spike	600mm	0.00	1.40	17.20	
GM13	Spike	600mm	0.00	0.90	14.60	
GM14	Spike	600mm	0.00	0.90	17.50	
GM15	Spike	600mm	0.00	0.10	17.90	
GM16	Spike	600mm	0.00	0.30	18.40	
GM17	Spike	600mm	0.00	0.80	17.50	
GM18	Spike	600mm	0.00	1.40	17.20	
GM19	Spike	600mm	0.00	2.20	8.80	
GM20	Spike	600mm	0.00	0.80	20.10	
GM21	Spike	600mm	0.00	0.40	20.30	
GM22	Spike	600mm	0.00	0.60	19.60	
GM23	Spike	600mm	0.00	0.50	18.80	

LANDFILL GAS MIGRATION MONITORING FORM

Site Name: Dunmore Landfill Site		Site Address: Dunmore, Co. Kilkenny	
Operator: Kilkenny County Council		National Grid Reference: 160572N 249519E	
Site Status: Closed		Date: 01-Dec-12	Time: 09:00
Instrument Used: Infra red Gas Analyser - GA 94		Date Of Calibration: Jul '12 Next Calibration Due: Jan'13	
Monitoring Personnel: Alan Rhatigan		Weather: Dry	Barometric Pressure (mb): 998

RESULTS

Sample Station Number	Borehole/ Spike/ Other	Survey Depth	CH ₄ % v/v	CO ₂ % v/v	O ₂ % v/v	Comments
GM1	Spike	600mm	0.00	0.60	17.50	
GM2	Spike	600mm	0.00	2.30	16.40	
GM3	Spike	600mm	0.00	0.30	18.10	
GM4	Spike	600mm	0.00	0.60	17.60	
GM5	Spike	600mm	0.00	nm	nm	Spike Removed
GM7	Spike	600mm	0.00	0.00	18.20	
GM8	Spike	600mm	0.00	0.70	17.80	
GM9	Spike	600mm	0.00	0.50	17.50	
GM10	Spike	600mm	0.00	nm	nm	Spike Removed
GM11	Spike	600mm	0.00	0.80	17.50	Spike Removed
GM12	Spike	600mm	0.00	nm	nm	Spike Removed
GM13	Spike	600mm	0.00	nm	nm	Spike Removed
GM14	Spike	600mm	0.00	1.20	17.20	
GM15	Spike	600mm	0.00	0.10	17.90	
GM16	Spike	600mm	0.00	0.00	18.40	
GM17	Spike	600mm	0.00	0.90	17.80	
GM18	Spike	600mm	0.00	2.10	17.10	
GM19	Spike	600mm	0.00	nm	nm	
GM20	Spike	600mm	0.00	0.70	19.80	
GM21	Spike	600mm	0.00	nm	nm	Spike Removed
GM22	Spike	600mm	0.00	nm	nm	Spike Removed
GM23	Spike	600mm	0.00	nm	nm	Spike Removed

Spikes removed to facilitate works on GAA pitches. Will be repositioned early 2013

Appendix C
Ground Water
Monitoring
&
Dust Monitoring

Groundwater Parameters & Trends

PH	1st 1/4 2012	2nd 1/4 2012	3rd 1/4 2012	4th 1/4 2012
GW 1	6.6	7.7	7.4	7.2
GW 2	7.2	7.3	7.2	7.2
GW 4	6.9	7.3	7.3	7.2
MW 1	7.0	7.2	7.1	7.2
Well 3	7.2	7.4		
Well 6	7.0	7.1	7.1	7.1
Well 14	7.3	7.6	7.3	7.4
Well 15	7.0	7.1		

