ANNUAL ENVIRONMENTAL REPORT 2010

Reporting Period 1st January – December 31st 2010

Waste Transfer Station,
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Churchfield Industrial Estate, Cork
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1. Introduction

Ashgrove Recycling operates a materials recovery facility / waste transfer station at Churchfield Industrial Estate, Cork.

The Company began operations in July 2002. The facility is Located in an Industrial Estate north of Cork City. The site prior to construction was a Greenfield site in industrial zoned land.

The site occupies 1.1 hectares and consists of a materials recovery building with associated offices and impermeable concreted surfaces. The operations at Ashgrove have positively helped the environment in diverting materials away from unnecessary land filling.

1.1 Facility Details

Licence Registration Number: -	W0147-01
Name: -	Ashgrove Plant Ltd, t/a Ashgrove Recycling
Location: -	John. F Connelly Road, Churchfield Industrial Estate, Cork.
Reporting Period: -	1st January – December 31st 2010

1.2 Waste Activities

The waste streams that are processed at the facility are non hazardous. The facility does not accept liquid wastes. The majority of waste accepted at the facility is derived from construction and demolition activities, along with a smaller quantity of commercial and industrial waste streams.

Incoming waste is weighed on a Precia Molen weighbridge, and is then consigned to the material recovery building. The material is visually inspected to determine its compliance with waste acceptance criteria.

Large items of timber and metal are removed mechanically and placed in to designated containers. Material that is not readily separated is fed into the Viper 123 city sizer and the action of the vibrating screen box separates out the soils and the fines. Larger material that does not fall through the screen mesh is deposited onto a conveyor belt and passes underneath a powerful over band magnet, which in turn removes the metal fraction. From here the remaining material moves through a Viper picking station where recoverable material is manually picked and deposited into hoppers which conveys the material into suitable containers. Plastic, glass, wood, non ferrous metal are separated from the material and the remaining material consists of light fractions of paper and plastic, along with a mixture of rubble and stones.

As this mixture falls below from the end of the belt, a high velocity air stream blows the lighter material into a catch net. The heavier material falls below into an awaiting receptacle.
The recyclable material is brought to the respective industry for use as a raw material for further processing.

2.0 Quantity and Composition of Waste

2.1 July 2002 – February 2003

Wastes Received and consigned by the facility
Period:- 8th July 2002 to 26th Feb 2003

Total Quantity of material handled (Incoming)	2,268,000 Kg	
Recovery	Weight/Kg	EWC Codes
Wood		15 01 03
Dunlee waste management	273,000.00	17 02 01
		19 12 07
CTO Environmental Solutions	151,290.00	20 01 38
Cardboard/Paper		15 01 01
Cork Recycling	48,000.00	19 12 01
		20 01 01
Glass		
Cork Mini Skips	25,140.00	15 01 07
		17 02 02
		19 12 05
		20 01 02
Metals		
Cork Metal	154,140.00	15 01 04
		17 04 07
		19 12 02
		19 12 03
		20 01 40
Plastic		
Cork Recycling	22,000.00	15 01 02
		17 02 03
		19 12 04
		20 01 39
Rubble/Soil		
Loftus Engineering, Kinsale Rd	647,070.00	17 01 01
	400,000.00	17 01 02
		17 01 03
		17 01 07
		17 05 04
Disposal		
Residual Material		
Kinsale Road Landfill	300,560.00	19 12 12
Transferred to other facilities for Recovery/Disposal		
Aherne Waste Management	170,000.00	20 03 01
Tyrone Recycling	76,800.00	15 01 05
		19 12 12
		20 010 8
		20 01 02

2.2 Wastes Received and consigned by the facility

Period:- 01/01/04 to 31/12/04

Total Quantity of material handled (Incoming)	10,741,510Kg	
Recovery	Weight/Kg	EWC Codes
Wood		15 01 03
Dunlee waste management	667,240	17 02 01
Medite	12,180	19 12 07
CTO Environmental Solutions	408,160	20 01 38
Cardboard/Paper		15 01 01
Cork Recycling	207,940	19 12 01
KRL	4,580	20 01 01
Glass		
MSM	9,190	15 01 07
		17 02 02
Metals		
Cork Metal	632,340	15 01 04
		17 04 07
		19 12 02
Plastic		
Cork Recycling	18,380	15 01 02
		17 02 03
Rubble/Soil		
Dan Sheehan	1,982,930	17 01 01
John Dunlee	3,169,460	17 01 02
Rossmore	193,470	17 01 03
Youghal	17,560	17 01 07
Green Waste		17 05 04
CTO	31260	20 02 02
Disposal		
Residual Material		
Kinsale Road Landfill	409,000	19 12 12
Transferred to other facilities for Recovery/Disposal		
Greenstar	1,800,970	20 03 01
Tyrone Recycling	76,800.00	15 01 05
Lehane Environmental	641,760	19 12 12
Glanmire	27,890	20 010 8
Mulleadys	296,910	20 01 02
Longford	22440	
Rosmore	75570	
Youghal	5820	
KRL	476,840	

2.3 Wastes Received and consigned by the facility

Period:- 01/01/05 to 31/12/05

Total Quantity of material handled (Incoming)	10,741,510Kg	
Recovery	Weight/Kg	EWC Codes
Wood		15 01 03
		17 02 01
Medite	3,811,080	19 12 07
CTO Environmental Solutions	32,000	20 01 38
Cardboard/Paper		15 01 01
Glyntown	347,250	19 12 01
		20 01 01
Glass		
SFL	631,160	15 01 07
		17 02 02
Metals		
Cork Metal	1,140,160	15 01 04
		17 04 07
		19 12 02
Plastic		
Glyntown	86,740	15 01 02
		17 02 03
Rubble/Soil		
Dan Sheehan	14,453,530	17 01 01
John Butler		17 01 02
		17 01 03
		17 01 07
Green Waste		17 05 04
CTO	59,520	20 02 02
Disposal		
Residual Material		
Kinsale Road Landfill	409,000	19 12 12
Transferred to other facilities for Recovery/Disposal		
Mulleadys	5,341,730	20 03 01
Rossmore		15 01 05
Thorntons		19 12 12
Portlaoise		20 010 8
Ballymackey		20 01 02

2.4 Wastes Received and consigned by the facility

Period:- 01/01/06 to 31/12/06

Total Quantity of material handled (Incoming)		
Recovery	Weight/Kg	EWC Codes
Wood		15 01 03
Graingers	39,310	17 02 01
Wayerheuser, formellyMedite	2,830,790	19 12 07
CTO Environmental Solutions-Green Waste Timber - CTO Environmental Solutions	65520 578700	20 01 38
Mixed Dry Recyclables Thorntons	1,270,040	
Cardboard/Paper		15 01 01
Glyntown	443,640	19 12 01
		20 01 01
Glass		
SFL	263,520	15 01 07
Tullagower Recycling	920,580	17 02 02
Gypsum		
Cleanbuild	64,620	
Gypsum Industries	60,440	
Metals		
Cork Metal	1,155,040	15 01 04
Cable – National Recycling	246,240	17 04 07
		19 12 02
Bituminous Mixtures		17 04 01
John A Wood	75,177	
Plastic		
Glyntown	191800	15 01 02
Clearpoint	108,200	17 02 03
Rubble/Soil		
Con Cronin, Mourneabbey	4,132,890	17 01 01
John Butler	7,560,130	17 01 02
John A Wood	676,593	17 01 03
		17 01 07
Green Waste		17 05 04
CTO		20 02 02
Disposal – Residual Material		
Residual Material		
Ballaghveny Mulleadys Rossmore	6,120,970 84,740 16,110	19 12 12

2.5 Wastes Received and consigned by the facility

Period:- 01/01/07 to 31/12/07

Total Quantity of material handled (Incoming)		
Recovery	Weight/Metric Tonnes	EWC Codes
Wood		15 01 03
Graingers		17 02 01
Wayerheuser, formellyMedite	4351.88	19 12 07
		20 01 38
Mixed Dry Recyclables		
Thorntons	4272	20 03 01
Cardboard/Paper		15 01 01
Glyntown		19 12 01
Cork Recycling, Lehenaghmore	474	20 01 01
Glass		
Tullagower Recycling	1448.86	15 01 07
		17 02 02
Gypsum		
Cleanbuild		
Gypsum Industries		
Metals		
Cork Metal	1672.22	15 01 04
Cable – National Recycling	30.32	17 04 07
		19 12 02
Bituminous Mixtures		17 04 01
John A Wood		
Plastic		
Glyntown	64	15 01 02
Clearpoint		17 02 03
Bernard O.Brien, Waterfall	24.02	
Rubble/Soil		
Con Cronin, Mourneabbey	3171	17 01 01
John Butler	7,403	17 01 02
Paudie Sheehan, Donoughmore	1428	17 01 03
Whites Cross	1037	17 01 07
Gypsum/Plasterboard		17 08 02
Cleanbuild	535	
Gypsum Recycling	96	
Dry Recyclables		
Thorntons		20 01 99
Clearpoint	200.38	
Disposal – Residual Material		
Residual Material		
Ballaghveny	1404.43	19 12 12
Youghal	6923.53	

