Annual Environmental Report 2011

Waste Licence (Reg. W0217-01)

March 2012

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Killarney Waste Disposal Ltd

Aughacureen, Killarney, Co. Kerry
Waste Licence Reg. No. W0217-01

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1.0 Introduction

This document is the fifth Annual Environmental Report (AER) covering environmental performance at the Killarney Waste Disposal Ltd., Aughacureen facility. Killarney Waste Disposal Ltd. was issued a Waste Licence (Reference No. W0217-01) by the EPA on August 1st, 2006. Before the granting of the Waste Licence, the facility reported annual environmental performance to Kerry County Council as a condition of their Waste Permit (WP23/03).

The report covers the period from January 1st to December 31st, 2011 and has been prepared in accordance with the Environmental Protection Agency (EPA) '*Guidance Note for Annual Environmental Report*' (October 2000) and other relevant guidance as provided by the EPA on its website (www.epa.ie).

Since the Waste Licence was issued in August 2006, Killarney Waste Disposal Ltd. (KWD) has installed a dust gauges and conduct routine surface and groundwater water sampling. In addition, a number of lower frequency reports have been commissioned to assess the impact of Killarney Waste Disposal Ltd. operations on the local environment such as a Hydrological Assessment, an Energy Assessment and assessments of Raw Material and Water Consumption on site.

The next AER will cover the calendar year 2012 and will be issued in early 2013.

1.1. Licence Details

Licensee:	Killarney Waste Disposal Limited.
Waste Licence Register No.:	W0217-01
Licence Issue date:	01 August 2006
Location of Activity	Aughacureen, Killarney, Co. Kerry

1.2. Summary Data Table

Current Waste Licence annual reporting requires the submission of an EPA Pollution Release Transfer Register (PRTR). This documents emissions and waste management information in the form of a spreadsheet, which is transmitted to the Agency electronically.

The PRTR has been submitted to the Agency electronically to the EPA at http://aer.epa.ie/prtr.

1.3. Description of Facility

KWD, a Material Recovery Facility (MRF) first established in 1987, is located on a 2.2 hectare site at Aughacureen, approximately 4 km northwest of Killarney Town. The MRF is situated on a rural site and there is no considerable residential or commercial development in its proximity. The primary landuse of the surrounding locale is agricultural with some of the land now being used for commercial forestry.

KWD directly employs approximately 65 staff.

A copy of the Environmental Management Structure for the facility is outlined in Figure 1.3.1.

Normal operating hours at the facility are 07.00. to 20.00, Monday to Saturday inclusive and waste is accepted at and dispatched from the facility between the times of 07.30 and 19.30.

KWD see contamination as a significant issue, affecting the efficiency of waste collection and segregation processes. As a result, KWD have focused additional emphasis on housekeeping and waste storage procedures on site. All work surfaces are cleaned regularly and maintained to a suitable standard to prevent the build up of anaerobic bacteria. All areas where there is potential for the generation of odour (i.e. temporary storage areas, skips, bins etc.) are covered to reduce the potential for escape of odours.

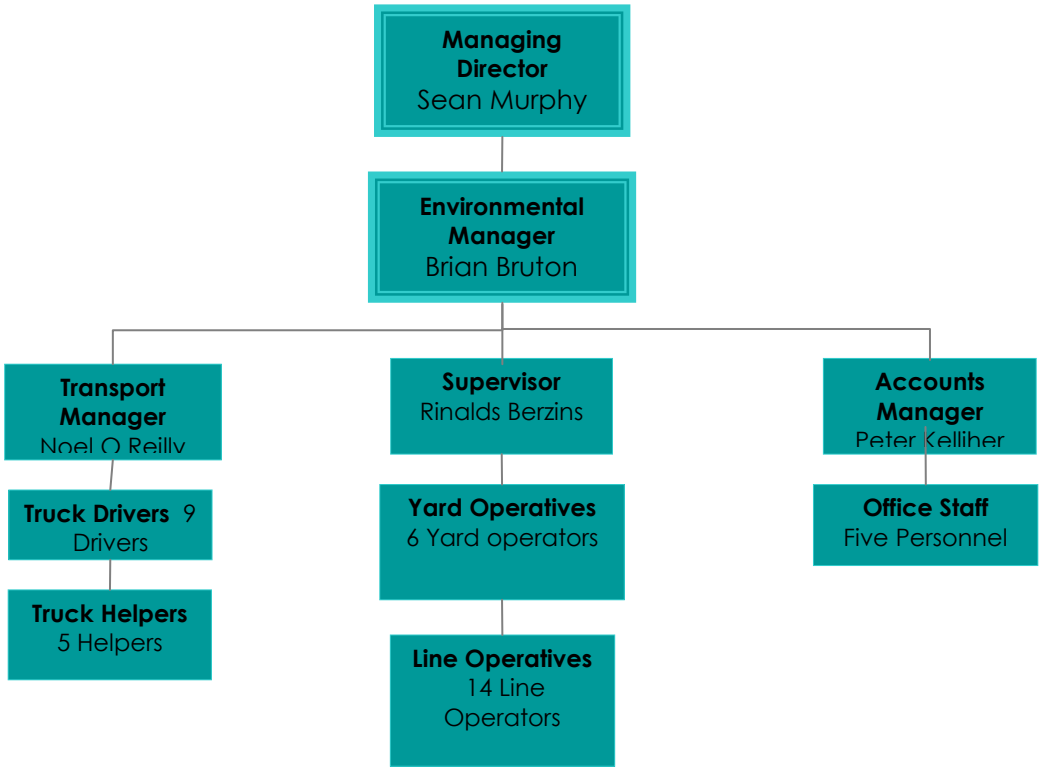


Figure 1.3.1 Company Environmental Management Structure

1.4. Description of Activity

The Waste Licence Register Number W0217-01 allows for up to 40,000 tonnes of waste to be processed at the facility per annum (Schedule A). In October 2009, a proposal to increase the intake of dry recyclables from 6,500tpa to 28,000tpa was approved by the Agency. KWD proposed to reduce intake of a number of other waste steams to balance against this increase and to comply with the overall tonnage limit.

Table 1.4.1 shows the breakdown of intake limits as agreed with the Agency before and after October 2009:

Table 1.4.1 Waste Categories and Quantities KWD are Licenced to Process

Waste Type	Max (tpa) set out in Licence W0217-01	Max (tpa) effective from end Oct 2009
Mixed Municipal Waste	15,500	9,000
Organic Waste (Kitchen and Canteen)	6,000	1,000
Dry Recyclable Wastes	6,500	28,000
Non-hazardous C&D Waste	12,000	2,000
TOTAL	**40,000**	**40,000**

Waste is accepted from a number of domestic and commercial waste sources in the Cork/Kerry Region. Processed materials are sold to customers for further processing and recycling.

KWD operate licenced waste disposal and recovery activities under the current Waste Licence in accordance with the Third and Fourth Schedule of the Waste Management Acts 1996 to 2005.

Schedule A of the current Waste Licence specifies the authorised processes that can be carried out at KWD MRF as set out below:

	Authorised Process
i	The sorting and separation of waste to recover organic substances such as paper and cardboard, plastics, wood, and biodegradable waste (kitchen and canteen waste).
ii	Sorting of metals from other wastes.
iii	Sorting, separation and processing of mixed municipal waste separately collected dry recyclables and non-hazardous Construction & Demolition waste to recover organic substances, inorganic materials and metals.
iv	The drying of organic substances.
V	The shredding of wood.
vi	The baling, wrapping and placing of waste into containers or trailers prior to submission to a recycling facility.
vii	The exchange of recycling at the facility.
viii	The mixing and baling of wastes prior to transfer to another facility for disposal.
ix	Storage of waste prior to recovery/disposal off-site

Process Description

All incoming waste is weighed on the weighbridge, located near the site entrance and the following information is recorded for site records:

- Description of waste, waste types, composition form and relevant EWC code
- Origin of waste including customer details
- Weight of the waste load
- Truck registration

The waste material is deposited in the MRF at the Waste Intake Area where it is inspected prior to processing. Any load failing inspection is transferred to the quarantine area where it undergoes further inspection and if found to be non complaint is returned to the customer.

Waste for recovery is segregated into the relevant waste steams and depending on the nature of the material is either bailed for further processing offsite or loaded for offsite disposal.

Materials undergoing further processing offsite are transferred to the holding area where they are stored until sufficient quantities are available for shipment by container.

KWD ensures that all information relating to the loading of containers on site is recorded for site records. All containers are sealed prior to shipment off site.

The main waste streams for processing are set out below:

- Mixed Municipal Waste originating from both domestic and commercial sources.
- Source segregated waste, including organic waste and dry recyclables (plastic, paper, cardboard and packaging waste, glass and metals).
- Timber.
- Construction and Demolition (C&D) waste.

Dry recyclables are delivered to the facility and processed every week. The processing of C&D waste takes place over a few hours weekly. Storage of the waste is minimised as far as possible with regular shipments off site.

Mixed Municipal Waste

Mixed Municipal Waste, including household and commercial wastes (originating from, factories, offices, hotels, and retail sources) are stored and shipped to landfill. The process diagram for Mixed Municipal Waste is shown in Figure 1.4.1.

Dry Recyclables

Source segregated municipal dry recyclables originate from the same sources as the Mixed Municipal Waste (the majority of customers, both domestic and commercial, have a green bin and a black bin, collections alternating every second week). The dry recyclables waste stream requires a significant amount of processing due to its nature. The process stream can be seen in Figure 1.4.2. A ballistatic separator is employed in the case of mixed dry recyclables, whereas segregated dry recyclables are simply inspected and baled.

Organics

Organic waste goes to a bulk trailer and is shipped to an Irish compost facility, as shown in Figure 1.4.3.

Construction and Demolition (C&D) Wastes

C&I (or C&D) waste from commercial and industrial sources is tipped internally and pre-sorted to remove bulky items and large metals. The residual material is passed through a Trommel to remove the fine fraction containing subsoil and topsoil. The C&I fines are sent to landfill as cover material. The remaining material (non-fine fraction) is sent over a picking line and segregated into metals, concrete, timber, plasterboard and residual material. Metals are stored pending removal off-site and timber is sent to the on-site timber shredder. Recoverable materials are sent off-site for recovery and residual material is sent to landfill. The processing of C&D waste is shown in Figures 1.4.4 and 1.4.5. No hazardous waste is at present accepted at the facility.