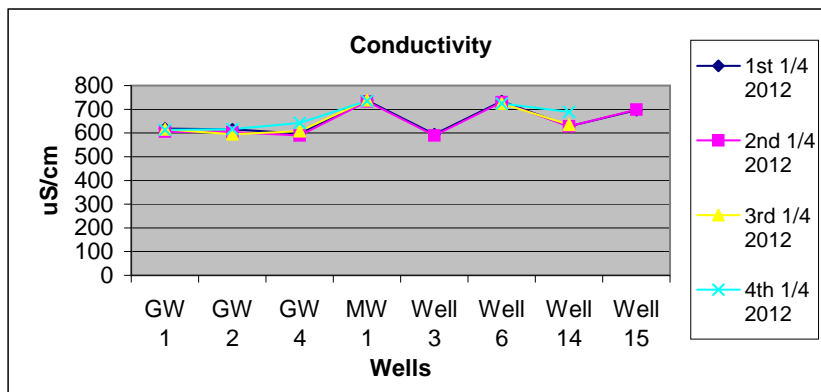
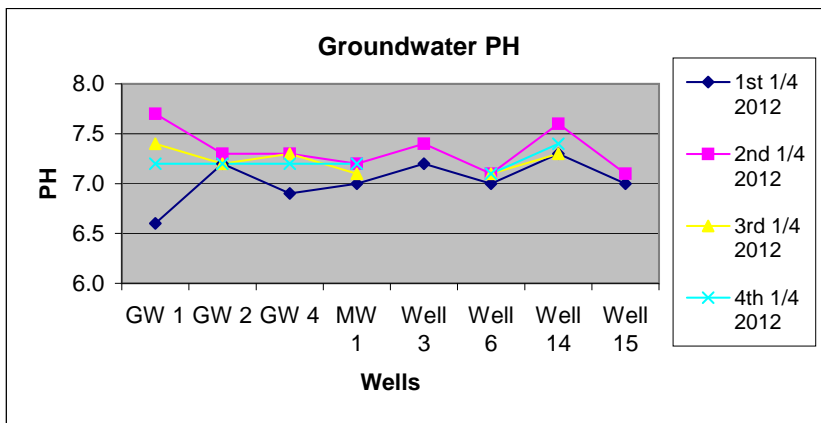
Conductivity uS/cm	1st 1/4 2012	2nd 1/4 2012	3rd 1/4 2012	4th 1/4 2012
GW 1	619	606.0	615.0	613
GW 2	615	604.0	595.0	617
GW 4	598	590.0	608.0	642
MW 1	737	733.0	738.0	735
Well 3	595	589.0		
Well 6	734	730.0	724.0	724
Well 14	628	628.0	635.0	689
Well 15	696	698.0		