2.6 Wastes Received and consigned by the facility

Period:- 01/01/08 to 31/12/08

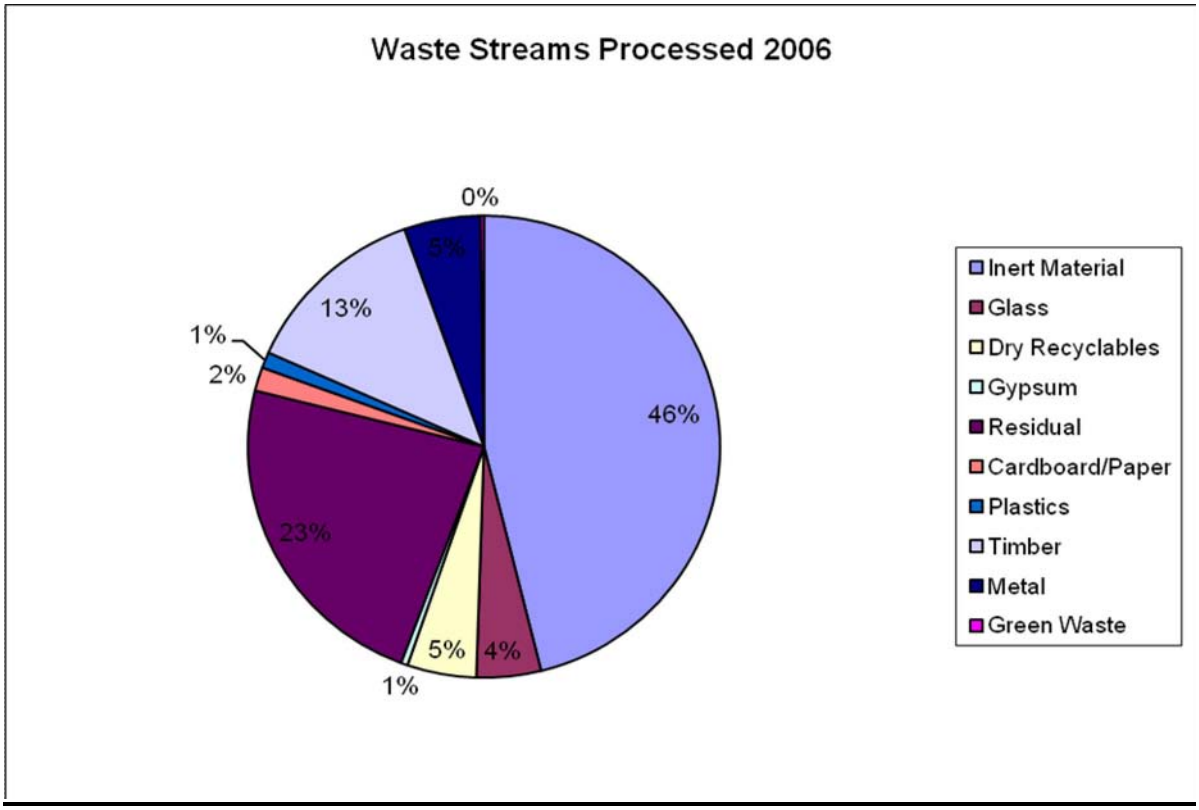
Total Quantity of material handled (Incoming)		
Recovery	Weight/Metric Tonnes	EWC Codes
Wood		15 01 03
Eirbloc	561	17 02 01
Wayerheuser, formellyMedite	2215 1574	15 01 03 17 02 01
Waste recovery services Fermoy	119	20 01 38
WEEE		
Veolia Environmental	.09	16 02 14 / 20 01 36
Veolia Environmental	2,18	16 02 13* / 20 01 35*
Veolia Environmental	.05	20 01 21*
Veolia Environmental	4.31	16 02 14 / 20 01 36
BC Waste Management	4.28	16 02 14 / 20 01 36
Mixed Dry Recyclables		
Thorntons	6991	20 03 01
AVR Safeway, Youghal, Co. Cork	553	20 03 01
Cardboard/Paper	1435	15 01 01
Glyntown		19 12 01
Cork Recycling, Lehenaghmore	55	20 01 01
Glass		
Clare Recycling	1632	15 01 07
End of life tyres		
Crossmore Tyres	11	16 01 03
Mixture of Conc and Bricks		
Mallow Contracts	7707	17 01 07
Paint related materials		
Veolia Environmental	.54	15 01 10
Metals		
Cork Metal	1659	17 04 07
Cable – National Recycling	12	17 04 11
National Recycling	30.33	17 04 02
Thornton's	81	15 01 04
Thornton's	37	15 01 04
Bituminous Mixtures		17 04 01
John A Wood	8.5	
Plastic		
Thorntons	318	15 01 02
Cork Recycling	22	17 02 03

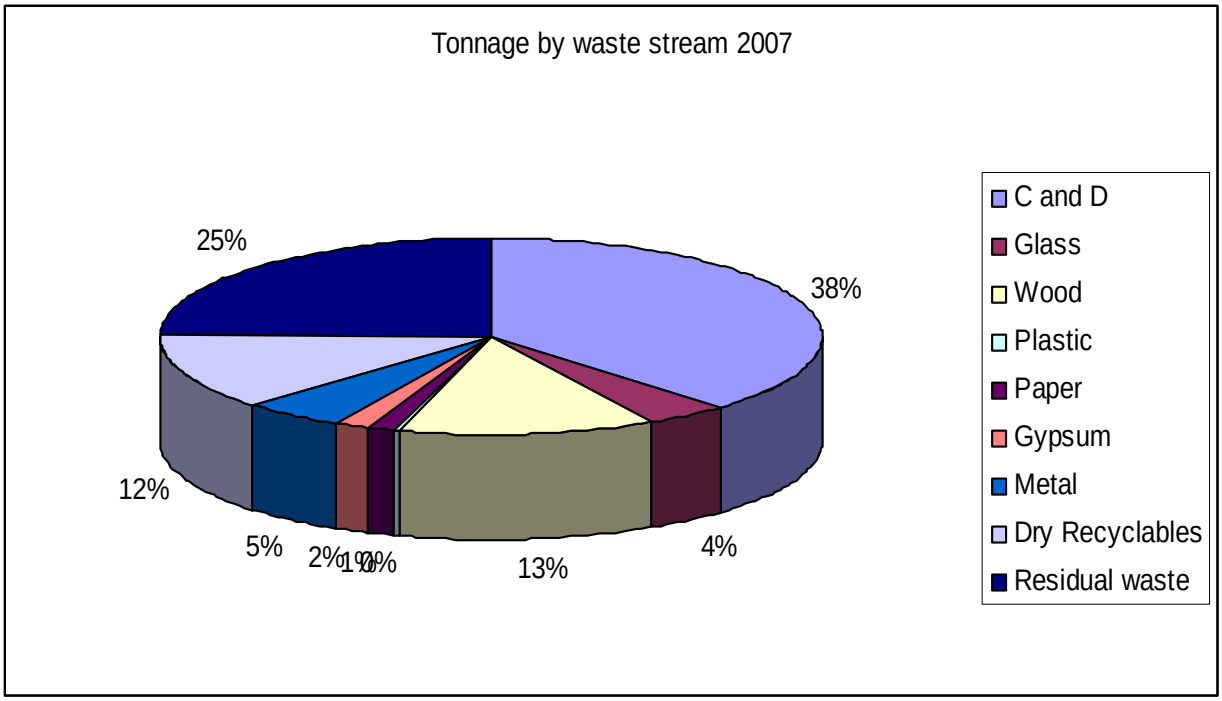
Bernard O Brien Waterfall	100	17 02 03
Rubble/Soil		
Mallow Contracts	17,500	17 05 04
John Butler	7,403	17 01 02
Paudie Sheehan, Donoughmore	1428	17 01 03
Whites Cross	1037	17 01 07
Gypsum/Plasterboard		17 08 02
Cleanbuild	166	
Recycleworks, St Margarets, Co. Kildare	458	17 08 02
Dry Recyclables		17 08 02
Thorntons		20 01 99
Clearpoint	200.38	
Disposal – Residual Material		
Residual Material		
Gortadroma Landfill Youghal Kinsale road	841 5098 827	20 03 01