Waste Process Diagrams

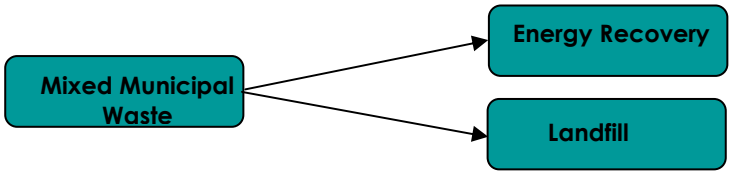


Figure 1.4.1.: Municipal Waste

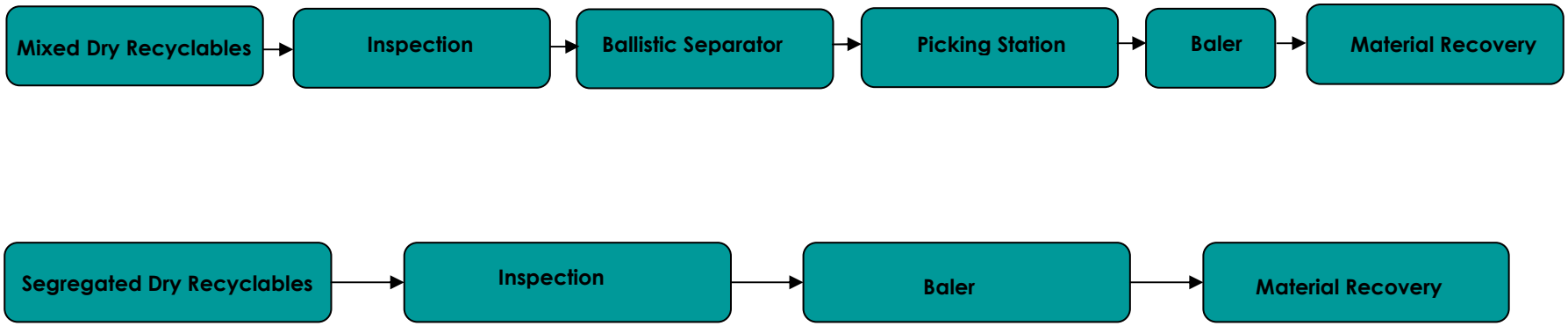


Figure 1.4.2.: Dry Recyclables

Figure 1.4.3.: Organics

Figure 1.4.4.: Timber from Construction and Demolition Sources

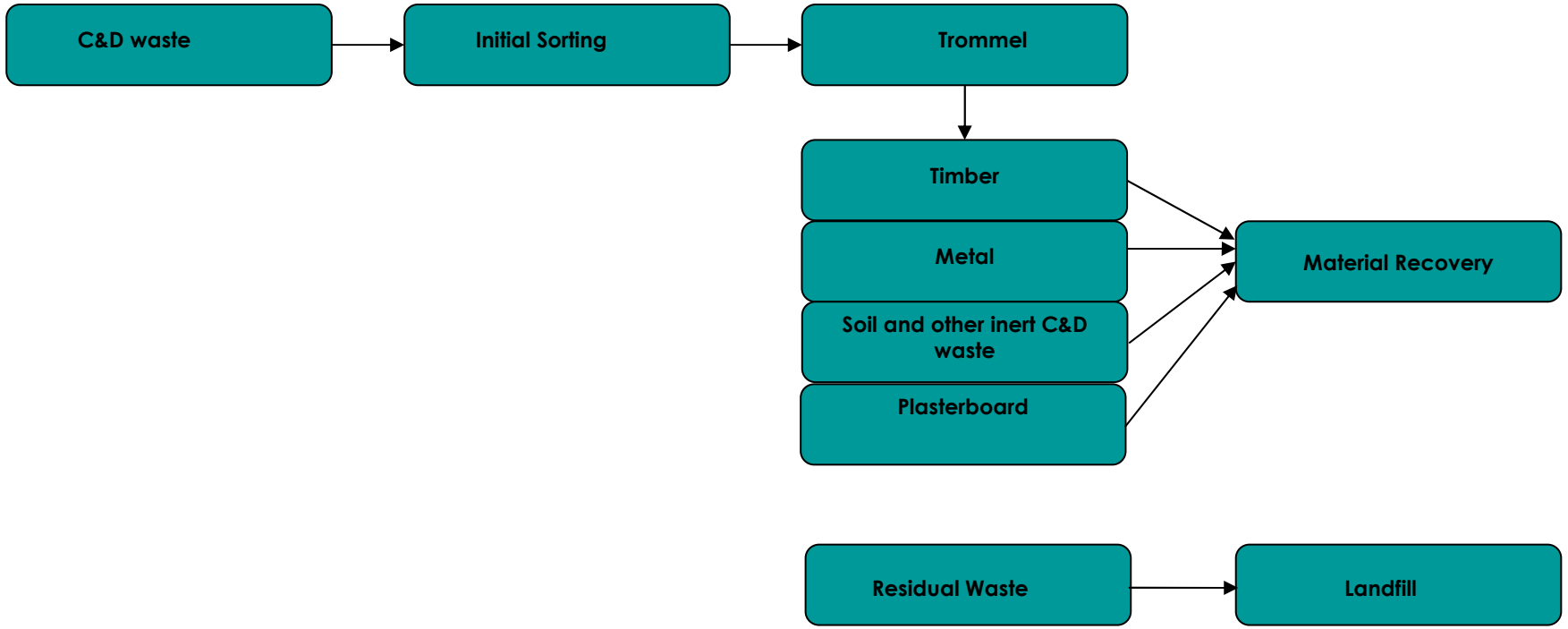


Figure 1.4.5.: Construction and Demolition Waste

2.0 Discharges, Wastes and Resources Summary Data

This section of the AER summarises all environmental and resource monitoring information for the calendar year 2011.

Information on discharges to water are summarised and are based on the average measured concentration for the relevant parameter from the relevant emission point.

Information on waste arisings is presented in accordance with the PRTR electronic report spreadsheet as issued by the EPA.

Summary totalised and relative data on resource (*power and fuel*) at the plant during 2011 are presented in comparison with previous year's data to allow comparison.

Summary information on all emissions and discharges, waste arisings and resource use has been compiled on an electronic spreadsheet. The spreadsheet has also been submitted electronically to the Agency in the Pollution Release and Transfer Register (PRTR) at http://aer.eap.ie/prtr.

2.1 Process Effluent

The processing of municipal waste gives rise to an effluent which is collected in an underground bund within the Materials Recovery Facility. The composition of this process effluent would be typical of a landfill leachate. It has been previously estimated that approximately 6.8 m^3 of effluent is produced per month, based on outgoing weighbridge dockets.

As per Condition 11.10, for each consignment of process effluent removed from the facility, the following is recorded:

- The name of the tanker transporter.
- Details of the ultimate disposal/recovery destination.
- The date and time of removal of process effluent from the facility.
- The volume of process effluent in cubic metres, removed from the facility on each occasion.
- Any incidents or spillages of process effluent during its removal or transportation.

A fully bunded pre-cast concrete underground effluent collection tank has been installed to collect all liquid arising, prior to its transport by tanker to Tralee Waste Water Treatment Plant (WWTP) for treatment.

KWD do not discharge process effluent to sewer and are required to monitor the process effluent on an annual basis as per Schedule C.4 Waste Monitoring.

Monitoring results for the process effluent are shown in Table 2.1.1

Table 2.1.1. Process Effluent Results 2011

Parameter	Process Effluent
Antimony ug/l	1.25
Arsenic µg/l	5.28
Barium mg/l	0.091
Boron mg/l	<1
BOD mg/l	337
Cadmium mg/l	<1
Chromium mg/l	0.009
Chloride mg/l	226
Cobalt mg/l	0.003
Copper mg/l	0.004
COD mg/l	910
TON mg/l	109
Total Ammonia as N mg/l	86.5
Lead mg/l	0.012
Iron mg/l	1.04
Manganese mg/l	1.16

Parameter	Process Effluent
Mercury µg/l	<0.5
Molybdenum µg/l	1.59
Nickel mg/l	0.024
Selenium µg/l	11.6
Chloride mg/l	226
Sulphate mg/l	76.4
Tellurium µg/l	<5
Thallium µg/l	<1
Tin Mg/l	<0.005
Zinc mg/l	0.084
Vanadium µg/l	13.3
US EPA 624 VOLATILE Screen Compounds (with the exception of the following)	**<1**
1,2,4-Trimethylbenzene µg/l	5.5
1,3,5-Trimethylbenzene µg/l	4.6
Ethylbenzene µg/l	4.8
Meta/para-Xylene µg/l	136
Ortho-Xylene µg/l	20.9
p-Isopropyltoluene µg/l	3.0
US EPA 625 VOLATILE Screen Compounds (All parameters)	**<0.001**

There are no emission limit values for process effluent set out in the Waste Licence.

2.2 Surface Water

Surface water runoff is collected from roof and yard areas. The system comprises of two collection systems which discharge to separate holding tanks. From the holding tanks, the surface water is pumped to a precast concrete oil/water separator where it flows by gravity to an aerated lagoon and on to a settling pond. Overflow from the pond discharges to ground via a reed bed and a gravel percoloation trench. The percolation trench extends to a stream which borders the site and it is likely that some or all of the surface water from the site ultimately reaches this stream, one of the headwater tributaries of the Glanooragh River.

Average surface water runoff has been estimated at approximately 7.4m^3/day. Storm water collected is discharged via R1, R2 and SW1 licenced emission points.

In accordance with Schedule C.2.3 of the site Waste Licence, analysis of pH, conductivity, suspended solids, total ammonia, sulphate and chloride is undertaken on a weekly basis for emission point SW1 and annually for emission points R1 and R2. Heavy Metal analysis is carried out biannually for SW1 and annually for R1 and R2. A visual inspection of the storm water discharge is carried out on a weekly basis at R1 and R2 and daily at SW-1.

Samples from SW1 were analysed on a weekly basis during the 2011 reporting period. However, there was no flow at certain periods and hence, it was not possible to collect a sample at these times.

The heavy metal concentration is reported as the sum of antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, tellurium, thallium and tin as required by Schedule C.2.3 of the Waste Licence.