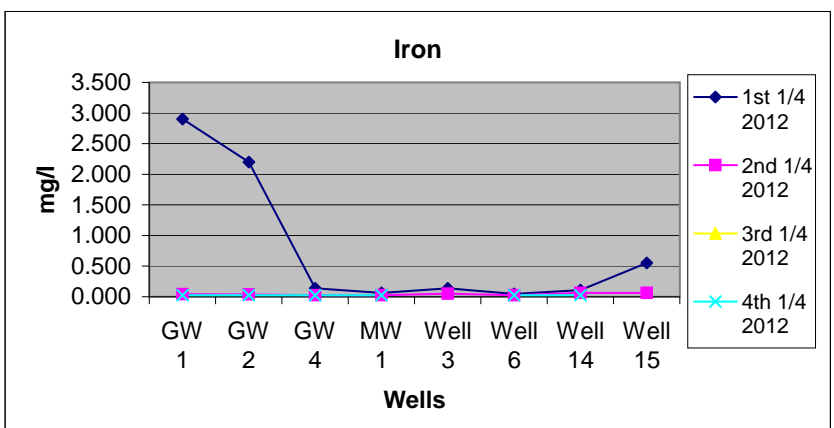
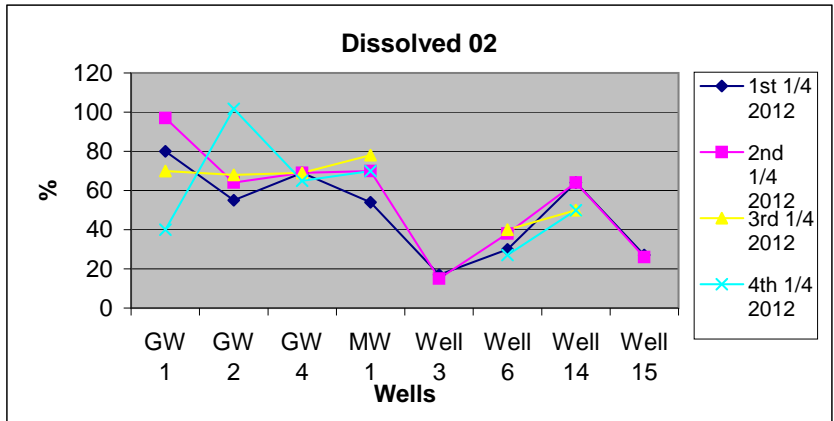
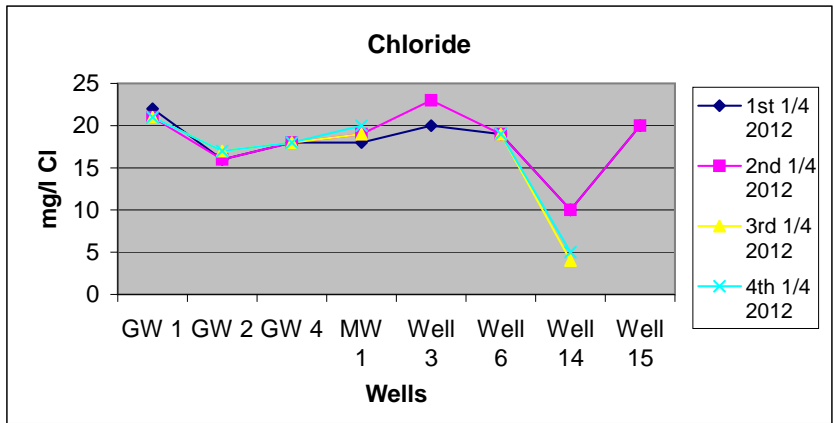
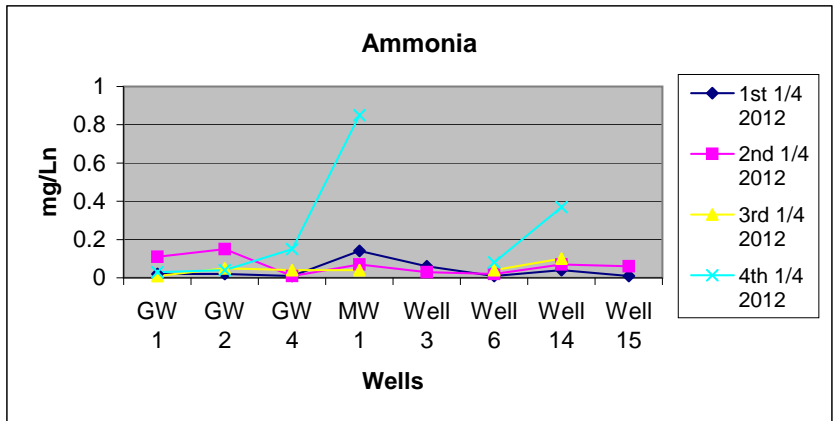
Ammonia mg/l/N	1st 1/4 2012	2nd 1/4 2012	3rd 1/4 2012	4th 1/4 2012
GW 1	0.02	0.11	0.01	0.03
GW 2	0.02	0.15	0.05	0.04
GW 4	0.01	0.01	0.04	0.15
MW 1	0.14	0.07	0.04	0.85
Well 3	0.06	0.03		
Well 6	0.01	0.02	0.04	0.08
Well 14	0.04	0.07	0.10	0.37
Well 15	0.01	0.06		

Chloride mg/l Cl	1st 1/4 2012	2nd 1/4 2012	3rd 1/4 2012	4th 1/4 2012
GW 1	22	21.0	21.0	21
GW 2	16	16.0	17.0	17
GW 4	18	18.0	18.0	18
MW 1	18	19.0	19.0	20
Well 3	20	23.0		
Well 6	19	19.0	19.0	19
Well 14	10	10.0	4.0	5
Well 15	20	20.0		

Dissolved O2 %	1st 1/4 2012	2nd 1/4 2012	3rd 1/4 2012	4th 1/4 2012
GW 1	80	97.0	70.0	40
GW 2	55	64.0	68.0	101.7
GW 4	69	69.0	69.0	65
MW 1	54	70.0	78.0	69.9
Well 3	17	15.0		
Well 6	30	38.0	40.0	27
Well 14	64	64.0	50.0	50
Well 15	27	26.0		

Iron mg/l	1st 1/4 2012	2nd 1/4 2012	3rd 1/4 2012	4th 1/4 2012
GW 1	2.900	0.043		0.025
GW 2	2.200	0.039		0.025
GW 4	0.140	0.025		0.025
MW 1	0.063	0.025		0.025
Well 3	0.140	0.051		
Well 6	0.047	0.025		0.025
Well 14	0.110	0.062		0.025
Well 15	0.550	0.063		