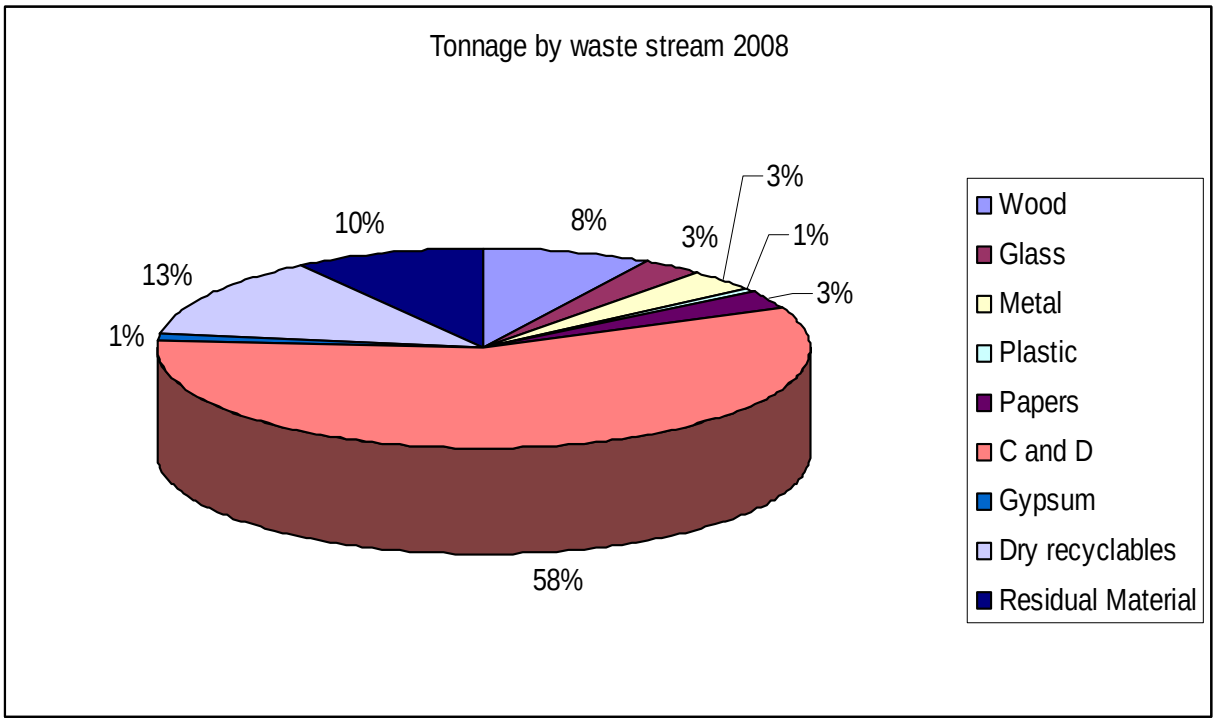
Total Quantity of material handled 2009 Inclusive		
Recovery	Weight/Metric Tonnes	EWC Codes
Wood		19 12 07
Eirebloc	609	17 02 01
Wayerheuser, formellyMedite	2635	20 01 38
Mixed Dry Recyclables		
Thorntons	6891	20 03 01
Cardboard/Paper		15 01 01
Cork Recycling, Lehenaghmore	282	20 01 01 19 12 01
Glass		
Clare Recycling	1325	15 01 07
Glassdon	224	
Mixture of Concrete,Bricks&Tiles		
Mallow Contracts	8969	17 01 07
Plastics		
W.F Recycling Bernard O'Brien Glyntown Enterprises Cork Recycling	29 58 14.76 7	17 02 03 20 01 39
Metals		
Aluminium - Cork Metal	5.98	17 04 02
Cable – Cork Metal	5.86	17 04 11
National Recycling	8.78	17 04 02
Mixed Metal – Cork Metal	1354	17 04 07
Gypsum		
Sandyhills Environmental	368	17 08 02
Soil & Stone		
Mallow Contracts	7337	17 05 04
Disposal		
Residual Waste		
Youghal Landfill	221	20 03 01
Gortadroma Landfill	4706	

Total Quantity of material handled 2010 Inclusive		
Recovery	Weight/Metric Tonnes	EWC Codes
Wood		19 12 07
Eirebloc, Lisarda, Co. Cork. CK(S)503/07	1225.54	
Wayerheuser, Clonmel. P0027-02	860	
Mixed Dry Recyclables		
Thorntons, Killeen Rd, Dublin. W0242-01	802.54	20 03 01
Cardboard/Paper		
Country Clean Recycling Ltd	303.36	19 12 01
Glass		
Glassdon Ltd, Co. Antrim LN/08/103	1369.42	19 12 05
Mixture Concrete,Bricks&Tiles		
Mallow Contracts, Mallow Rd, Cork. CK (N) 277/05	9,752.56	17 01 07
Plastics		
W.F Recycling, Centre Park Rd, Cork. 01/09	30.4	19 12 04
Metals		
Aluminium - Cork Metal CK (S) 491/07	16.4	19 12 03
Ferrous Metal	842.4	19 12 02
WEEE		
CRT'S KMK Metals Recycling Co, Co. Offally. W0133-03	8.18	16 02 13
Gypsum		
Sandyhills Environmental, St Margarets, Co. Dublin WPT 112	175.2	17 08 02
Nurendale Ltd, t/a Panda, Navan, Co. Meath W0140-03	55.1	17 08 02
Soil & Stone		
Mallow Contracts, Mallow Rd, Cork. CK (N) 277/05	1494.62	17 05 04
Further Treatment of 19 12 12 - RDF		19 12 12
Greyhound Recycling, Clondalkin, Co. Dublin. W0205-01	2477.46	
Greenstar Recycling, Glanmire, Co. Cork. W0136-02	916.44	
Disposal		
Residual Waste		
Youghal Landfill, Foxhole, Co. Cork. W0068-02	609.84	19 12 12

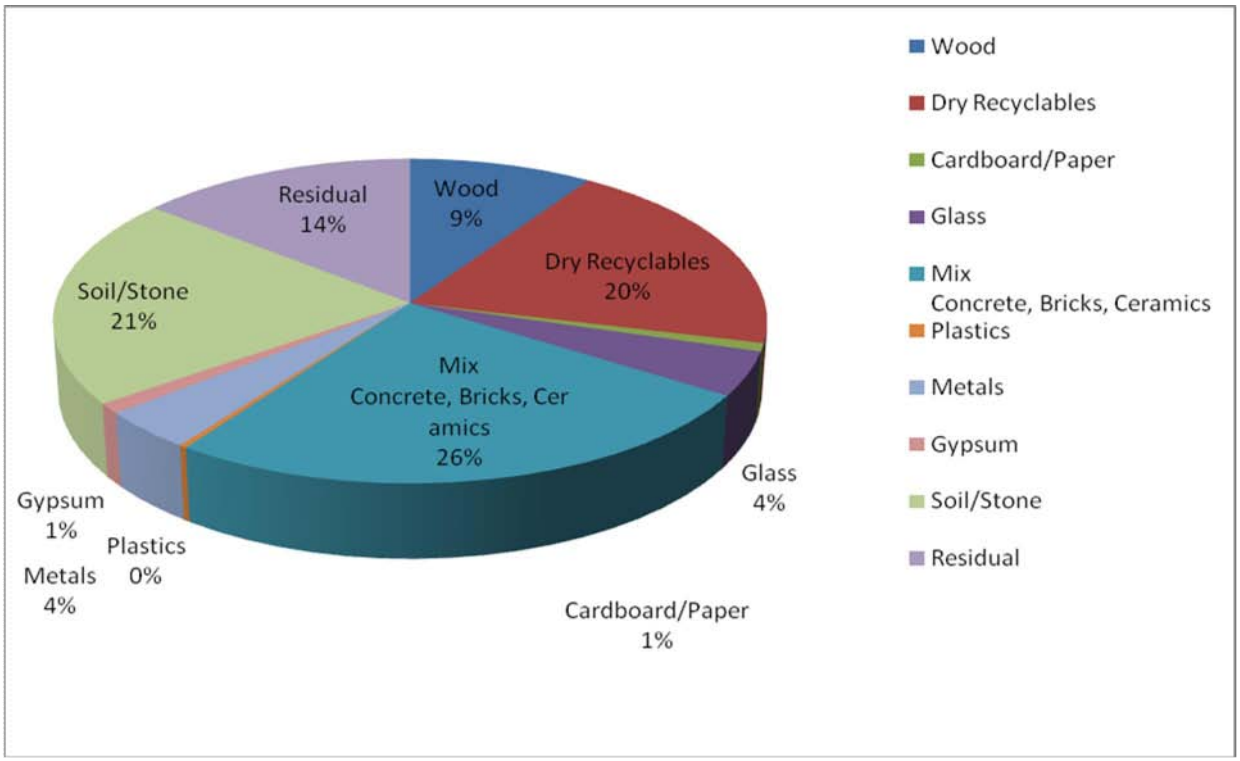
3.0 2006 – 20010 Waste Streams Represented Graphically:-