The surface water analytical results for from roof areas R1and R2 are outlined in Table 2.2.1 and Figure 2.2.1. Full weekly results for SW1 are shown in Table 2.2.2

Table 2.2.1 R1 R2 Surface Water Analytical Results and Heavy Metal Results 2011

Parameter	R1	R2	Annual Average Environmental Quality Standard Inland Waters
Antimony µg/L	8.57	10.4	-
Arsenic µg/L	<1	<1	25
Cadmium µg/L	<1	<1	<0.08
Chloride mg//L	27.6	44.5	-
Chromium µg/L	<0.001	<0.001	3.4
Copper µg/L	<0.001	<0.001	7.2
Lead µg/L	<0.001	<0.001	-
Mercury µg/L	<0.5	<0.5	0.05
Nickel µg/L	<0.001	<0.001	20
pH	6.8	6.8	-
Selenium µg/L	<1	<1	-
Sulphate mg//L	3.59	5.57	-
Tellurium µg/L	<0.5	<0.5	-
Thallium µg/L	<1	<1	-
Tin µg/L	<0.005	<0.005	-
Conductivity µs	94.7	150	-
Suspended Solids mg/L	2	<2	-
Total Ammonia mg/L	0.13	0.04	-

There are no emission limit values for surface water parameters set out in the Waste Licence. Where possible the results have been compared to National Environmental Quality Standards in accordance with S.I. N0 272 of 2009. As can be seen all emissions are well below the annual average Environmental Quality Standard for Inland Waters.

Week	pH	Conductivity	Total Ammonia as N	Chloride	Suspended Solids	Sulphate
		µS	mg/l	mg/l	mg/l	
Surface Water Regulations Trigger Level	***>6 or <9***	***2500***	***≤0.04 (mean) or ≤0.090 (95%ile***			
Drinking Water	***≥ 6.5 and ≤9.5***			***250***		***250***
Trigger Levels	***7.43***	***1,000***	***0.4***	***48.34***	***50***	***250***
1	-	-	-	-	-	-
2	-	-	-	-	-	-
3	**6.9**	**445**	**0.26**	**47.9**	**11**	**67.7**
4	**6.8**	**594**	**0.46**	**43.9**	**42**	**92.6**
5	**6.8**	**546**	**0.53**	**37.24**	**22**	**93.87**
6	**7**	**357**	**0.16**	**32.4**	**6**	**56.2**
7	**6.9**	**364**	**0.11**	**26.21**	**6**	**58.19**
8	**6.9**	**404**	**0.11**	**25.74**	**8**	**62.95**
9	-	-	-	-	-	-
10	-	-	-	-	-	-
11	-	-	-	-	-	-
12	-	-	-	-	-	-
13	**6.6**	**535**	**0.12**	**23.6**	**22**	**88.17**
14	-	-	-	-	-	-
15	**6.9**	**512**	**<0.02**	**25.2**	**4**	**86.7**

Week	pH	Conductivity	Total Ammonia as N	Chloride	Suspended Solids	Sulphate
			µS	mg/l	mg/l	mg/l
Surface Water Regulations Trigger Level	***>6 or <9***	***2500***	***≤0.04 (mean) or ≤0.090 (95%ile***			
Drinking Water	***≥ 6.5 and ≤9.5***			***250***		***250***
Trigger Levels	***7.43***	***1,000***	***0.4***	***48.34***	***50***	***250***
16	-	-	-	-	-	-
17	-	-	-	-	-	-
18	**7**	**558**	**<0.02**	**23.4**	**16**	**92.8**
19	**6.9**	**435**	**0.05**	**18.9**	**7**	**71.9**
20	-	-	-	-	-	-
21	**6.9**	**566**	**<0.02**	**19.8**	**8**	**75.4**
22	-	-	-	-	-	-
23	**7.4**	**520**	**0.09**	**20.8**	**4**	**47.3**
24	**6.9**	**529**	**0.07**	**19.1**	**13**	**24.5**
25	**8.1**	**502**	**0.09**	**16.07**	**14**	**30.9**
26	-	-	-	-	-	-
27	-	-	-	-	-	-
28	-	-	**0.12**	-	-	-
29	-	-	**0.21**	-	-	-
30	-	-		-	-	-
31	**6.7**	**462**	**0.4**	**24.1**	**128**	**11.5**

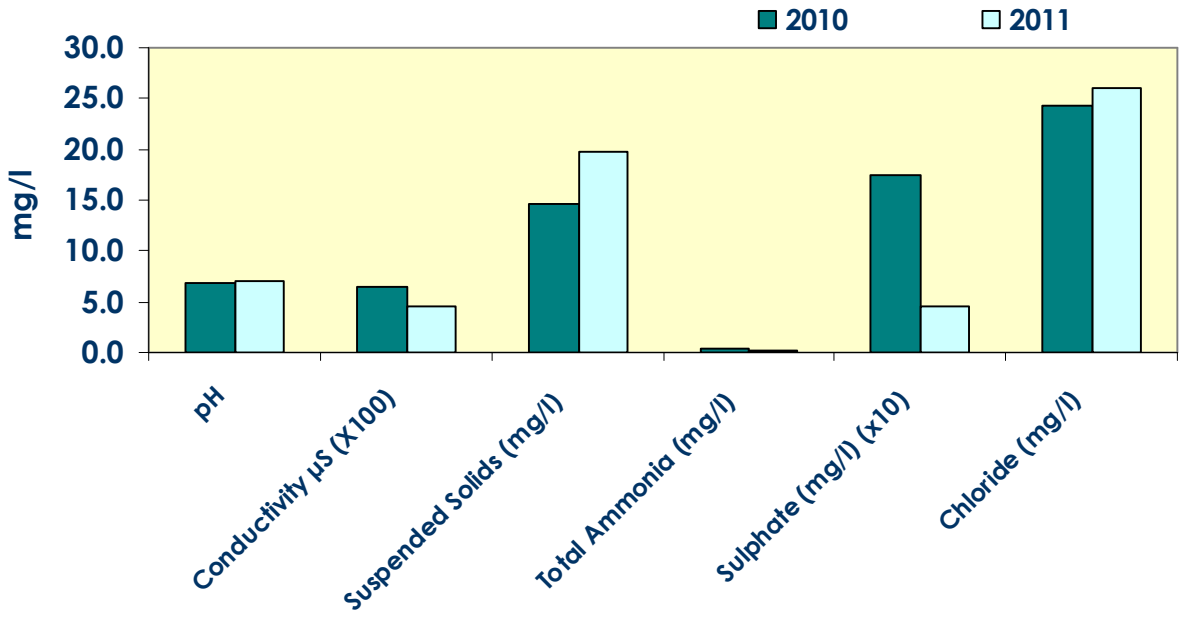
Week	pH	Conductivity	Total Ammonia as N	Chloride	Suspended Solids	Sulphate
			µS	mg/l	mg/l	mg/l
Surface Water Regulations Trigger Level	***>6 or <9***	***2500***	***≤0.04 (mean) or ≤0.090 (95%ile***			
Drinking Water	***≥ 6.5 and ≤9.5***			***250***		***250***
Trigger Levels	***7.43***	***1,000***	***0.4***	***48.34***	***50***	***250***
32	-	-	-	-	-	-
33	**7**	**536**	**0.09**	**18.3**	**22**	**11.9**
34	-	-	-	-	-	-
35	-	-	-	-	-	-
36	-	-	-	-	-	-
37	**7**	**469**	**0.02**	**28.3**	**24**	**51.3**
38	-	-	-	-	-	-
39	-	-	-	-	-	-
40	**6.9**	**611**	**0.04**	**25.3**	**36**	**2.98**
41	-	-	-	-	-	-
42	**6.9**	**504**	**0.03**	**25.8**	**40**	**2.5**
43	-	-	-	-	-	-
44	**6.9**	**510**	**0.06**	**25.7**	**12**	**2.3**
45	-	-	-	-	-	-
46	**7.1**	**288**	**0.41**	**15.5**	**8**	**31.7**
47	**7.1**	**290**	**0.41**	**15.6**	**16**	**32.2**

Week	pH	Conductivity	Total Ammonia as N	Chloride	Suspended Solids	Sulphate
			µS	mg/l	mg/l	mg/l
Surface Water Regulations Trigger Level	***>6 or <9***	***2500***	***≤0.04 (mean) or ≤0.090 (95%ile***			
Drinking Water	***≥ 6.5 and ≤9.5***			***250***		***250***
Trigger Levels	***7.43***	***1,000***	***0.4***	***48.34***	***50***	***250***
48	**7.1**	**314**	**0.17**	**20.6**	**8**	**15.6**
49	**7**	**349**	**0.69**	**23.1**	**8**	**47.8**
50	**7.1**	**336**	**0.19**	**32.2**	**36**	**30**
51	**7.1**	**349**	**0.09**	**35**	**4**	**18.3**
52	**7.1**	**348**	**0.1**	**34.2**	**10**	**17.2**

As can be seen in Table 2.3.2 trigger levels were agreed with the Agency for SW1. It was agreed that if a trigger level was reached an investigation and where required increased monitoring will be undertaken to determine the causes of the increase and implement control measures as required.

The trigger level for ammonia was breached on five occasions in 2011. This was followed by subsequent monitoring events which showed that levels returned to below the trigger level. A comparison of the water monitoring results for SW1 between 2010 and 2011 is provided in Table 2.2.3.

Table 2.2.3. SW1 Surface Water Monitoring Results 2010-2011



Heavy metal surface water analytical results for SW1 are outlined in Table 2.2.1 2.2.4.

Table 2.2.4 Heavy Metal Surface Water Monitoring Results 2011

Parameter	SW1 2011	SW1 2011	National Environmental Quality Standard (where available)
Antimony µg/L	<1*	1.5	-
Arsenic µg/l	<1*	<1*	25
Cadmium µg/l	<1*	<1*	<0.08
Chromium µg/l	<0.001*	<0.001*	3.4
Chloride mg/l	36.1	32.2	-
Copper	0.001	0.001	0.05

Parameter	SW1 2011	SW1 2011	National Environmental Quality Standard (where available)
µg/l			
Lead mg/l	<0.001*	<0.001*	7.2
Mercury µg/l	<0.5*	<0.5*	0.05
Nickel µg/l	0.002	0.002	20
Selenium µg/l	<1*	<1*	-
Tellurium µg/l	<1*	16.9	-
Sulphate mg/l	47.7	30	-
Thallium µg/l	<1*	<1*	-
Tin µg/l	<0.005	<0.001	-

*Limit of Detection

There are no emission limit values for surface water parameters set out in the Waste Licence. Where possible the results have been compared to National Environmental Quality Standards in accordance with S.I. N0 272 of 2009. As can be seen all emissions are well below the annual average Environmental Quality Standard for Inland Waters.

2.3 Groundwater Monitoring

The underlying bedrock of the site is shale and sandstone. The aquifer is classified as being of local importance and is moderately productive in local zones. Shale and sandstone are of low permeability and groundwater flow occurs predominantly through fractures, fissures and joints.