Appendix D

Site Drawing

Appendix E

Status of Objectives and Targets

<u>Objectives</u>	<u>Status</u>	<u>Comments</u>
<p>Objective 1 Ensure that all waste acceptance requirements are met</p>		
<p>Target 1.1 All waste accepted at the facility is within the criteria set out in Part I of the Waste Licence.</p>	Compliant	
<p>Target 1.2 Any restriction on waste entering the facility shall be strictly enforced.</p>	Compliant	
<p>Target 1.3 All waste accepted for recovery and disposal shall be done so within the opening hours i.e. 8.00 – 4.30 Mon –Fri. and 8.00 12.00 Sat.</p>	Compliant	
<p>Objective 2 Provision of required infrastructure at the facility with the agreement of the agency</p>		
<p>Target 2.1 Green Waste Segregation and stock piling commenced in May of 2012. One of the waste quarantine areas is used for this process.</p>	Ongoing Since May 2012	Approved by the EPA
<p>Target 2.5 Storage and shredding area for Christmas Trees shall be provided in the first 2 weeks of</p>	Ongoing Annually	

January.			
Objective 4			
The facility shall be operated to ensure there are no adverse environmental effects as a result of the operation of the facility.			
Target 4.1	All lagoon structures at the site were independently tested to ensure that the liner integrity is up held	Completed Oct 2012	No defects were found in the liner
Target 4.2	The gas flare was serviced every quarter.	Compliant	Serviced by AFS
Objective 5			
Control of emissions at the facility			
Target 5.1	Any emission exceeding trigger levels or unauthorised emission will be notified to the Agency.	Ongoing	Compliant
Objective 6			
To submit all relevant reports and notifications to the Agency in the timeframes specified			
Target 6.1	Any incident at the site shall be notified in accordance with the correct action procedure.	Ongoing	
Target 6.2	All quarterly and annual reports to be submitted as per licence requirements.	Ongoing	

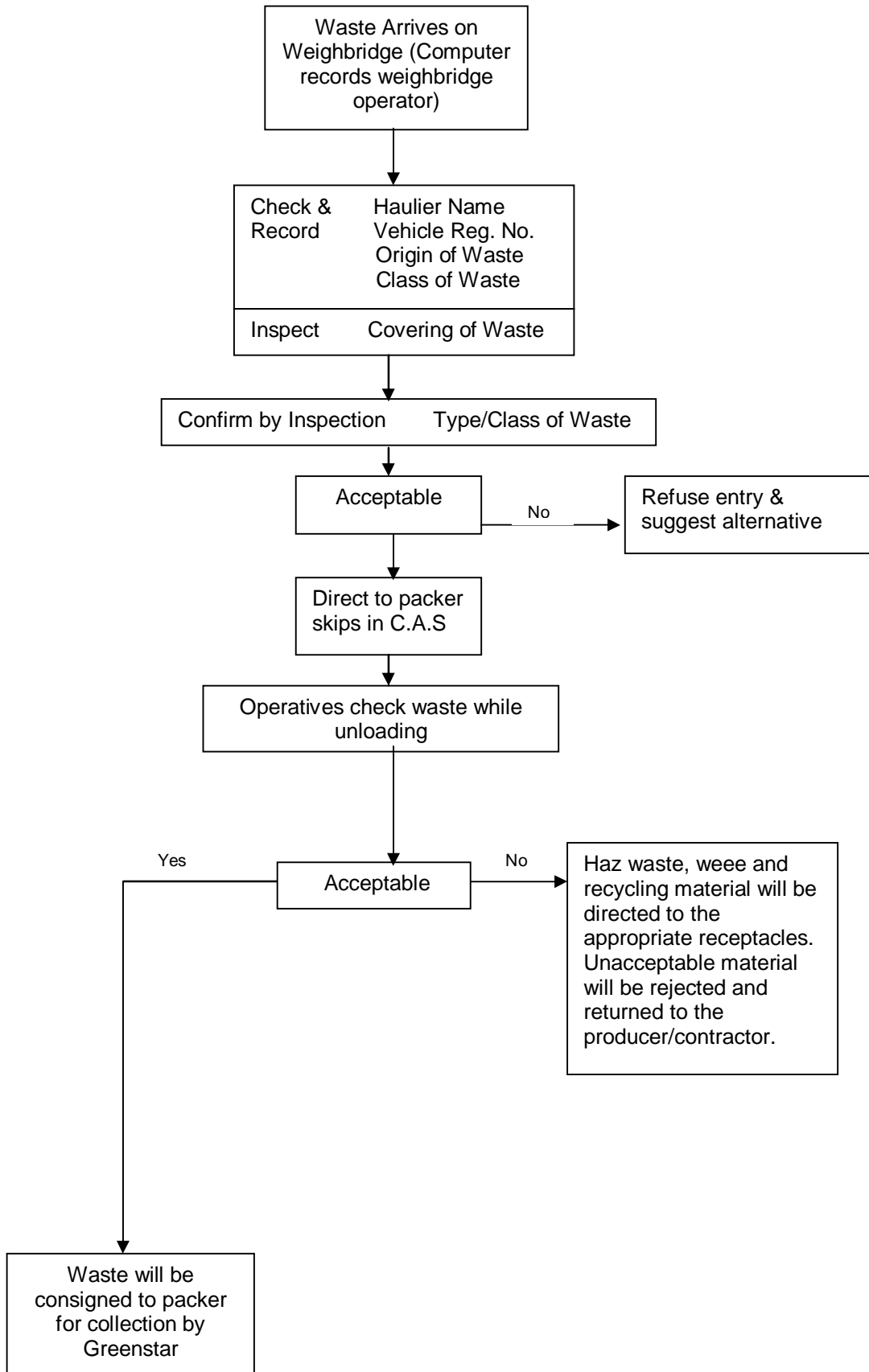
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Appendix F