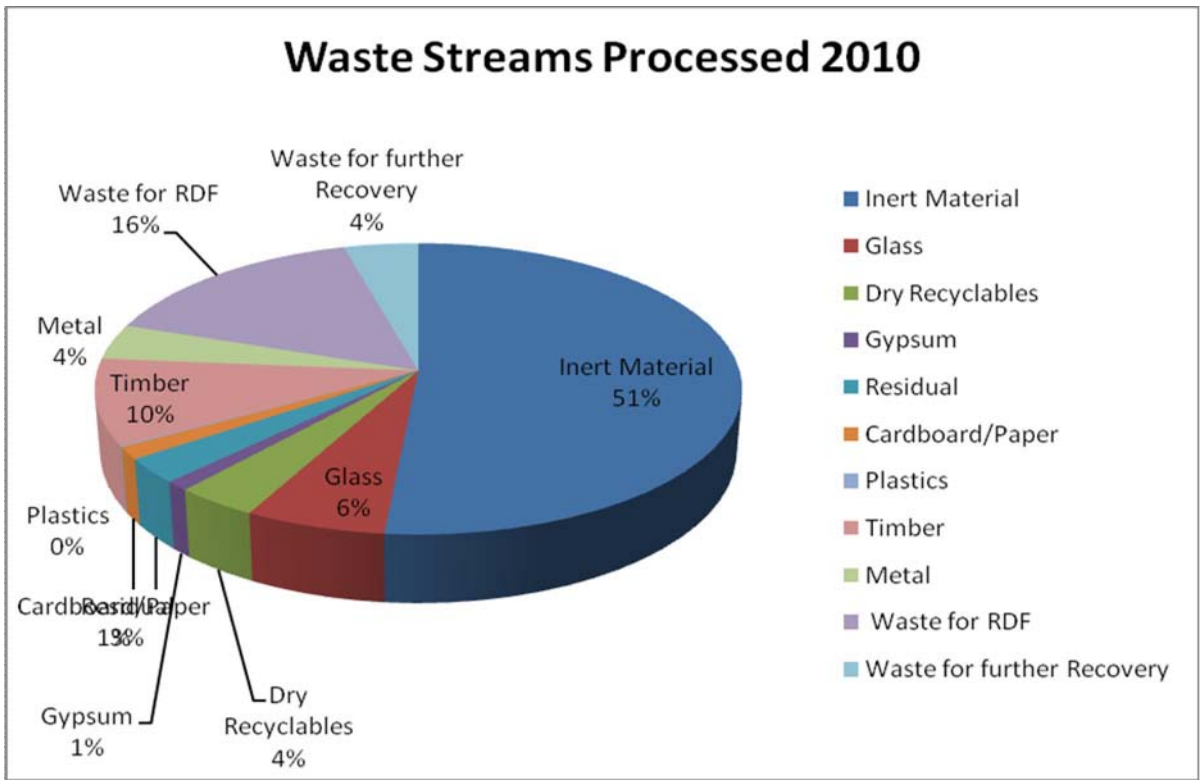






2009 Waste Streams Characterisation




Waste Streams Processed 2010
Waste for RDF 16%
Waste for further Recovery 4%
Metal 4%
Timber 10%
Inert Material 51%
Glass 6%
Plastics 0%
Gypsum 1%
Dry Recyclables 4%
Inert Material
Glass
Dry Recyclables
Gypsum
Residual
Cardboard/Paper
Plastics
Timber
Metal
Waste for RDF
Waste for further Recovery

4.0 Summary Report on Emissions

4.1 Emissions to Public Sewers

There are no discharges directly to waters from the facility. Emissions are made to foul and surface water sewers only. Both effluent and surface water discharge are sampled at the facility.

Both effluent types pass through a class 2 interceptor prior to being discharged to the public sewer north of the facility. Foul water is cleaned of petrochemical contamination by passing through a 4000 litre full retention seperator.

4.2 Foul effluent

This consists of process effluent from waste handling activities within the MRF and of discharge (washings and surface water) from the bin washing area of the site. The effluent is monitored on a monthly basis as per conditions of licence W0147/01.

4.3 Surface water effluent

This originates from rainwater and washings coming from the areas of hard standing at the site and from rainwater roof discharge. This effluent type is emitted to surface water sewer running west-east direction along the northern boundary of the site. Runoff from the yard also enters this sewer; however it is passed through an interceptor prior to discharging to public sewer.

4.4 Noise Emissions

The only noise emissions emanating from site is when the recycling plant is in operation. This is used a couple of hours daily within the main recovery building. Acoustic cladding within recovery building reduces noise levels at sensitive receptors.
In conjunction with the acoustic cladding, the landscaping surrounding the site also helps to reduce the noise further.
Noise monitoring is conducted on site bi-annually and relevant reports are submitted to the Agency.

4.5 Dust Emissions

Dust generation on site is mainly attributable to windblown dust as the site is quite elevated. Vehicular movements within the facility on impermeable surfaces also contribute to dust nuisance. In dry windy conditions and sunny spells the hard standing areas and any problematic areas are sprayed with water using water bowser.

The probe atomiser within the recovery building reduces dust nuisance and sprays are focused on main stockpiles within the recovery building. Furthermore, the city sizer within the shed has a series of sprays focused on the screening area.
Dust monitoring on site is conducted three times annually and respective reports are submitted to the Agency.

4.4 Locations

Surface and foul water monitoring is carried out at two locations (S01 and S02) to the north of the site.

Noise monitoring is carried out at four locations of the site. Refer to noise monitoring locations in Appendices.

Dust monitoring is carried out at four points at site extremities, namely D1 to D4.

4.5 Methods

Foul water sampling is carried out be taking a grab sample belong the V notch weir when there is adequate flow. Surface water sampling was carried out by full submergence of the container into the surface water body. Samples were stored appropriately and transferred within 24 hours for analysis, conducted by Alcontrol Laboratories.
The results have been compared to the ELV,s contained in Schedule C and D of waste licence 147/1. All surface and foul water results were in compliance with the emission limit values contained in the licence.

5.0 Summary of Results & Interpretations – Environmental Monitoring

Monitoring Point	Grid Reference
F 01	165933 E 73611N

5.1Summary of Foul Water Effluent Analysis

Parameter	**BOD**	**COD**	**Amm. Nitrogen**	**Suspended Solids**	**Sulphate**	**p.H**	**Temp**	**MBAS**	**F.O.Gs**
Sampling Date	**mg/l**	**mg/l**	**mg/l**	**mg/l**	**Mg/l**		**Degrees C**	**Mg/l**	**mg/l**
14.01.10	7.35	61.6	0.268	65	127	7.2	1	0.154	3.6
4.02.10	17.5	118	2.02	44.7	105	8.2	5	0.297	10.3
*									
15.04.10	320	854	9.85	128	296	7.4	12	0.953	28
27.05.10	314	622	9.92	145	354	7.6	16	1.56	8.74
*									
22.07.10	28.9	124	4.17	12	86	7.4	16	0.319	4.49
*									
30.09.10	126	978	8.1	41	75.5	7.9	12	4.99	9.16
14.10.10	88.3	544	3.88	43	77.6	7.7	10.7	5.11	6.04
*									
9.12.10	184	383	8.4	59	103	7.3	8.2	0.478	8.99

*** Unable to obtain a representative sample due to the emptying of Interceptor**

5.2 Summary of Surface Water Effluent Analysis

Sampling Date	**BOD Mg/l**	**Suspended Solids Mg/l**	**Am. Nitrogen NH 4 Mg/l**	**pH**	**Mineral Oils ug/l**
4.02.10	18	7	0.4	7.9	<10
29.10.10	22	83	0.2	8.2	<10

5.2.1 Foul Water Toxicity Test

Test Parameter	Analytical Technique	Result / Toxic Units
Toxicity (Vibrio Fischeri) 15 Mins	**EC 50**	**18.5**
Toxicity (Vibrio Fischeri) 30 Mins	**EC 50**	**15.6**

5.3 Interpretation of Results:-

Foul water results have been within the Emission Limit Values as specified within the licence for 2010, with the exception of sulphate, which exceeded the 100mg/l sulphate trigger value on three occasions for the 2010 sampling period.