It has been established that the majority of houses within a 1 km radius are connected to the Local Authority water supply. A GSI well search revealed 15 wells in the vicinity of the site. The nearest groundwater well is greater than 1km up gradient and the nearest down gradient well is greater than 2.7 km north of the site.

Schedule C.6 of the Waste Licence requires groundwater quality to be monitored on a biannual basis. The requirements of this Schedule can be seen in Table 2.3.1.

Table 2.3.1 Groundwater Monitoring Requirements

Parameter	Monitoring Frequency	Analysis Method/Technique
Total Ammonia (as N)	Biannually	Standard Method
Nitrates (as N)	Biannually	Standard Method
Conductivity	Biannually	Standard Method
Chloride	Biannually	Standard Method
Sulphates	Biannually	Standard Method
Diesel range organics	Biannually	To be agreed by the Agency

Four monitoring boreholes were constructed at the KWD facility in July 2009, at locations agreed with the Agency. Groundwater monitoring was undertaken bi-annually in 2011 in accordance with licence requirements. A summary of the results is provided in Table 2.3.2.

Table 2.3.2. Results of Ground water Monitoring

Parameter	MW1				MW2				MW3				MW4			EPA IGV	Ground water Regs. 2010
Total Ammonia (as N) (mg/l)	1.43	1.37	1.42	1.82	0.82	1.1	0.66	2.13	3.08	2.93	2.66	2.92	0.07	0.27	0.11	0.15 mg/l	0.175 mg/l
Nitrates (as N) (mg/l)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	25	37.5
Conductivity (us/cm)	635	621	623	627	509	760	773	745	783	512	503	508	387	378	382	1000µS/cm	-
Chloride (us/cm)	23.66	25.1	24.7	24.1	22.65	14.9	23.4	24.4	22.12	20.9	23	21.7	34.3	24.9	30.4	30	-
Sulphates (mg/l**)**	<0.5	1.71	<0.5	2.02	<0.5	1.25	<0.5	<0.5	<0.5	0.92	<0.5	1.04	28.78	27.5	22.3	200	187.5
Diesel Range Organics	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	19	<10	-	-

A detailed hydrological assessment was undertaken of the site in 2010 which noted elevated levels of ammonia in the ground water. The highest levels of ammonia were noted in MW2 and MW3 which are located close to clear felled forestry plantation and agricultural lands close to the MRF facility. Groundwater flow direction has been demonstrated to flow from south west to north east, which suggests that the source of the ammonia is from outside the site boundary.

As can be seen in Table 2.3.2 trigger levels were set for groundwater in 2011 based on European Communities Environmental Objectives (Groundwater) Regulations S.I. No. 9 of 2010 where specified, and for parameters not specified the use of the EPA interim guideline values.

It was noted that if a trigger level was reached an investigation and where required increased monitoring will be undertaken to determine the causes of the increase and implement control measures as required. Groundwater monitoring was undertaken in March and June, and owing to the trigger levels of ammonia being reached onsite two additional rounds of water monitoring was undertaken in September and November of 2011 for MW1-MW3. The results show an increase in ammonia concentrations in keeping with that noted in the hydrogeological investigation.

2.4 Receiving Water Monitoring Summary

The KWD facility is located within the catchment area of the Glanooragh River. The Aughacureen Drain flows within and along the KWD site boundary. The drain flows to a tributary of the Glanooragh River which in turn flows to the Gweestin River, 10 km downstream of the KWD facility. The Gweestin flows a further 10 km to join the River Laune.

From previous assessments of the receiving aquatic environments, it has been established that the Aughacureen Drain is incapable of supporting salmonid fish. However, there exists potential for the Glanooragh River to spawn salmonid fish species.

Analysis of the Glanooragh River is carried out at two monitoring locations, Site B an upstream monitoring location (Grid Reference V 9357 9384) and Site D a downstream monitoring location (Grid Reference V 9374 9395). Monitoring is conducted for the purpose of evaluating the influence that KWD have on receiving waters.

Schedule C.6 of the Waste Licence sets out the monitoring requirements for receiving waters. These requirements are shown in Table 2.4.1.

Table 2.4.1 Receiving Water Monitoring Requirements

Parameter	Monitoring Frequency	Analysis Method
pH	Biannually	pH electrode/meter
Conductivity	Biannually	Standard Method
Ammonia	Biannually	Standard Method
Visual Inspection	Weekly	Sample and Examine for Colour/Odour

The results of analysis for monitoring undertaken at Sites B and D are shown in Table 2.4.2 and Figure 2.4.1.

Table 2.4.2 Receiving Water Analytical Results 2011

Parameter	Site B		Site D	
	Upstream of Site Boundary		Downstream of Site Boundary	
pH	6.8	6.8	7.2	7.1
Conductivity µS/cm	218	189	231	265
Total Ammonia as N mg/l	0.04	0.03	0.09	0.02

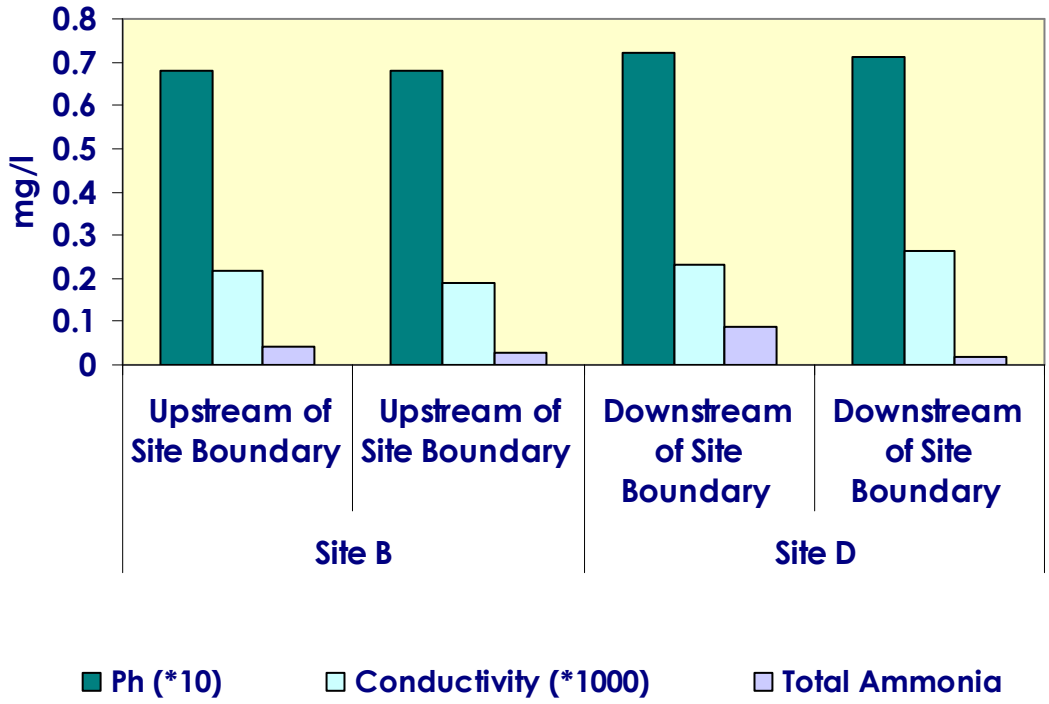


Figure 2.4.1: Average Receiving Water Analytical Results 2011

There are no emission limit values for monitoring of receiving waters set out in the Waste Licence.

On visual inspection, water samples obtained from Site B and Site D ranged between straw to straw yellow in colour. Odour was recorded as being satisfactory.

2.5 Noise Emissions

Noise surveys are undertaken as per Condition 6.12 of the Waste Licence, to determine compliance in terms of noise emissions from the site and to aid in establishing work practices for the control of noise emissions from the site.

The EPA Guidelines for Noise Surveys for IPPC and Waste licensing sets out the following requirements in relation to noise:

Activities on-site shall not give rise to noise levels off site, at noise-sensitive locations, (at specified noise sensitive locations) which exceed the following sound pressure limits (L_{Aeq}, 30 min):

- Daytime (08:00hrs to 22:00hrs): 55dB(A)
- Night-time(22:00hrs to 08:00hrs): 45dB(A)

Guidelines also specify that there shall be no clearly audible tonal or impulsive components at any noise-sensitive locations.

In accordance with Condition 6.12.1 of the Waste Licence, a noise survey is required to be undertaken biannually. In 2008, Killarney Waste Disposal Ltd. requested a reduction in the monitoring frequency to annual surveying. The reduction in the noise monitoring frequency was requested based on 100% compliance in all previous noise surveys. The Agency provided verbal agreement.

Noise monitoring was undertaken in on the August 2011. The following noise sensitive locations were assessed as part of the survey.

Noise Sensitive Locations	Location Details
NSL1	At the entrance to the site beside the visitors/directors car park and near the main reception.
NSL2	Close to noise sensitive location to the south west of the site, on local access road.
NSL3	Beside nearest noise sensitive location to the north west of the site and adjacent to the local access road.
NSL4	North of the site between residential dwelling H8 and H10 and close to local road.

Noise monitoring results for 2011 are shown in Table 2.5.1.

Table 2.5.1: 2011 Noise Monitoring Results

Noise Sensitive Locations	Daytime	Night time
	ELV 55 dB L(A)eq (30min)	ELV 45 dB L(A)eq (15 min)
NSL1	48.5	36.3
NSL2	48.3	39.8
NSL3	49.9	38.0
NSL4	54.3	41.2

For all NSLs, the daytime and nighttime results meet the EPA limits of 55 dB(A) LA_{eq} (day time) and 45 dB(A) LAeq (night).

Recorded L_{Aeq} values for the day time monitoring ranged between 48.3. dB (A) and 54.3 dB (A) all of which were within the licenced emission limit value of 55 dB (A).

Recorded L_{Aeq} values for the night time monitoring ranged between 36.3 dB (A) and 40.2 dB (A) all of which were within the licenced emission limit value of 45 dB (A).

In general no 1/3 octave band frequency spectra was noted and all locations are generally broadband in nature. However where individual octave bands exceed adjacent 5dB or more, these octave bands are either toward the lower end of the spectrum or have a low associated decibel value and therefore, are not likely to cause noise disturbance. In addition, where occasionally elevated noise readings were recorded, site activities are in general not dominant at the receptors to the site, the noise source associated with dominant frequency bands are likely to be as a result of passing local road traffic or other activities such as dogs barking and not as a result of site activities.

The report concluded that there are there no significant tonal components associated with site operations and each frequency analysis shows a general broadband noise spectrum which supports the conclusion that the site activities have a minimal impact on the local noise climate and minimal potential to cause noise disturbance at local receptors.