Waste Acceptance Procedure Flowchart

DUNMORE RECYCLING & WASTE DISPOSAL CENTRE

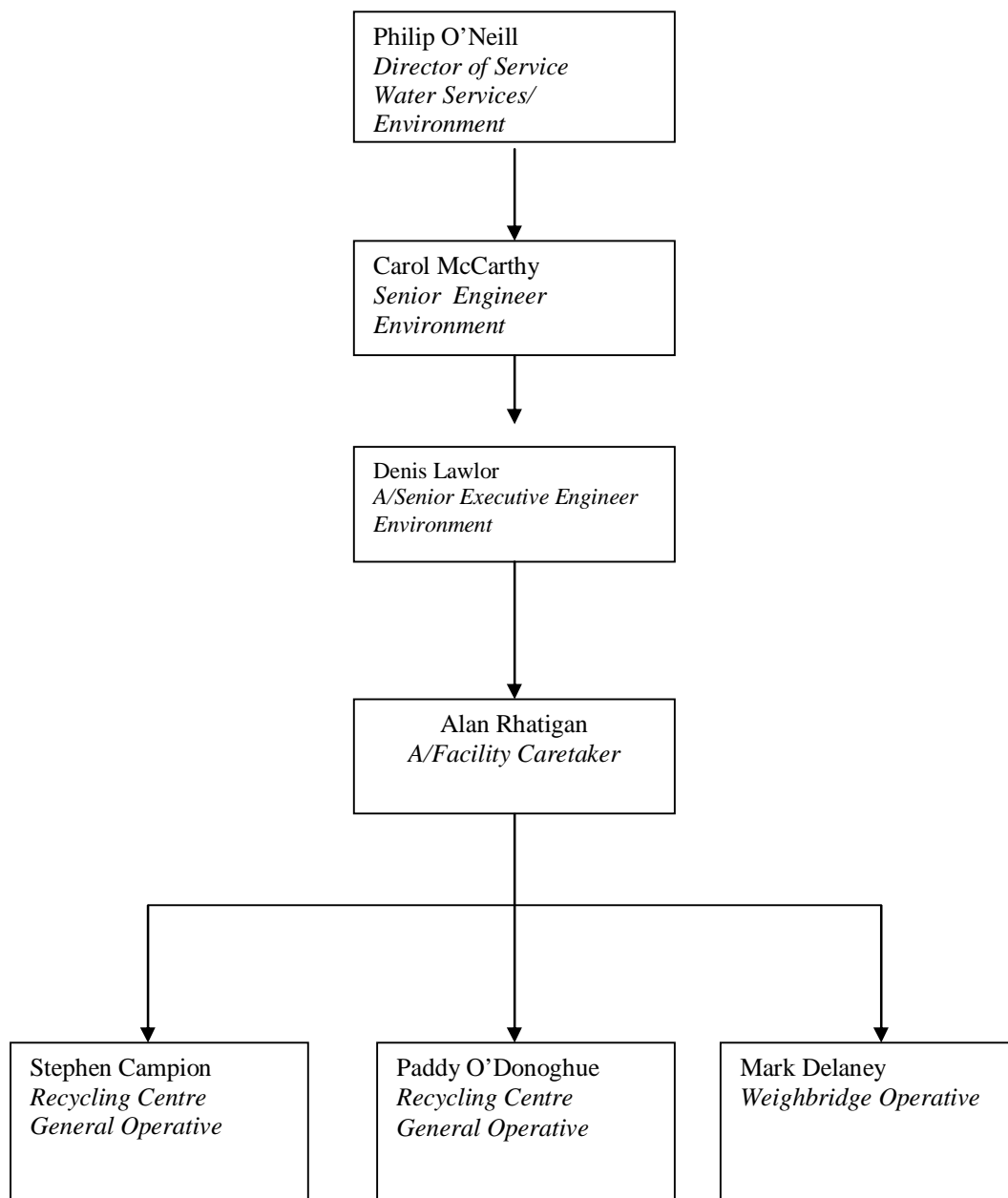
WASTE ACCEPTANCE PROCEDURE



Appendix G

Management Structure

Staff Structure – Dunmore Recycling & Waste Disposal Centre



Appendix H

Sample Flare Data

DATE	TIME	BLOWER	CO	DAMPER_POS	METHANE	OXYGEN	PRESSURE	TEMP	FLOW	CO2
09/03/2012	00:00:11	60.00000000	2.45143199	0.33647373	31.89665413	0.96935707	7.01782513	761.25372314	102.59162140	23.56098366
09/03/2012	00:04:50	60.00000000	2.31524134	0.33647373	31.89264870	0.91828555	6.96975756	764.79467773	102.68775940	23.60905075
09/03/2012	00:34:50	60.00000000	2.55157208	0.33647373	31.89665413	0.79411173	7.05387545	764.69055176	102.31924438	23.56899643
09/03/2012	01:04:50	60.00000000	2.46344876	0.33967823	31.70438576	0.79411173	7.04185867	762.86798096	101.71038818	23.47286034
09/03/2012	01:34:50	60.00000000	2.56759453	0.33967823	31.82054710	0.77308226	7.08391762	762.60766602	101.74243164	23.29661369
09/03/2012	02:04:50	60.00000000	2.58762264	0.33967823	31.94472122	0.76607245	6.99979973	772.24114990	102.33526611	23.72120857
09/03/2012	02:34:50	60.00000000	2.52753854	0.33967823	31.844458160	0.79110754	7.07190084	770.73101807	102.12697601	23.55297279
09/03/2012	03:04:50	60.00000000	2.68375707	0.33647373	31.86460876	0.89825749	7.14400148	767.86700439	102.31924438	23.76126480
09/03/2012	03:34:50	60.00000000	2.49549365	0.33647373	31.80853081	1.17364299	6.99379110	763.75323486	101.05347443	23.49689484
09/03/2012	04:04:50	60.00000000	2.39535332	0.33967823	31.85659790	1.46805525	7.01782513	766.40893555	101.10153961	23.65311432
09/03/2012	04:34:50	60.00000000	2.49949908	0.33647373	31.84858704	1.66433001	7.12597656	769.27294922	101.19766998	23.66913605
09/03/2012	05:04:50	60.00000000	2.29921889	0.33647373	31.78049088	1.75445616	7.20408583	771.09552002	100.98937988	23.75325394
09/03/2012	05:34:50	60.00000000	2.42339253	0.33647373	31.89264870	1.83056271	7.08391762	774.27197266	100.33245850	23.84938812