However, we are confident that the discharge and associated sulphate concentration had no adverse effect on the immediate environment as the waste water discharged is subsequently conveyed to Cork City Councils waste water treatment plant located at Carrigrenan, Little Island, Co. Cork. Sulphate levels of this magnitude have no immediate threat is based on the EU drinking water standards issued in 1998 specifying a concentration of 250mg/l of sulphate for drinking water intended for human consumption.

Segregation of waste streams that may give rise to elevated sulphates has been isolated so as to prevent ingress of sulphates within the Drainage system.
BOD and COD levels are all well within allowable limits. This is also applicable for the other parameters that require testing under licence conditions.

Cork City Councils Chemist Mr. Edmond Barry was notified of the increased sulphate levels and it transpires that the Council have no issue of sulphate levels as outlined above being discharged to their public sewer located north of the facility.

Testing carried out by Cork City Council to determine if effluent is within limits as specified within discharge licence W.P. (S) 608/09 have demonstrated that they are all within the specified limits.

The interceptors are cleared of contents normally on an annual basis and drainage inspections all help positively in achieving compliance and identifying the time for the clearing of interceptor contents.

No sample could be obtained in June for analysis as the interceptors were cleared of contents for treatment.

Suspended solids were quite low and this could be contributable to regular sweeping of yard by a Contractor with a suction mechanical sweeper. Additionally, the silt trap was made larger in the main recovery building which helps trap fines being discharged to monitoring chamber.

Surface water results for February and October were all within the trigger levels as specified for the following parameters within the facility licence.

Quarterly monitoring reports are submitted to the Agency and the final quarter of 2010 can be constituted in this report.

6.0 Summary of Dust Monitoring

The dust gauges were set up at the locations D1, D2, D3 and D4 as specified in Table D1.1 of the Waste Licence. The gauges were erected such that the containers were 1.8 m above ground level. The containers were exposed for a 30 day period.

D1: This sample location is sited at the southeast corner of the site.
D2: This sample location is sited at the northwest corner of the site.
D3: This sample location is sited at the southwest corner of the site.
D4: This sample location is sited at the northeast corner of the site.

Monitoring Point	Easting	Northing
D1	166017	73499
D2	165915	73549
D3	165941	73484
D4	165990	73619

The results of the dust monitoring are outlined in the tables below, along with graphical representation of results.

June – 30 Day Composite

Table 4.1: Dust Monitoring Event No. 1
Units:- mg/m^2/day

Location / Parameter	Organic Particulates	Inorganic Particulates	Total Particulates
D1	52	67	119
D2	40	62	102
D3	45	107	152
D4	32	58	32

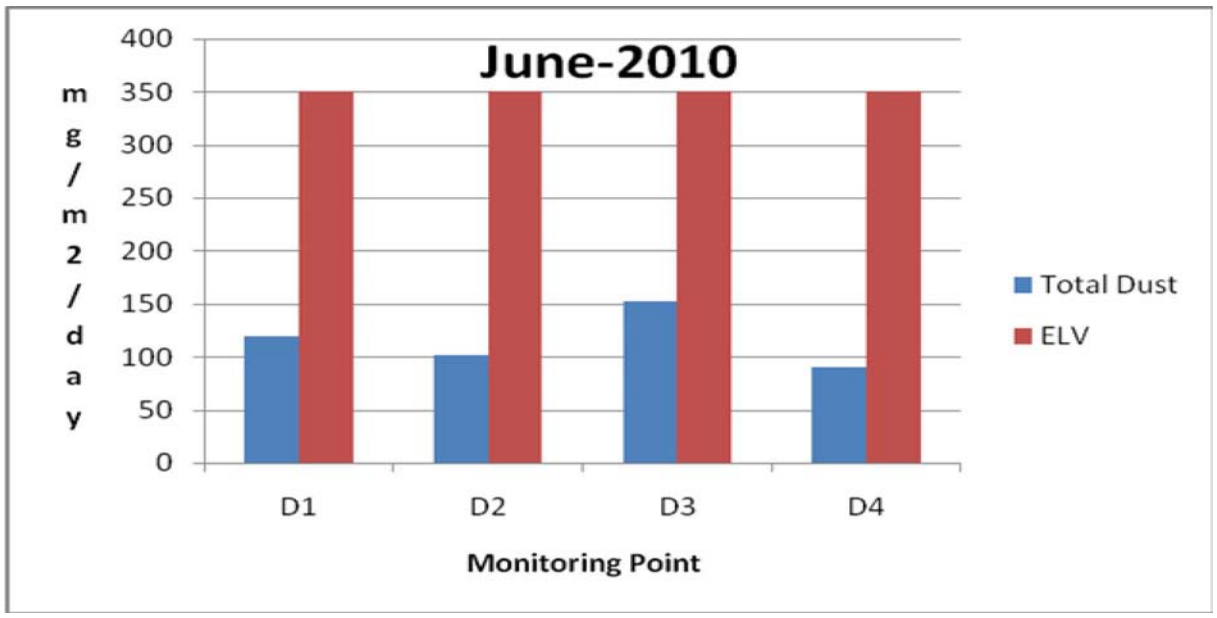


Table 4.2: Dust Monitoring Event No. 2
Period:- July 30 Day Composite
Units:- mg/m^2/day

Location / Parameter	Organic Particulates	Inorganic Particulates	Total Particulates
D1	29	20	49
D2	40	62	102
D3	44	88	131
D4	36	22	57