The results of the noise monitoring survey clearly indicate that activities at the facility do not generate unacceptable noise levels beyond site boundaries and in particular at the closest receptors to the site. The operation of the site complies with the specified noise limits.

2.6 Emissions to Air

Dust and Odour Control

All waste for disposal and malodorous waste stored overnight at the facility are stored within the materials recovery building or in suitably enclosed containers, pending regular removal from the facility.

All areas where there is a potential for generation of odour (temporary storage area, skips, and bins) are covered. Airborne dust in dry weather periods is reduced by spraying of site roads with water, access roads with hard standing are swept regularly. Plant equipment is regularly washed down to minimise dust and odour generation, as well as to prevent contamination of different waste streams.

Dust Emissions

Schedule C.6 requires dust monitoring to be carried out on a quarterly basis. Schedule B.5 sets the emission limit value for Total Dust Deposition at 350 mg/m^2/day.

Three installed bergerhoff gauges monitor the ambient air quality for total dust deposition. Samples were collected in the first, second and fourth quarters for the 2011 reporting period. Results of analysis are shown in Table 2.6.1 and Figure 2.6.1.

Table 2.6.1 Total Dust Deposition for 2011

Dust Monitoring Results 2011: Total Particulates mg/m^2/day			
Quarter ELV	Back Road 350	Gate 350	Back gate 350
Quarter 1	50	169	84
Quarter 2	226	398	364
Quarter 3	166	322	243
Quarter 4	39	35	51

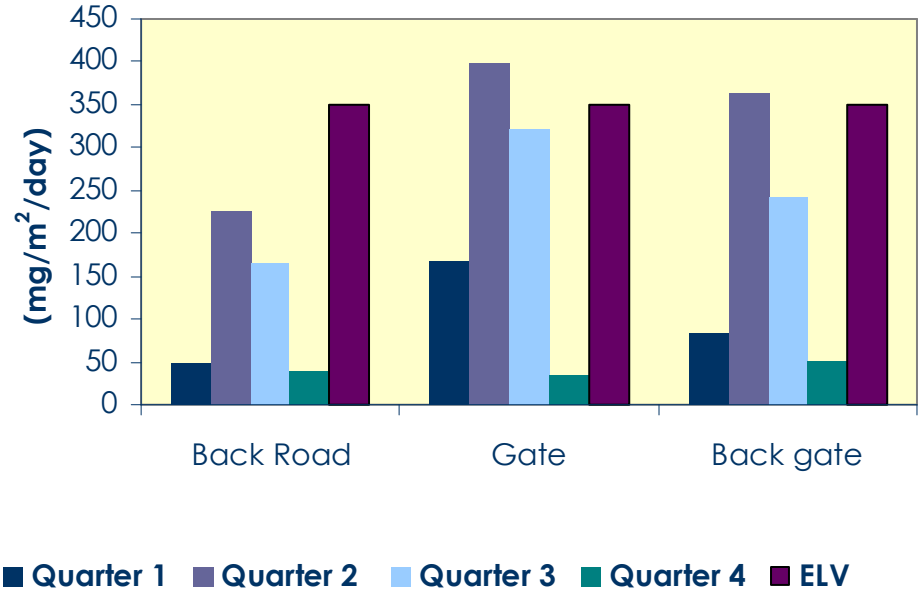


Figure 2.6.1 Dust Depositions for 2011

Total dust for all of the monitoring points were compliant with the Licence Emission Limit Value of 350 mg/m^2/day with the exception of two monitoring results for the gate, and back gate during Quarter 2. It is believed that dry weather during the monitoring period may contribute to the higher dust results. Subsequent dust monitoring records show a reduction in dust levels which are more in keeping with normal levels and were all within the Licence Emission Limit Values.

2.7 Waste Management

Management of solid non-hazardous and hazardous wastes are recorded in accordance with Condition 7 of the Waste Licence.

EWC Code Waste Description	EWC	Waste Description	Waste Accepted onsite in 2011
Mixed residual waste (typically black bin)	20 03 01	Mixed Municipal Waste	11,940.80
Commercial food waste e.g. canteens, restaurants	20 01 08	Compost	1,595.24
Wood waste from municipal sources (e.g. furniture)	20 01 38	Timber	781.46
Metals from municipal waste e.g. light iron	20 01 40	Scrap Metal	2188.769
Segregated cardboard & paper packaging (e.g. corrugated cardboards, paper wrapping & bags)	15 01 01	Cardboard Packaging which comprises Old Corrugated cardboard	3429.233
Segregated plastic packaging (e.g. PVC, PET & PE bottles & jars, plastic bags, food wrappers)	15 01 02	Plastic Packaging-Mixed Film	250.041
Segregated metal packaging - aluminium cans	15 01 04	Aluminium Cans	41.06
Segregated mixed packaging	15 01 06	Dry Recyclables-Paper (all newspaper, magazines, and paper products),Heavy corrugated cardboard and light cardboard,Aluminium-beverage cans, Steel (tin) cans, Tetra Pak Cartons(this is composed of a mixture of paper, polyethylene plastic, and aluminium foul. i.e. tetrapak milk/juice cartons).	37,994.70
Tyres	16 01 03	Tyres	12.12
Mixture of concrete, bricks, tiles ceramics from C&D waste	17 01 07	Rubble	566.63

Glass from C&D waste (e.g. window glass)	17 02 02	Glass	39.94
Mixed metals from C&D waste	17 04 07	Scrap Metal	0.64
Gypsum-based construction material e.g. Plasterboard	17 08 02	Plasterboard	6.12
		Total incoming waste in 2011 (tonnes)	**58,846.76**

Table 2.7.1 shows the total quantities of waste received and consigned from the facility in the 2011 reporting period. A breakdown of the waste types is provided in accordance with the European Waste Catalogue and Hazardous Waste list. The total quantity of waste accepted in KWD in 2011 was 58,846 processed at the facility for 2011 was 58,561 tonnes.

Full details of the waste processed onsite were submitted as part of the EPA Waste Characterisation Survey is submitted under separate cover.

Table 2.7.1 Onsite Treatment and Transfer of Waste 2011

Waste Description	EWC	Quantity Sent Off-Site (Tonnes)	Disposal and Recovery Codes	Customer Reference No.
Cardboard and Soft Mixed Paper	15 01 01	254.5	R5	Customer 1
		252.7	R5	Customer 2
		1834.44	R5	Customer 3
		778.34	R5	Customer 4
		226.14	R5	Customer 5
		152.66	R5	Customer 6
		26293.67	R5	Customer 7
Mixed Film, Pet Bottles	15 01 02	248.34	R5	Customer 8
		1690.5	R5	Customer 9
		1419.18	R5	Customer 10
		26.58	R5	Customer 11
		698.1	R5	Customer 12
		532.34	R5	Customer 13
		349.4	R5	Customer 14
		24.04	R5	Customer 15
		54.66	R5	Customer 16
		415.34	R5	Customer 17
Aluminium Cans/Steel Cans	15 01 04	112.38	R4	Customer 18
		630.34	R4	Customer 19
		77.28	R4	Customer 20
		650.72	R4	Customer 21
Tyres	16 01 03	5.64	R4	Customer 22
Rubble	17 01 07	105.94	R4	Customer 23
		88.38	R4	Customer 24
Wood	17 02 01	695.96	R4	Customer 25
		277.54	R4	Customer 26
Hard Plastic	17 02 03	19.34	R5	Customer 27
		15.94	R5	Customer 28
Scrap Metal	17 04 07	572.08	R4	Customer 29
Fines	19 12 12	454.08	R5	Customer 30
		301.74	R5	Customer 31
Compost	20 01 08	899.66	R3	Customer 32
		207.64	R3	Customer33
		135.74	R3	Customer 34
Textiles	20 01 11	18.62	R5	Customer 35
		0.98	R5	Customer 36
Batteries	20 01 33	11.22	R4	Customer 37

Waste Description	EWC	Quantity Sent Off-Site (Tonnes)	Disposal and Recovery Codes	Customer Reference No.
Scrap Metal	20 01 40	1491.64	R4	Customer 38
		20.58	R4	Customer 39
		0.6	R4	Customer 40
		24.92	R4	Customer 41
		1.68	R4	Customer 42
Mixed Municipal Waste	20 03 01	10816.22	D1	Customer 43
		5106.84	D1	Customer 44
		539.3	D1	Customer 45
Fridge	16 02 11* / 20 01 23* / 20 01 36	3.28	R4	Customer 46
		8.18	R4	Customer 47
Bulk Plastic Bags	15 01 02	15.78	R5	Customer 48

The Quantity and Composition of Waste Recovered and Disposed of at Killarney Waste Disposal during 2011 are presented in Table 2.7.2 and Figure 2.7.1.

Table 2.7.2 Quantity and Composition of Waste Recovered and Disposed of at Killarney Waste Disposal during 2011

	Waste Destination	Percentage of Total
Abroad	Recovered	51.4
Offsite Ireland	Recovered	19.5
Offsite Ireland	Disposed	29.0
Hazardous	Recovered	0.03

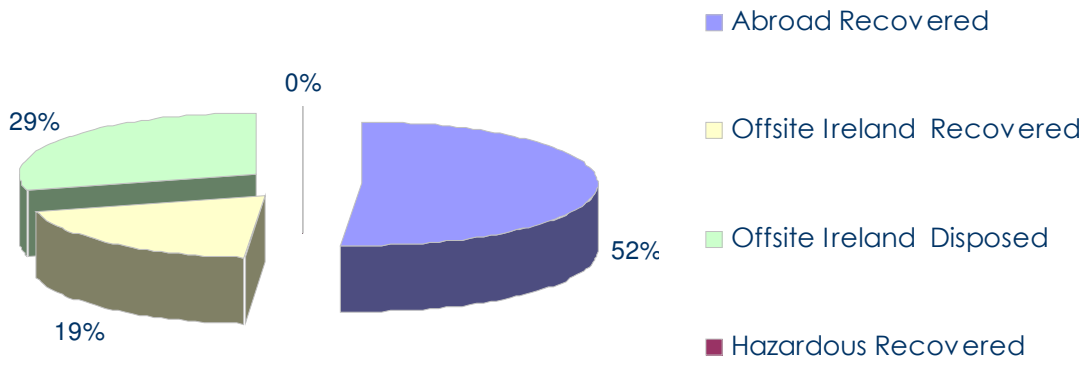


Figure 2.7.1 Quantity and Composition of Waste Recovered and Disposed of at Killarney Waste Disposal during 2011

2.8 Resource Management

Data relating to energy consumption (electricity and fuel oil) for the 2011 reporting period are summarised in the following sections.