09/03/2012	06:04:51	60.00000000	2.66773462	0.33647373	31.81654167	1.87462437	7.07190084	766.46105957	100.90927124	23.75325394
09/03/2012	06:34:51	60.00000000	2.46745443	0.33647373	32.01682281	1.83857393	7.08391762	763.85736084	100.54075623	23.48087311
09/03/2012	07:04:51	60.00000000	2.39535332	0.33647373	31.77248001	1.83156407	6.98177433	766.66931152	100.28439331	23.70919228
09/03/2012	07:34:51	60.00000000	2.49148798	0.33647373	31.78449631	1.83356690	7.01181650	763.18041992	101.24574280	24.00560760
09/03/2012	08:04:51	60.00000000	2.49549365	0.33647373	31.78049088	1.80152202	7.04185867	771.66833496	101.05347443	23.85339355
09/03/2012	08:34:51	60.00000000	2.44342065	0.33647373	31.69637299	1.71840572	6.99979973	767.45043945	101.18164825	23.77728653
09/03/2012	09:04:51	60.00000000	2.34728599	0.33647373	31.58021164	1.75145197	7.08391762	763.23254395	101.32585144	23.62907982
09/03/2012	09:34:51	60.00000000	2.32725811	0.33647373	31.58021164	1.84558380	6.97576618	766.40893555	100.70097351	23.72921944
09/03/2012	10:04:51	60.00000000	2.57160020	0.33647373	31.58021164	2.09192872	6.86160612	761.93066406	99.83576965	23.75275937
09/03/2012	10:34:51	60.00000000	2.32725811	0.33326921	31.54015541	2.38634086	6.74143791	761.35791016	97.49649048	24.20188141
09/03/2012	11:04:51	60.00000000	2.49949908	0.32686019	31.34387970	2.45844173	6.72341299	765.52374268	97.51251221	24.35810089
09/03/2012	11:34:51	60.00000000	2.31524134	0.32686019	31.25575638	2.37432384	6.96975756	762.92010498	96.39094543	23.97356224
09/03/2012	12:04:51	60.00000000	2.48347688	0.32686019	31.17163849	2.35730004	6.84958935	761.77447510	93.98757935	23.68115234
09/03/2012	12:34:51	60.00000000	2.53955531	0.32686019	31.17163849	2.41938710	6.92169046	760.57678223	95.10914612	24.28599930
09/03/2012	13:04:51	60.00000000	2.33526921	0.32686019	31.17964935	2.45944309	6.66332865	750.16223145	91.19967651	24.26196480