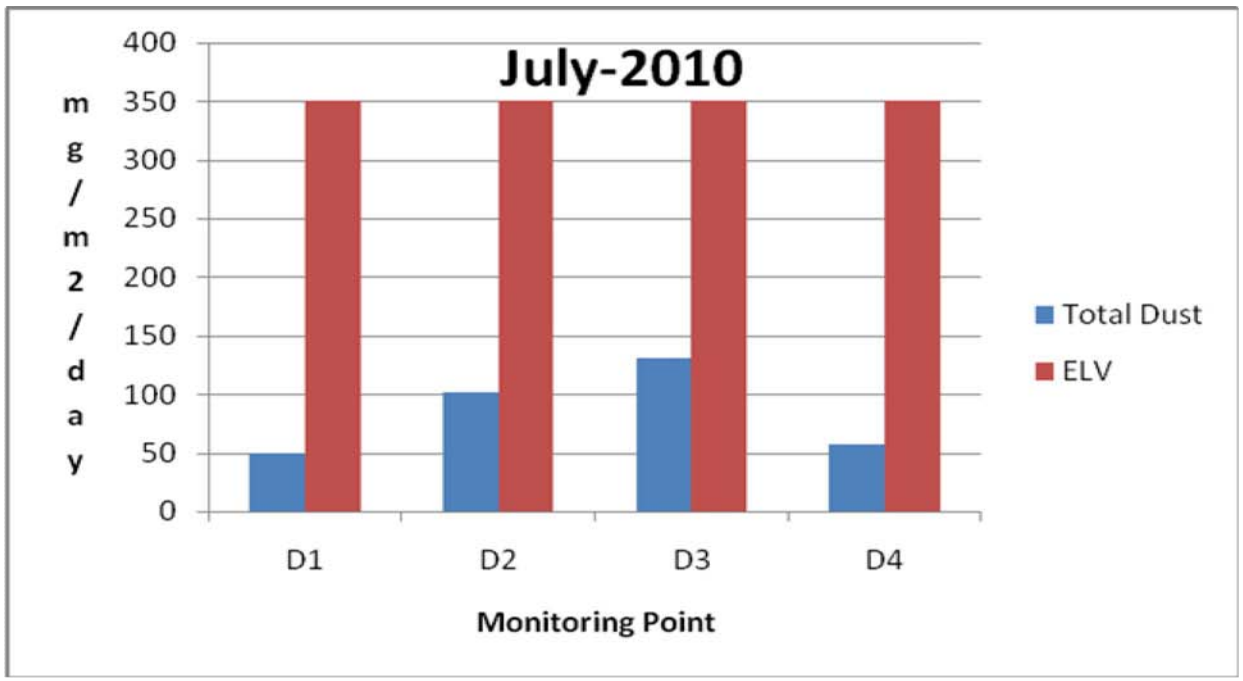
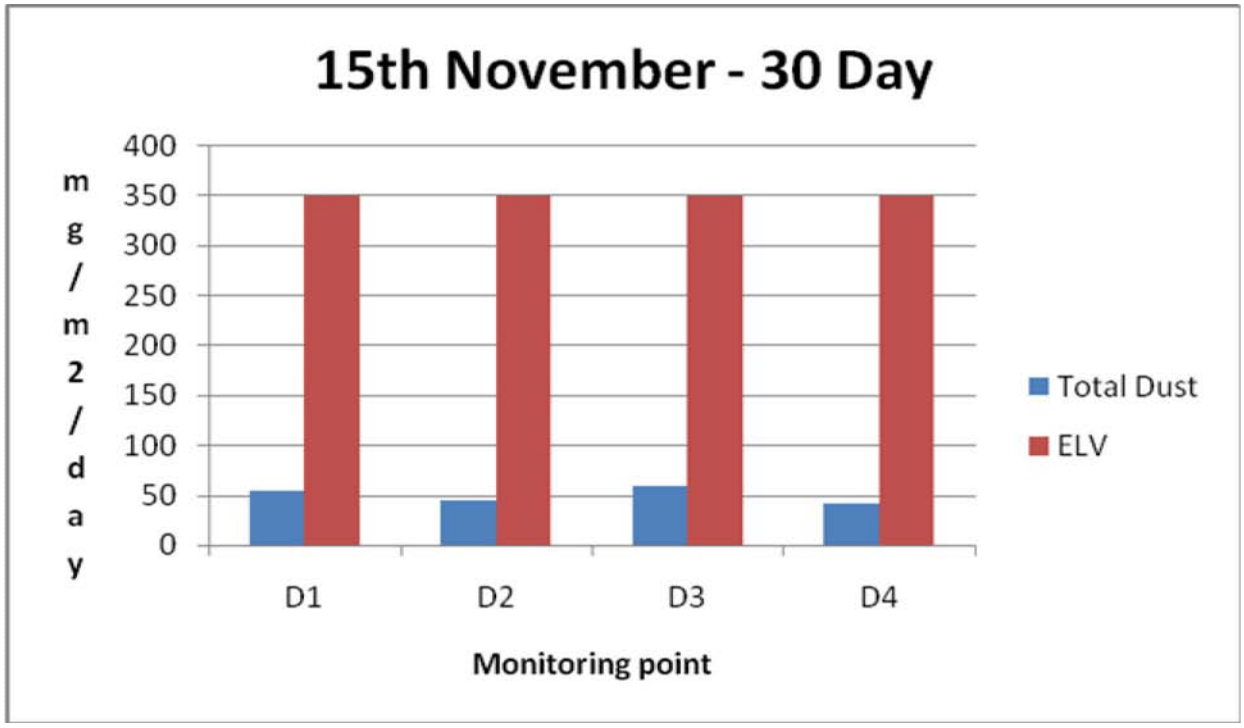


Table 4.2: Dust Monitoring Event No. 3
Period:- July 30 Day Composite
Units:- mg/m^2/day

Location / Parameter	Organic Particulates	Inorganic Particulates	Total Particulates
D1	22	33	55
D2	13	31	45
D3	18	42	59
D4	27	14	41



6.2 Conclusion:-
The on-site dust levels when monitored as required in Schedule D2 of waste Licence W0417/01 are within the trigger levels of 350 mg/m^2/day. This was achieved by regular spraying of the yard during dry gusty conditions and this in conjunction with yard sweeping using mechanical sweeper.

7.0 Noise Monitoring – 13th July 2010

Glenside Environmental was commissioned by Ashgrove Recycling to conduct a bi-annual noise survey at their premises at John F Connelly Road, Cork. This survey was conducted to comply with the requirements of the Waste Licence for the facility. The licence (register no. W0147-1) was issued by the Environmental Protection Agency to the company in March 2002.

The following are the details of the survey as carried out at Ashgrove Recycling on the 13th July 2010. The survey was carried out in accordance with the EPA Noise Survey Guidance Document 2006.

Patrick Power B.Sc MIOA carried out measurements at the locations in Schedule D of the licence. All measurements were carried out in accordance with ISO 1996 and EPA Noise Survey Guidance document as specified in the waste licence for the facility.

7.1 Equipment Used

The survey was carried out with a Bruel & Kjaer 2260 Investigator Sound Level Meter. The unit was calibrated before and after use. The instrument was calibrated with a Bruel & Kjaer Type 4231 Sound Level Calibrator, in accordance with ISO 1996-1: 1982 prior to commencing the survey using the recommended calibration procedure and a known pure tone noise source.

7.2 Permitted Noise Limits

Table 7.2 below shows the permitted noise levels acceptable outside the site boundaries as given in Schedule D of the waste licence for the facility.

Table 7.1: Noise Monitoring Frequency & Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
L_{Aeq} [30 minutes]	Bi-annual	International Standards Organisation. ISO 1996. Acoustics – Description and Measurement of Environmental Noise. Parts 1, 2 and 3.
L_{A10} [30 minutes]	Bi-annual	
L_{A90} [30 minutes]	Bi-annual	
Frequency Analysis (1/3 Octave Band Analysis)	Bi-annual	

The noise emission limits are given in Schedule C of the licence and are tabulated below.

Table 7.2: Noise Emission Limits

Day dB(A) L_{Aeq} [30 minutes]	Night dB(A) L_{Aeq} [15 minutes]
55	45

Furthermore the EPA requires that there be no audible tones or impulsive components at any noise-sensitive location.

Noise Terminology

The noise monitoring results for the noise sensitive locations (M1-M4) are provided in Table 2.3.

In order to understand the terms used, some definitions are outlined as follows:

L_{AF10} Refers to those levels in the Top 10 percentile of the sampling interval; it is the level, which is exceeded for 10% of the measurement period. It is used to determine the intermittent high noise level features of locally generated noise.

L_{AF90}/L_{AF95} Refers to those levels in the lower 90/95 percentile of the sampling interval; it is the level which is exceeded for 90%/95% of the measurement period. It is used to estimate a background level.

L_{Aeq} The average level recorded over the sampling period. The closer the L_{Aeq} value is to either the L_{AF10} or L_{AF90} value indicates the relative impact of the intermittent sources and their contribution. The relative spread between the values determines the impact of noise on the background.

Noise Monitoring Locations

The following is a description of the noise sensitive locations monitored during the bi-annual noise survey.

Location	Description
M1 (E 166056 N 73491	On roadside close to FÁS training center, east of the Ashgrove recycling facility
M2 (E 165915 N 73549	At the “old roundabout” to the west of the facility perimeter
M3 (E 166283 N 73727)	Upper Fair Hill Road adjacent to Fair Green
M4 (E 165868 N 73758)	Outside houses on Nash’s Boreen

RESULTS

Ambient Measurements

The results of the noise monitoring at locations M1-M4 is presented in octave band data below. The 1/3 octave band data is presented in Appendix A.

Table 3.1 Ambient Measurements (Locations M1 - M4)

Monitoring Location	Time and Date	$L_{Aeq, 30min}$ dB(A)	$L_{A90, 30min}$ dB(A)	$L_{A10, 30min}$ dB(A)
M1	13/07/10 12:37-13:07	63.7	54.2	65.2
M2	13/07/10 13:13-13:43	57.3	51.0	60.4
M3	13/07/10 11:57-12:27	65.5	48.6	68.0
M4	13/07/10 11:22-11:52	56.6	39.6	55.8

OBSERVATIONS

Location M1

The main noise source at this location was the from activities in industrial buildings close to the monitoring location in particular the Waters Glass facility. Traffic movements to the Ashgrove facility also contributed to the average noise levels. The L_{Aeq} was recorded at 63.7dB(A). There was no significant operational noise audible from the Ashgrove facility audible at this location. The background noise was recorded at 54.2dB(A).

Location M2

Traffic movements to and from the industrial estate close to the entrance of the Ashgrove facility, together with operational and traffic noise from Ashgrove facility contributed to the ambient noise levels at M1. The average noise level was recorded at 57.3dB(A) and the L90 was 51.0dB(A). The background noise level indicates that the specific noise from the Ashgrove premises is within the 55dB(A) limit as specified in the Waste Licence.