Data are presented as monthly and annual totals and per tonne of waste handled.

2.8.1 Summary Energy Consumption

Energy demand is primarily associated with operations plant equipment which includes the wood shredder, waste segregation process lines, in addition to diesel process vehicles.

Energy, both as electrical power and fuel oil represents a significant input to processing activities at Killarney Waste Disposal and is closely tracked on an ongoing basis. Tracking and evaluation of energy data allows for the setting of targets and development of programmes for monitoring energy efficiency.

Table 2.8.1 presents diesel consumption data for 2010 and 2011.

Table 2.8.1 Diesel Consumption 2010 and 2011

Month	Oil (litres)	
	2010	2011
Jan	12,921	13142
Feb	10,769	17557
March	10,902	5040
April	10,879	7565
May	8,911	11709
June	12,790	10806
July	17,557	8973
August	17,008	8356
September	13,448	13164
October	8,931	7840.17
November	15,614	9717
December	6,565	12032
Total	**146,295**	**125,901**

As can be seen from Table 2.8.1 there was a small decrease (13%) in oil consumption between 2010 and 2011.

Table 2.8.2 shows electricity consumption in 2010 and 2011. Overall, electricity consumption increased by 37% which is reflective of the improved sorting technology.

Table 2.8.2 Electricity Consumption 2010 and 2011

Months	Electricity (KW) 2010	Electricity (KW) 2011
Jan -Feb	117,558	119,926
Mar-Apr	139,772	150,835
May-Jun	140,196	184,588
Jul - Aug	152,569	197,824
Sept -Oct	146,266	246,015
Nov-Dec	137,597	248,525
TOTAL	**833,958**	**1,147,713**

The increase in electrical usage is largely due to more efficient picking operations whereby the material can be run along conveyor an additional time to increase the quality of recyclable material recovered. These operations resulted in slower processing operations requiring more electrical power.

Energy consumption at KWD is directly related to plant processing operations. Figure 2.8.1 illustrates oil and electricity consumption per tonne waste processed for 2010 and 2011.

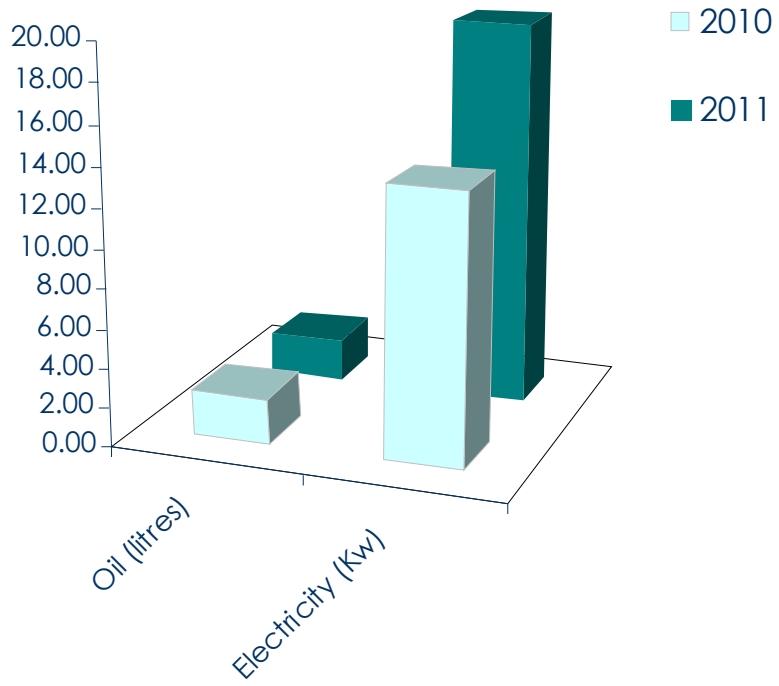


Figure 2.8.1 Energy Consumption per Tonne Waste Processed

Oil consumption per tonne waste processed decreased by 8% per tonne of material processed between 2010 and 2011. There was an increase in electricity consumption at the site which by 43% per tonne compared with 2010. This is a result was a result of more reliance on mechanical sorting and less manual sorting onsite.

2.9 Third Party Inspection Audits

2.9.1 EPA Monitoring and Site Inspections

There were two EPA Audit undertaken of the Killarney Waste Disposal facility for the 2011 reporting period.

During the inspection the Agency Inspector raised a number of non-compliances and observations. The corrective actions required and the status of each of these corrective actions is tabulated in Tables 2.9.1-2.9.4.

Table 2.9.1 Summary of Inspection Non-Compliances and Current Status of Corrective Actions Implemented by Killarney Waste Disposal – Site Inspections11/04/011 and 19/09/2011.

Ref.	IPPCL Ref.	Non Compliance	Corrective Action	Status
1	Condition 1.2 and Schedule A2	**Exceedance with Annual Waste Acceptance Limit for 2010** Condition 1.2 states: Activities at this facility shall be limited as set out in Schedule A: Limitations, of this Licence.	The licensee shall comply with Condition 1.2 and Schedule A.2 of the licence.	KWD sought a full Waste Licence review in July 2010 to reflect the capacity of the site to process more waste. KWD has requested that the amount of material received onsite be increased to 60,000 tonnes. The EPA Office of Climate, Licensing and Resource Use has notified KWD that the application is currently being processed and a decision will be received between June-December 2011.
2	Condition 6.1	**Monitoring Requirements for Groundwater and Dust** Condition 6.1 states: The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out below and in accordance with Schedule C: Control & Monitoring of the Licence.	The licensee shall ensure that all monitoring is undertaken as specified in the licence unless otherwise agreed by the Agency.	KWD have reviewed the Waste Licence in detail and developed a monitoring schedule to ensure that all monitoring requirements are undertaken at the required frequencies as specified in the Licence. If due to circumstances outside our control i.e. unforeseen weather conditions which do not permit monitoring to be undertaken KWD will notify the Agency.
3	8.2 & 11.9.1	**Waste Records** C&D waste enters the facility as three waste streams; mixed load	1. Cease sending the fines produced at this facility as cover material for landfill	1. KWD have implemented the above corrective action and ceased sending fines to landfill

Ref.	IPPCL Ref.	Non Compliance	Corrective Action	Status
		(EWC 17 09 04), mixed skip (EWC 17 09 04) and rubble (17 0107). The Agency deems this material as a mixture of MSW and C&D waste and the EWC code currently being utilised for this material is incorrect. The audit team noted that 652.82 tonnes of mixed waste material was processed on-site in the first three months of this year and of that, 227.6 tonnes of fines were sent to Gortadroma landfill for recovery as landfill cover. Final processed C&D product was not available on-site for review and none of this material has been sent off-site to date in 2011. This suggested that none of the 652 tonnes of material that has been accepted during this period required disposal, which based on the quality of the 1st stage processed mixed waste feedstock (see photo attached), the audit team do not consider is credible. The material sent to the KWD site is not acceptable under the	unless otherwise agreed with the Agency. 2. Assign appropriate EWC codes for all waste entering the facility and leaving the facility. 3. Submit a detailed account of the quantity of each waste type (including a breakdown of the relevant EWC codes) that entered the facility and left the facility during the months of January, February and March 2011 within one month of receipt of this report. 4. Explain why no final processed C&D product was available on-site for review by the Agency during the audit within one month of receipt of this report. 5. Ensure that final processed C&D product is sent to appropriate permitted facilities only, unless otherwise agreed with the Agency.	unless agreed in advance with the Agency. 2. KWD have reviewed all EWC codes to ensure that they are appropriate for all material entering and leaving the site and ensure that they are classified in accordance with the descriptions of the European Waste Catalogue. The EWC codes used for both rubble and fines have been amended as recommended above. 3. A copy of the quantities and types of waste including the EWC codes for materials which entered and left the facility for the first three months of the year was issued to the EPA. 4. The 652 tonnes of material that was processed onsite during the first three months of the year was representative of mixed waste. The material consisted of 50 tonnes of C& D product, 277 tonnes of fines, and 375 tonnes of dry recyclable material comprising paper, cardboard, plastic, hard plastic, mixed film, aluminium, steel cans etc. The C&D material is run through the facility two times to increase the quality of the product. C&D

Ref.	IPPCL Ref.	Non Compliance	Corrective Action	Status
		permit as the EWC code for this material should be classified as 191912 while Mr. Liam Casey has no permit to accept this material.		material was not available for inspection during the site audit as it was being processed a second time through the sorting lines. 5. KWD will ensure that all processed C&D product is sent to licenced facilities unless agreed in advance with the Agency. We are currently in discussions with Kerry County Council to have our waste permit amended for the Sheens East site to receive C&D product (EWC 191912).We will update you once we have received confirmation of the above.

Table 2.9.2 Summary of Inspection Non-Compliances and Current Status of Corrective Actions Implemented by Killarney Waste Disposal – Site Inspections 19/09/2011.

Ref.	IPPCL Ref.	Non Compliance	Corrective Action	Status
1	Condition 3.17	**Sockpile of Dry Recyclables outside MRF** A large stockpile of dry recyclables was noted outside the MRF building. This issue was raised at the previous site inspection dated 27/05/11.	1. Ensure that the current stockpile of dry recyclable waste is moved indoors and processed without delay. 2. Ensure that waste other than specified in condition 3.17 of the licence is not stored outdoors.	The stockpile comprising mixed plastic material was temporarily stored outside the Materials Recovery Facility (MRF) and requires further processing and sorting before it is removed offsite. There is currently no capacity to relocate the material within MRF. This material will be reprocessed and removed offsite within a 4 week period.