09/03/2012	13:34:51	60.00000000	2.52753854	0.32686019	31.21169472	2.48748231	6.99379110	769.01263428	92.57760620	24.51031303
09/03/2012	14:04:52	60.00000000	2.45143199	0.32686019	31.29180717	2.50550771	6.85559797	765.78405762	85.49568939	24.31804466
09/03/2012	14:34:52	60.00000000	2.20308423	0.32365569	31.21169472	2.52253151	6.81954718	771.92871094	84.19787598	24.37812805
09/03/2012	15:04:52	60.00000000	2.41938710	0.32365569	31.18365669	2.55257344	6.85559797	761.35791016	80.35249329	24.39815712
09/03/2012	15:34:52	60.00000000	2.45944309	0.32365569	31.25976181	2.61365891	7.00580788	773.85540771	87.49849701	24.53034210
09/03/2012	16:04:52	60.00000000	2.45143199	0.32365569	31.05948257	2.67574596	6.88563967	766.51312256	85.38352966	24.30602837
09/03/2012	16:34:52	60.00000000	2.51552153	0.32365569	31.16763306	2.73382735	6.86761475	770.36651611	89.40516663	24.67053795
09/03/2012	17:04:52	60.00000000	2.45143199	0.32365569	31.11155510	2.77488470	6.81954718	765.05505371	90.83116150	24.62247086
09/03/2012	17:34:52	60.00000000	2.42739820	0.32365569	30.99138641	2.78089309	6.86761475	767.76287842	92.22511292	24.30602837
09/03/2012	18:04:52	60.00000000	2.49949908	0.32365569	31.02343178	2.76286793	6.85559797	771.19964600	94.01962280	24.35009003
09/03/2012	18:34:52	60.00000000	2.42739820	0.32365569	31.14360046	2.74183846	6.71139574	770.00201416	95.41357422	24.35409546
09/03/2012	19:04:52	60.00000000	2.50350475	0.32365569	30.94732475	2.72281194	6.90967369	772.29321289	95.81413269	24.15781975
09/03/2012	19:34:52	60.00000000	2.48347688	0.32045117	31.02343178	2.70078087	6.93370724	769.01263428	96.42298889	24.23392677
09/03/2012	20:04:52	60.00000000	2.56358886	0.32365569	30.83116150	2.68676138	6.88563967	762.97216797	96.90366364	24.12577438
09/03/2012	20:34:52	60.00000000	2.44342065	0.32045117	30.81914520	2.65972352	6.93370724	764.11773682	96.37492371	23.83737183
09/03/2012	21:04:52	60.00000000	2.38734221	0.32365569	30.85920143	2.61566186	6.90967369	756.41094971	97.33626556	23.44482231