Location M3

At location M3 the traffic on the Upper Fairhill Road was the dominant source of noise. The high L_{AF10} levels are an indication of traffic noise. There was no contribution from the Ashgrove facility at this location. The L_{Aeq} was recorded at 65.5dB(A).

Location M4

There was only minimal noise audible from the Ashgrove facility at his location. The average noise levels were influenced by local passing traffic and the background levels were influenced by the distant traffic from the Mallow Road. The L_{Aeq} was recorded at 56.6dB(A) and the L_{90} was 39.6dB(A).

CONCLUSIONS

There was no audible noise from the facility at 3 of the 4 monitoring locations. At location M2 close to the facility the average noise level was recorded at 57.3dB(A). Traffic movements and operational noise influenced the average noise levels. The area is zoned industrial and other local industry also contributed to the ambient levels. Other local noise from the Waters Glass facility and construction of industrial units influenced the local noise levels.

In conclusion the noise levels emanating from the Ashgrove facility are considered not to be impacting on local sensitive areas.

7.3 Noise Monitoring – 29th November 2010

RESULTS

Ambient Measurements

The results of the noise monitoring at locations M1-M4 is presented in octave band data below. The 1/3 octave band data is presented in Appendix A.

Table 8.3 Ambient Measurements (Locations M1 - M4)

Monitoring Location	Time and Date	$L_{Aeq, 30min}$ dB(A)	$L_{A90, 30min}$ dB(A)	$L_{A10, 30min}$ dB(A)
M1	29/11/10 10:41-11:21	61.1	52.0	63.7
M2	29/11/10 10:07-10:37	59.2	49.6	61.7
M3	29/11/10 11:33-12:03	64.9	47.5	66.4
M4	29/11/10 12:09-12:39	52.0	38.1	54.1

OBSERVATIONS

Location M1

Measurements at location M1 were recorded on the roadside on access road to Ashgrove facility. The noise from the Ashgrove facility was audible but was not considered significant. The main noise source at this location was from activities in industrial buildings close to the monitoring location in particular the Waters Glass facility. Traffic movements to the Ashgrove facility also contributed to the average noise levels. The L_{Aeq} was recorded at 61.1dB(A). The background noise was recorded at 52.0dB(A).

Location M2

Traffic movements associated with the industrial estate close to the entrance of the Ashgrove facility, together with operational and traffic noise from Ashgrove facility contributed to the ambient noise levels at M2. The average noise level was recorded at 59.2dB(A) and the L90 was 49.6dB(A). The background noise level indicates that the specific noise from the Ashgrove premises is within the 55dB(A) limit as specified in the Waste Licence.

Location M3

At location M3 the traffic on the Upper Fairhill Road was the dominant source of noise. The high L_{AF10} levels are an indication of traffic noise. There was no contribution from the Ashgrove facility at this location. The L_{Aeq} was recorded at 64.9dB(A).

Location M4

There was only minimal noise audible from the Ashgrove facility at his location. The average noise levels were influenced by local passing traffic and the background levels were influenced by the distant traffic from the Mallow Road. The L_{Aeq} was recorded at 52.0dB(A) and the L_{90} was 38.1dB(A).

CONCLUSIONS

There was no audible noise from the facility at 3 of the 4 monitoring locations. At location M2 close to the facility the average noise level was recorded at 59.2dB(A). Traffic movements and operational noise influenced the average noise levels. The area is zoned industrial and other local industry also contributed to the ambient levels. Other local noise from the Waters Glass facility and local industrial units influenced the local noise levels.

In conclusion the noise levels emanating from the Ashgrove facility are considered not to be impacting on local sensitive areas.

8.0 Environmental Management Plan / Schedule of Targets & Objectives

8.1 Introduction:-

This Environmental Management Plan was prepared to ensure compliance with Condition 2.3 of EPA Waste licence Registered Number 147/1 with respect to activities concerning:-

Ashgrove Recycling,
John. F. Connolly Road,
Churchfield Industrial Estate,
Churchfield,

Cork.

The Environmental Management System involves the implementation of a system, which forms the basis for continuous, structured and quantifiable improvement in a facilities environmental performance.
Ashgrove Recycling operates a Materials Recovery Facility in conjunction with a skip hire business at Churchfield Industrial Estate, Cork. The waste, which is collected primarily from Construction/Demolition and Commercial Activities within the functional areas of Cork City and County Council, is separated into recyclable and unrecoverable fractions at the facility.
The redeemable material is transferred to various associated industries for recycling with the residual unrecoverable materials being landfilled.

8.2 Purpose

The purpose of this Environmental Management Programme is to ensure that the schedule of targets and objectives are supported and fully implemented throughout the company. It will help the company achieve continual improvement in an environmental context. It will provide the facility with the framework to operate in conjunction with the waste licence and strive to achieve good environmental practice for the operation of the facility.

The development of a set of comprehensive procedures for Ashgrove Recycling across all departments continued from what was initiated in 2004. A number of additional procedures have been implemented at Ashgrove Recycling Centre in relation to facility operations in 2005. These include;

a) **Communications Procedure –** This procedure ensures that effective and responsive measures are in place at Ashgrove Recycling Centre to deal with requests for environmental information at the facility.
b) **Vehicle Emergency Response Procedure –** This procedure is designed to protect driving employees during emergency situations.
c) **Fire Extinguisher Installation Standard** – This procedure has unified the way in which fire extinguishers are mounted in Ashgrove Recyclings facility. The standard complies with all aspects of I.S.291: 1986, the Irish standard for the use, sitting, inspection and maintenance of portable fire extinguishers.
d) **No Smoking Procedure** - This is an important procedure for the protection of the safety of all employees. All aspects of the Public Health (Tobacco) Act 2004 are considered in this procedure and bring the Ashgrove Recycling Operations into line with the requirements of the Act.
e) **Hot Works Permit Procedure** – In conjunction with the No Smoking Procedure, a 'Hot Works Procedure' is now in place at Ashgrove Recycling operations. This is to ensure that all the appropriate measures are taken to reduce the risk of fire in the event of hot works taking place.
f) **Control of Sub Contractors** – As all employees are exposed to the hazards and risk that the Ashgrove Recycling operations present, so to are all contractors that work on our sites. This procedure will ensure that the contractors that are brought onto work on Ashgrove Recycling operations are trained, certified and experienced operators of there equipment. It will also ensure that the standard of sub-contractors that Ashgrove Recycling utilises, comply with all aspects of the law in regards to there operations whilst on Ashgrove Recycling operations.

8.3 Schedule of Objectives and Targets 2011

Objectives	**Targets**
1. Increase area of concreted surface, i.e.:- Impermeable Hard standing at the facility	To increase concrete surface area by 500m^2 within the next 2 years.
2. To reduce the amount of residual waste going for RDF	To reduce residual waste going to RDF Production by 2% per annum.
3. Water Conservation	Reduce annual consumption by 5%.
4. Reduce energy wastage at the facility	5% reduction in consumption compared to last years usage.
5. Reduce litter within and around the site vicinity	Eradicate all extraneous litter from Ashgroves activities in and around the site. Carry out daily Inspections.
6. Reduce emissions from the development	Reduce dust emissions to the atmosphere by 10% from the beginning of 2008. Implement further dust suppression equipment
7. Reduce instances of hazardous waste coming to the facility	Negotiate with customers. Site audits to identify non-compliant waste streams and report back to site/facility manager
8. To eliminate adverse spillages of engine oil	To reduce incidences of oil spillage by regular checks and providing suitable bunding.
9. To increase the accuracy of logging EWC codes on weighbridge system.	Ensure all EWC Codes are accurately logged for every waste movement and installation of weighbridge camera within 6 months
10. Increase security measures at the Facility	To install two additional CCTV Cameras within 6 months. Also erect more fencing to the south of facility boundary adjacent to lane within 6 months.