Table 2.9.3 Summary of Inspection Observations– Site Inspections 21/04/2011

Ref.	Observation	Corrective Action	Status
1	**Environmental Management Programme** A five year plan is not in place and targets have not been defined. Specific environmental objectives such as routing monitoring of surface water and groundwater are included which are currently addressed under specific conditions in the Licence.	The licensee shall review the EMS and corresponding EMP onsite in line with the requirements of Condition 2.2 of the licence within one month of receipt of this report.	KWD have reviewed the Environmental Management System and corresponding Environmental Management Plan on-site in line with the requirements of Condition 2.2. of the Licence. An updated copy of the objectives and targets included in the five year plan has been completed.
2	**Waste Inspection Records** On review of the weighbridge dockets for waste entry to the site, Brian Bruton confirmed that while waste is inspected on entry to the facility this inspection is not recorded. Condition 8.9.3 requires an inspection of waste on entry to the facility and upon tipping within the MRB.	The licensee shall ensure that all waste inspections are recorded to confirm compliance with condition 8.9.3 of the licence.	A waste inspection procedure has been developed to ensure that each load of waste is inspected and verified to confirm that it is acceptable in accordance with the Waste Licence. A record of this inspection will be noted in a waste record. The Waste acceptance docket is currently being amended to include a relevant section for waste inspection.
3	**Bund Integrity Report** On review of the bund integrity report for the leachate storage tank dated 02/03/09 I noted that the hydrostatic test was undertaken between 8:00 am and 17:00 pm.	Confirm the length of time that the hydrostatic test was undertaken for the underground leachate storage tank.	It was not possible to undertake a 24 hour hydrostatic test of the leachate tank due to KWD operations within the site. It was noted that the primary diesel storage tank began to slightly float at 0.30m of freeboard. It was considered unsafe to continue filling to 0.15m of freeboard due to concerns over the primary vessel

Ref.	Observation	Corrective Action	Status
			floating. A 24 hour hydrostatic assessment will be undertaken when the tanks and the report will be made available to the Agency.
4	**Emergency Response Procedure** The Emergency response procedure does not include the Agency in the defined list of contact in section 5.6 of the procedure and does not include/reference to Agency's guidance note on the reporting of incidents.	The licensee shall amend the emergency response procedure to include the Agency's contact details including telephone and fax as well as inclusion/reference to the Agency's guidance note on the reporting of incidents.	KWD have updated the Emergency Response Procedure to include the Agency contact details and also references the Environmental Protection Agency Guidance to Licence holders on the Notification, Management and Communication of Environmental Incidents.
5	**Groundwater Wells** On review of the down gradient groundwater Wells BH1 and BH2 I noted that the well covers can be locked but are currently unlocked	The licensee shall place locks on all groundwater well covers to prevent vandalism and contamination of the groundwater wells.	KWD have sourced suitable locks for the well covers. These will be in place at all times to prevent vandalism and groundwater contamination.
6	**Yard Drainage System** Surface water drainage from the yard to the sump adjacent to the timber shredding area could be obstructed by timber waste present in the area and this could also potentially impact on the quality of the surface water discharged via this sump.	The licensee shall take all necessary measures to ensure that surface water drainage from the yard area in not impacted and obstructed by any waste in the yard area.	KWD will manage and control future timber shredding operations to ensure that an adequate amount of spare parts are present on site should they be required. Site management will ensure that the timber will be stored in a location that will not impact the yard drainage.
7	**Nuisance Monitoring** Nuisance inspections are undertaken by the licensee but the record sheet does not include inspections for birds, flies,	The licensee shall amend the week record sheet for nuisance monitoring inspections to include birds, flies and vermin within one month of receipt of	KWD have updated the weekly inspection record to include birds, flies, and vermin. A copy of the updated record was issued to the

Ref.	Observation	Corrective Action	Status
	and vermin. The Agency notes that Rentokil come onsite once a month to check vermin baits.	this report.	EPA.
8	**Surface Water Monitoring** It was noted that particularly elevated levels of sulphate and conductivity were recorded for three consecutive results (dates outlined below) with ammonia elevated for two of these results.	Set trigger levels for all parameters in addition to that set already by the licensee for ammonia (0.7mg/l) have regard to relevant national and international standards when setting trigger levels.	KWD have established trigger levels for surface water. The trigger levels have been determined based on an assessment of surface water monitoring results generated over the past 3 years. The Trigger levels will be reviewed annually, taking into consideration the additional monitoring results obtained from the monitoring programme during the year.
9	**Ground Water Monitoring Results** It was noted that elevated levels of ammonia were recorded at MW1, MW2, and MW3. Elevated ammonia has been consistently detected at MW3.	Set trigger levels for all parameters in addition to that set already by the licensee for ammonia (0.7 mg/l). Have regard to national and international standards when setting trigger levels.	KWD have established trigger levels for ground water with reference to National and International standards. The trigger levels have been determined based on an assessment of groundwater monitoring results generated over the past 2 years.

Table 2.9.4 Summary of Inspection Observations– Site Inspections 20th of September 2011

Ref.	Observation	Corrective Action	Status
1	**C & D Waste** The licensee is seeking approval from the Agency to assign processed C&D waste on-site with an EWC code of 17 01 07 and have proposed the following via email dated 15/09/11 to satisfy the Agency that the final C&D product will comply with EWC code 17 01 07. Final processed C&D product was not available on site for visual inspection by the Agency.	Undertake a Waste Characterisation Study of C&D material extracted from the three waste streams – mixed load, mixed skip and rubble – in order to assess whether the EWC 17 01 07 (concrete, bricks, tiles and ceramics) is appropriate. Inform the Agency when final C&D produce is available for inspection.	A Waste Characterisation Study was undertaken of the material. As part of the survey site control measures were assessed to ensure that the systems on-site are adequate and where relevant recommendations for further improvement were made. KWD will contact the Agency via phone and fax when there is final product C&D material available for inspection.
2.	**IBC Containers And Drums Within MRF Building** Concerns were raised regarding spillage from containers.	Ensure that all drums and IBC's on site that contain potentially contaminating material are stored in a secure bunded area on site to ensure that any spillage is captured within the bunded area.	All drums of IBC containing potentially contaminating material will be located within a secure bunded area to ensure that any spillage for the facility is captured.

2.9.2 EPA Audits

There was no EPA Audit undertaken of the Killarney Waste Disposal facility for the 2010 reporting period.

2.10 Complaints Summary

KWD received five complaints during the 2011 reporting period. Details of the complaints and the corrective action taken are shown in Table 2.10.1.

Table 2.10.1: 2011 Summary of Complaints Received

Date	Complaint Class	Complainant	Corrective Action
10/05/11	Odour & Noise	Peter O'Leary	Inspected site. All doors closed, No smell detected. Noise: Scrap metal truck emptied on Sunday as it was used to move a conveyor. Driver informed this should not have happened and not to do it again and keep noise to a minimum.
11/05/11	Noise	Anonymous	Spoke with scrap metal machine operator about keeping loading noise to a minimum.
4/07/11	Odour	David Kennedy	Investigated reason for odour. Checked that all doors closed and nothing outside.
23/11/11	Odour/Truck Movement	Anonymous	No odour detected. No truck movement at 2am, confirmed truck movement at 8:45pm.
19/12/11	Truck Movement	Anonymous	No truck movement per CCTV footage.

2.11 Reported Incidents Summary

One incident were recorded during for the 2011 reporting period at the Killarney Waste Disposal facility.

A fire within the woodchip heating boiler for the office April May 2011. The fire was extinguished using Killarney Waste Disposals fire equipment and the Killarney Fire Brigade was to attend the scene as a precaution. There was no damage to any other machines, buildings or material. The Environmental Protection Agency was informed of the incident including the cause and actions take to contain the fire.

3.0 Environmental Management Programme

Section 3 of the AER contains summary information on the Killarney Waste Disposal Environmental Management Programme (EMP), together with a review of performance in meeting specified targets throughout 2011.

A revised EMP is presented in Section 3.2 for agreement and Agency approval.

It is noted that both the EMP and Schedule of Objectives and Targets fall under the site Environmental Management System and accordingly, are included within a structured system of management review and periodic auditing by internal auditors.

3.1 EMP Summary Progress Report

This section contains a brief summary of the progress in meeting targets established under the Environmental Management Programme 2011 - 2016. The objectives for the facility are largely continuous relating to monitoring and compliance programmes.

EMP 2011-2016

1.0 Objective To maintain and improve environmental management at KWD.			
No.	**Target**	**Plan**	**Status**
1.1	Environmental Management System	Carry out internal environmental audits	2011-2016
1.2	To ensure that all employees are made aware of requirements of the site environmental system	Identify environmental training needs of all employees Provide environmental awareness training to all employees	*Environmental Training for new staff.* *Environmental Refresher Training for all staff in May* 2011-2016.
1.3	Maintenance programme for vehicles and equipment	Completing the maintenance programme	Maintenance programme for vehicles to be undertaken in November 2011.
1.4	To conduct Annual Environmental Review Meetings	Review environmental performance of facility. Review EMP for 2011 / 2012	2011-2016 Review December 2011.
1.5	Prepare annual statement in accordance with condition 12.2.2 of 1of Waste Licence No W0217-01	Prepare annual statement on Environmental Liabilities Submit as part of AER	2011-2016 March 2011
1.6	Reduce Odour Complaints from the Plant	Three odour complaints were received in 2011. It is hoped that a repeat of this performance does not occur in 2011.	2011-2016
1.7	Improve surface water quality from	Continue to monitor surface water	Significant improvements have been

1.0 Objective To maintain and improve environmental management at KWD.			
No.	**Target**	**Plan**	**Status**
	the site	from the site and investigate any exceedence of trigger values.	recorded in the surface water quality since the licence was granted. 2011-2016

2.0 Objective **To establish and maintain a suitable site infrastructure at KWD.**			
No.	**Target**	**Plan**	**Status**
2.1	Label and provide safe and permanent access to all onsite sampling and monitoring points and to offsite points as required by Condition 3.10 of Licence	Review access Inspect on an annual basis and upgrade if necessary	Complete 2011-2016
2.2	All tank container and drum storage areas shall be rendered impervious in accordance with Condition 3.11.1 of Waste Licence W0217-01	Review storage of tanks, drums and container areas. Demonstrate that all storage areas are impervious to materials stored therein and repair if necessary	*Complete.* *Next inspection due in 2012*

3.0 Objective **Establish and maintain site control at KWD**			
No.	**Target**	**Plan**	**Status**
3.1	Carry out integrity testing on all underground tanks and pipes. in accordance with condition 6.9 of Waste Licence No W0217-01	Undertake programme of integrity testing. Schedule testing for the integrity testing	*Testing due in 2012*

3.0 Objective Establish and maintain site control at KWD			
No.	**Target**	**Plan**	**Status**
		To be carried out at three years intervals.	*2016*
3.2	Carry out annual Noise Survey in accordance with Condition 6.12.1 of Waste Licence No W0217-01 and ensure emissions are below Emission Limit Values.	Noise emissions were compliant with licenced Emission Limit Values for the 2010 monitoring period. Noise Survey.	*Noise Report due 2011.*
3.3	Prepare programme for the identification and reduction of noise emissions in accordance with Condition 6.12.1 of Waste Licence No W0217-01.	Review Noise survey reports Prepare programme based on findings of Noise surveys. Submit programme to EPA and update where necessary	*Continuous.* 2011-2016.