09/03/2012 21:34:52	60.00000000	2.46344876	0.32045117	30.96735382	2.56459022	6.93370724	760.05609131	98.29761505	23.99358940
09/03/2012 22:04:52	60.00000000	2.43540955	0.32365569	30.93530846	2.48447824	7.03585005	760.62884521	98.82635498	23.80132103
09/03/2012 22:34:52	60.00000000	2.49148798	0.32365569	30.94331932	2.42639685	6.93370724	754.74462891	99.80371857	23.93350601
09/03/2012 23:04:52	60.00000000	2.53955531	0.32365569	30.74303818	2.37832952	6.96374941	752.24511719	100.01201630	23.57300186
09/03/2012 23:34:53	60.00000000	2.59963942	0.32365569	30.81914520	2.32425380	6.97576618	748.18347168	100.09212494	23.74924850
10/03/2012 00:00:18	60.00000000	2.43540955	0.32365569	30.83116150	2.29020619	7.04786682	755.68194580	100.09212494	23.72921944

Appendix I

Emergency Response

Procedures

&

Contact Numbers

Emergency Response Procedures:

<p>Explosion</p>	<ol style="list-style-type: none"> 1. Call-out Fire Brigade 2. Evacuate Site 	<p>Engineer in Charge Chief Fire Officer EPA</p>
<p>Fire-Vehicle</p>	<p>Control with Vehicle or site fire extinguishers. If unsafe or out of control, call out Fire Brigade</p>	<p>Machinery Yard Engineer Vehicle Owner Engineer in Charge</p>
<p>Fire-Site</p>	<ol style="list-style-type: none"> 1. Cover with Inert Material. 2. If unsafe, or out of control evacuate site and call-out Fire Brigade. 	<p>Engineer in charge. EPA</p>
<p>Oil Spillage</p>	<p>Contain with oil sorbent material</p>	<p>Engineer in charge. EPA Southern Regional Fishery Board</p>
<p>Leachate Spillage</p>	<p>Contain with clay bunds, Dam watercourses, if necessary. Suction up spillage with Vacuum tanker or leachate Tanker.</p>	<p>Engineer in charge. EPA Southern Regional Fishery Board</p>
<p>Injury to Persons</p>	<ol style="list-style-type: none"> 1. Call Ambulance 2. Apply First Aid 	<p>Trained First-aiders Engineer in charge.</p>

Emergency Response Numbers: -

Gardai Station (056) 7722222
Dominic St
Kilkenny.

Fire Station (056) 7794400
Gaol Rd
Kilkenny.

Ambulance (056) 7751133

Environmental Protection Agency – OEE
(053) 9160600
LoCall 1890 335599

Southern Regional Fisheries Board (052) 80055

Appendix J

PRTR Report



Environmental Protection Agency

[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.15

REFERENCE YEAR	2012
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1. FACILITY IDENTIFICATION

Parent Company Name	Kilkenny County Council
Facility Name	Dunmore Landfill
PRTR Identification Number	W0030
Licence Number	W0030-02

Waste or IPPC Classes of Activity

No.	class_name
3.5	Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.
3.1	Deposit on, in or under land (including landfill).
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.
3.4	Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.
4.10	The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.
4.11	Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.
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.
4.9	Use of any waste principally as a fuel or other means to generate energy.
Address 1	Dunmore
Address 2	Co. Kilkenny
Address 3	
Address 4	
Country	Kilkenny
Country	Ireland
Coordinates of Location	-7.26476 52.6946
River Basin District	IESE
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Alan Rhatigan
AER Returns Contact Email Address	alan.rhatigan@kilkennycoco.ie
AER Returns Contact Position	A/Supervisor
AER Returns Contact Telephone Number	056 7794490
AER Returns Contact Mobile Phone Number	087 7656895
AER Returns Contact Fax Number	056 7767859
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	4
User Feedback/Comments	This site is closed and fully capped since 2010. All methane generated is captured and flared.
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(d)	Landfills
5(c)	Installations for the disposal of non-hazardous waste
5(d)	Landfills
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) ?	No
--	----

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

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

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

Additional Data Requested from Landfill operators

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

Landfill: Please enter summary data on the quantities of methane flared and / or utilised	Dunmore Landfill				
	T (Total) kg/Year	M/C/E	Method Used		Facility Total Capacity m3 per hour
			Method Code	Designation or Description	
Total estimated methane generation (as per site model)	204330.0	E	Estimated	Estimated	N/A
Methane flared	204330.0	M	Othw	On-site-data	500.0 (Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0 (Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : W0030 | Facility Name : Dunmore Landfill | Filename : W0030_2012.xls | Return Year : 2012 |

14/03/2013 12:23

Please enter all quantities on this sheet in Tonnes

3

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	Haz Waste : Address of Next Destination Facility	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)
						Non	Non Haz Waste: Address of Recover/Disposer		M/C/E	Method Used		
Within the Country	19 07 03	No	1911.0 in 19 07 02	landfill leachate other than those mentioned	D6	M	Weighed	Offsite in Ireland	Kilkenny County Council Purcellsinch waste water treatment plant,Purcellsinch waste water treatment plant	Purcellsinch waste water treatment plant,,Kilkenny,,Ireland		

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

[Link to previous years waste data](#)

[Link to previous years waste summary data & percentage change](#)