4.0 Objective To improve the efficient use of resources at KWD.			
No.	**Target**	**Plan**	**Status**
4.1	To carry out energy efficiency Audit in accordance with Condition 7.1of Waste Licence No W0217-01.	Carry out energy efficiency Audit.	*Complete.*
4.2	Reduce Energy Consumption by 5% per tonne of waste processed.	Obtain Planning Permission for an ESB substation to reduce the amount of energy used onsite.	March 2012.

4.0 Objective To improve the efficient use of resources at KWD.			
No.	**Target**	**Plan**	**Status**
		Assess the reduction in energy use at the site to ensure it is below the target of 5%.	March 2014.
4.3	Prepare report examining waste recovery options in accordance with Condition 11.11 of Waste Licence No W0217-01	Install upgrade to recycling line to increase efficiency, and provide a better product. Review options for improving recovery of BMW to remove fines, plastics, and metals to divert for recycling. Implement BMW waste recovery within the site.	August 2011. May 2011. November 2012
4.4	Reduce Water Consumption onsite by 5%.	To examine the feasibility of capturing rainwater from the roof of the facility. Calculate potential volumes of rainwater for collection. Select suitable method of capturing rainwater and containers for same. Site visit by potential suppliers of suitable systems. Get costings for rainwater	 June 2011 February 2012 November 2012

4.0 Objective To improve the efficient use of resources at KWD.			
No.	**Target**	**Plan**	**Status**
		containers and associated pipework etc. Review costs and compile feasibility report	January 2013 June 2015

5.0 Objective To improve emergency preparedness and response at KWD			
No.	**Target**	**Plan**	**Status**
5.1	Accident Prevention Policy	Review Annually Update Policy to include notification procedure to Environmental Protection Agency.	2011-2016 April 2011.
5.2	Emergency Response procedure	Update Annually –update as necessary.	2011-2016

3.1 Ongoing Environmental Programmes for 2012

It is noted that a significant investment, in terms of time and finance has been made in improving environmental awareness and reducing environmental impacts at the facility. KWD has also concerted great effort in compliance with their granted Waste Licence.

The EMP in 2011 will largely focus on resource management and energy consumption, while ensuring compliance with the IPPC Licence will remain a high priority.

A number of long term programmes initiated at the site will continue on an on-going basis to ensure compliance with the conditions of the IPPC Licence and the site environmental management system as follows:

1. Energy measurement, tracking and reduction.
2. Resource consumption measurement, tracking and reduction.
3. Programme to minimise water demand and reduction in volume of process effluent.
4. External housekeeping programme.
5. Staff training.
6. Environmental monitoring
7. Environmental management and auditing.

Records and other documentation relevant to the tracking of the above programmes are maintained on site.

3.2 Pollution Emission Register

Killarney Waste Disposal Ltd. already provides details of the types, volumes and destinations of all waste transferred from the facility in the AER. Additional information is submitted under separate cover as part of a National Waste Characterisation Survey using the web-based system.

3.3 Programme for Public Information

Killarney Waste Disposal Ltd. are committed to setting the standard in waste management and ensuring compliance with all environmental operations. In addition, Killarney Waste Disposal Ltd. Environmental Policy makes a specific commitment to make the environmental policy and records available to the public and interested parties.

Killarney Waste Disposal Ltd has implemented a public communications Programme which details how members of the public are facilitated in accessing environmental information at the facility.

The Environmental Policy is available in reception for any member of the public to review. In addition if a member of the public requests a copy of the environmental policy it will be provided to them by the Environmental Manager.

In addition the following records are available to the public upon request:

- Environmental Management System,
- Environmental Policy,
- Waste Licence,
- Monitoring Records,
- Complaints File.

3.4 Environmental Liabilities Risk Assessment and Site Closure Plan

A Closure Plan and Environmental Liabilities Risk Assessment (ELRA) were completed for Killarney Waste Disposal in 2008. There have been no alterations to the site infrastructure since the development of the ELRA.

Killarney Waste Disposal Ltd. has adequate insurance cover for environmental liabilities to €2,600,000 for any one occurrence, which will apply to "sudden identifiable and unintended incidents".

The facility has an Environmental Management Programme (EMP) in place. The EMP serves as a guidance document for facility staff and describes operational control and management practices that are applied at the facility. The EMP is also the core element of the Environmental Management System (EMS) for the facility and is designed to ensure that management of site activities complies with regulatory requirements and best practice. The EMS includes a detailed Emergency Response Procedure which sets out the steps to be taken in the event of an incident at the facility with the potential to cause environmental damage.

In addition to the above Killarney Waste Disposal Limited implements a comprehensive monitoring programme which will highlight any potential environmental incidents with the potential to cause environmental damage.

3.5 Report on progress made and proposals being developed to minimise water demand and the volume of process effluent discharge

Water consumption at the site is low and limited to wash down and vehicle washing all of which are necessary to remove and limit the potential for dust, odour, and litter.

3.6 Report on efficiency in the use of raw materials in processes and the reduction in waste generation

KWD operate efficiently to ensure that all waste is processed and as much as possible of the material is diverted for recycling and re-processing where possible. A description of the materials received at the facility is presented in Section 1.4 of the Annual Environmental Report.

KWD installed construction and demolition sorting line in 2009 to increase the amount of rubble from construction related wastes.

A combination of manual labour and mechanical equipment is used to separate the dry recyclables into different fractions. In 2009 KWD installed a processing line whereby each fraction is removed and baled and sent to different recycling facilities.

1. The first step in the process is the removal of cardboard and this is carried out at the in feed to the picking line.
2. A ballistic separator is then used to remove the fine fraction (-40mm) and also separate the rolling or 3D fraction (bottles, cans, etc.) from the flat fraction (newspapers, etc.)
3. The flat fraction then passes through a picking station where the LDPE film is removed and then on to a Titech Optical Sorting Machine where the remainder of the plastic is blown off automatically. The end product off the line is baled as paper.
4. The rolling or 3d fraction passes through a double valve Titech Optical Sorting Machine. One valve blows off all the bottles and the second valve blows off the film.
5. After the Titech, the material passes under an electro magnet for the removal of any steel cans.
6. At the final stage in the process, the material passes through an Eddie current, which repels the aluminium cans into a separate bay.
7. The remaining material finally passes through a 1m Titech Optical Sorting Machine where all non-paper contaminants are blown out before the material is baled as paper.

   You can also go to www.kwd.ie/recycling_facility.php to view videos of the sorting process including the ballistic separator and optical sorting equipment.

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.13

REFERENCE YEAR	2011

1. FACILITY IDENTIFICATION

Parent Company Name	Killarney Waste Disposal Limited
Facility Name	Killarney Waste Disposal Limited
PRTR Identification Number	W0217
Licence Number	W0217-01

Waste or IPPC Classes of Activity

No.	class_name
4.2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
3.11	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
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.
4.11	Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.
4.12	Exchange of waste for submission to 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.
4.3	Recycling or reclamation of metals and metal compounds.
4.4	Recycling or reclamation of other inorganic materials.

Address 1	Aughacurreen
Address 2	Killarney
Address 3	Co Kerry
Address 4	
	Kerry
Country	Ireland
Coordinates of Location	-9.55272 52.0876
River Basin District	IESW
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Brian Bruton
AER Returns Contact Email Address	brian.bruton@kwd.ie
AER Returns Contact Position	Manager
AER Returns Contact Telephone Number	064 32458
AER Returns Contact Mobile Phone Number	064 32458
AER Returns Contact Fax Number	
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	0
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General
5(c)	Installations for the disposal of non-hazardous waste
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) ?	N/a
Is the reduction scheme compliance route being used ?	N/a

4.1 RELEASES TO AIR

Link to previous years emissions data

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

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

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

Additional Data Requested from Landfill operators

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

Landfill: Killarney Waste Disposal Limited

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

4.2 RELEASES TO WATERS

Link to previous years emissions data

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facil

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

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

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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

SECTION A : PRTR POLLUTANTS

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

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

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

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

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

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

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

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

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

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
To Other Countries	15 01 01	No	254.5	paper and cardboard packaging	R5	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	15 01 01	No	252.7	paper and cardboard packaging	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	15 01 01	No	1834.44	paper and cardboard packaging	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	15 01 01	No	778.34	paper and cardboard packaging	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	15 01 01	No	152.66	paper and cardboard packaging	R5	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	15 01 01	No	26293.67	paper and cardboard packaging	R5	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	15 01 02	No	248.34	plastic packaging	R5	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	15 01 02	No	1419.18	plastic packaging	R5	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	15 01 02	No	26.58	plastic packaging	R5	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	15 01 02	No	698.1	plastic packaging	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	15 01 02	No	532.34	plastic packaging	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	15 01 02	No	349.4	plastic packaging	R5	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	15 01 02	No	24.04	plastic packaging	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	15 01 02	No	54.66	plastic packaging	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	15 01 02	No	415.34	plastic packaging	R5	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	15 01 04	No	112.38	metallic packaging	R4	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	15 01 04	No	630.34	metallic packaging	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	15 01 04	No	77.28	metallic packaging	R4	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	15 01 04	No	650.72	metallic packaging	R4	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	16 01 03	No	5.64	end-of-life tyres	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	17 01 07	No	105.94	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	17 01 07	No	88.38	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		

Within the Country	17 02 01	No	695.96	wood	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	17 02 01	No	277.54	wood	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	17 02 03	No	19.34	plastic	R5	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
To Other Countries	17 02 03	No	15.94	plastic	R5	M	Weighed	Abroad	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	17 04 07	No	572.08	mixed metals	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	19 12 12	No	454.08	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	19 12 12	No	301.74	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 01 08	No	899.66	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 01 08	No	207.64	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	O'Toole Composting ,WP 01/07	Ballintrane , Co.Carlow,.,.,Ireland		
Within the Country	20 01 08	No	135.74	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 01 11	No	18.62	textiles	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 01 11	No	0.98	textiles	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 01 33	Yes	11.22	batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential
Within the Country	20 01 40	No	1491.64	metals	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 01 40	No	20.58	metals	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 01 40	No	0.6	metals	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 01 40	No	24.92	metals	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 01 40	No	1.68	metals	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 03 01	No	10816.22	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 03 01	No	5106.84	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 03 01	No	539.3	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		
Within the Country	20 01 23	Yes	11.46	discarded equipment containing chlorofluorocarbons	R4	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential
Within the Country	15 01 02	No	15.78	plastic packaging	R5	M	Weighed	Offsite in Ireland	Confidential,Confidential	Confidential,Confidential,Confidential,Confidential,Confidential		