Objective 1:- Increase area of concreted surface, i.e.:- Impermeable Hard standing at the facility

Advantages to implement objective:-	The success of the project will yield several benefits to the environmental performance of the facility. It will also help the site by increasing the operational area. The concreting development will prevent the development of mud nuisance, and prevent runoff, etc from entering groundwater and possibly effecting soils. *Note:- Hard standing to conform to British Standard 8110* In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets.
Target:-	To have 500m^2 of the yard concreted within the next 2 years. This is to continue on from the existing concreted area.
Programme for achieving Target	Task 1:- Identify area to be concreted and calculate area. Task 2 :- Take levels to identify areas that need fill Task 3:- Divide into sections and prepare construction schedule and bill of quantities. Task 4:- Calculate flow rates for maximum rainfall intensity from Irish climatic data and identify if current interceptor is of sufficient size to cope with surface water runoff. Task 5:- Installation of silt traps and associated works. Task 6:- Order steel, aggregate and 30N Concrete Task 7:- Obtain quotations from Concrete Contractors, subsequent to identifying best tender, set date for commencement of works.
Responsibility for Project:-	The facility Manager and Environmental Manager are responsible for implementing this project, through to project completion.

Table 1.1:-

2011	Jan	Feb	Mar	April	May	June	July	August	Sept	Oct	Nov	Dec
Task 1												
Task 2												
Task 3												
Task 4												
Task 5												
Task 6												
Task 7												

Objective 2:- To reduce the amount of residual waste going for RDF (Refuse Derived Fuel).

Advantages to implement objective:-	Any reduction in residual waste going for RDF has several positive environmental effects. It helps to conserve natural resources when recycling, etc is carried out. It also has the added benefit of preventing the unnecessary energy recovery of materials as recycling is higher up in the waste hierarchy when compared to energy recovery. Energy recovery must be one of the last options once all other possibilities have been explored.
Target:-	In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets. To reduce residual waste going to for RDF by 2% per annum.
Programme for achieving Target	Task 1:- Identify existing rates of recovery Task 2:- Carry out regular assessments within the Material Recovery Building to identify if any recycled material is being waste stockpiled to be destined to landfill. Task 3:- If it is evident that recyclable material is being stockpiled for RDF production, then a meeting will be held with MRB staff whereby the materials which are relevant will be displayed. Task 4:- Identify the best method to segregate these recyclable materials. Task 5:- Review process regularly with the possibility of investing more in recycling infrastructure Task 6:- Implement any findings.
Responsibility for Project:-	The Facility Manager is responsible for implementing this project with the assistance of the Waste Controller. The Waste Inspector will assist with Task 2. It will be the responsibility of the Environmental Manager to assist with providing information to the Agency in relation to proposed destination for recovered materials.

Table 2.1:-

2011	Jan	Feb	Mar	April	May	June	July	August	Sept	Oct	Nov	Dec
Task 1												
Task 2												
Task 3												
Task 4												
Task 5												
Task 6												

Objective 3:- Water Conservation

Advantages to implement objective:-	Water conservation is very significant as it's a precious resource whose significance is undermined by many. Water conservation makes good economic sense as an industrial activity the water consumption is metered and any reduction in consumption patterns will have a positive effect in financial savings. In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets.
Target:-	Reduce annual consumption by 5% compared to last year's usage .i.e. 2010.
Programme for achieving Target	Task 1:- Identify plant and appliances that consume water Task 2:- Evaluate if the water consumption can be reduced without hindering performance of equipment. Task 3:- Look at water saving equipment such as press valve taps, etc. The use of water sprayer for dust control is being filled off rain water run-off. Task 4:- Compile information sheet and distribute to employees. Task 5:- Have a meeting with other employees and outline the importance of water conservation. Task 6:- Installation and implementing recommendations
Responsibility for Project:-	The facility Manager and Environmental Manager will have responsibility for implementing this Objective.

Table 3.1:-

2011	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Task 1												
Task 2												
Task 3												
Task 4												
Task 5												
Task 6												
Task 7												

Objective 4:- Reduce energy wastage at the facility

Advantages to implement objective:-	The reduction in energy will reduce the unnecessary release of CO2, along with other pollutants to the atmosphere. This is due to the fact that most electricity is generated by fossil fuels in Ireland. Renewable energies are not been exploited to their potential. It will also reduce running costs for the facility as energy costs have rising by over 30% in the past three years.
Target:-	In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets. 10% reduction in consumption compared to last years usage.
Programme for achieving Target	Task 1**:-** Identify the major sources of energy usage at the facility and conduct energy audit. Task 2:- Report findings to licensee. Suggest ways in improving controls, etc. Task 3**:-** Compile energy awareness literature and distribute amongst staff, incorporating findings of energy audit. Task 4**:-** Regularly show employees where energy is being wasted, such as leaving heating and light on unnecessarily. Also, switching plant machinery and vehicles off when not in use. This will also have a positive effect on reducing emissions. Task 5:- Asses the effect the above is having on energy consumption. Look at electrical/fuel billing for the previous three months since project implementation and compare with the subsequent three months. Take seasonal variations into account. Task 6:- Install control mechanisms if deemed necessary for project success. Task 7:- Review programme regularly
Responsibility for Project:-	The responsibility for this lies with the Environmental Manager

Table 4.1:-

2011	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Task 1												
Task 2												
Task 3												
Task 4												
Task 5												
Task 6												
Task 7												

Objective 5:- Reduce litter within and around the site vicinity

Advantages to implement objective:-	It's a stipulation of the waste licence under condition 7.4 that all loose litter not permitted by the licensee shall be removed from the vicinity of the facility as soon as possible. This type of litter is visually unacceptable and has the potential to create a nuisance.
Target:-	In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets. To maintain a well maintained site, site boundary and access roads while removing extraneous material from causing visual intrusion and possibly becoming an attraction for vermin.
Programme for achieving Target	Task 1:- Evaluate regularly the situation with respect to litter. It may be windblown or illegally dumped. Task 2:- Nominate litter patrol personnel. Task 4:- Discuss abatement measures with other adjoining facilities that may be a source for some of the litter. Task 5:- Check quality of all netting and replace if necessary. Task 6:- Check Integrity of fencing, and also monitor the growth of trees as this provides screening. If necessary, feed trees with phostrogen to encourage growth and speed up maturing process.
Responsibility for Project:-	The Waste Controller is responsible for the implementation of this program. The Environmental Manager will assist with Tasks 1, 4 and 5.

2011	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Task 1												
Task 2												
Task 4												
Task 5												
Task 6												

Objective 6:- Reduce emissions from the development

Advantages to implement objective:-	Condition 6.2 of the Waste Licence requires that all the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
Target:-	In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets. To curb emissions to well within the limits prescribed by the waste licence. To remove any possibility of future emissions being released and having an adverse environmental impact.
Programme for achieving Target	Task 1 – evaluate and compare current monitoring results with licence limits and current monitoring results with licence limits and current handling figures of the facility. Task 2 – Identify any problems areas that exist with adverse emissions to the environment. Task 3 – Identify sources / processes that may lead to problematic results. Task 4:- Evaluate the effectiveness of all emission abatement equipment currently installed. Task 5 :- Discuss any findings with the Agency Task 6:- Install, subject to approval from the Agency, any abatement equipment deemed necessary by the Agency. Task 7:- Look into possibility of installation of an electrical generator and power machinery from this to reduce source noise emissions.
Responsibility for Project:-	The Environmental Manager will have responsibility for this project. Any implementations will be overseen by the Facility Manager subsequent to being approved by the Agency.

2011	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Task 1												
Task 2												
Task 3												
Task 4												
Task 5												
Task 6												

Objective 7:- Reduce instances of hazardous waste coming to the facility

Advantages to implement objective:-	Condition 1.6 of the Waste Licence states that *" No hazardous wastes or liquid wastes shall be accepted at the facility"*. **Ashgrove Recycling & Waste Management does not wish to allow hazardous waste streams enter the facility.**
Target:-	In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets. To reduce instances of hazardous material arriving at the facility.
Programme for achieving Target	Task 1 – Evaluate current situation with regard to level hazardous waste arriving at the facility. Task 2 – Identify sources & Problematic customers where the majority of the identified waste streams come from. Task 3 – Compile Report on findings (Sources of hazardous waste). Task 4:- Arrange meetings with problematic customers to discuss situation and findings. Task 5:- Assist customer with approach to removing problematic waste from Ashgrove Recycling Receptacles. Task 6:- Review effectiveness of the above regularly. Task 7:- Incorporate waste acceptance criteria on waste acceptance letters
Responsibility for Project:-	The Facility Manager is responsible for the implementation of this project. The waste controller will be responsible for communications with customers. The waste inspector will assist with inspection and identification of customers who offend regularly. Environmental Manager will advise in accordance with the Waste Licence Regulations.

2011	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Task 1												
Task 2												
Task 3												
Task 4												
Task 5												
Task 6												
Task 7												

Objective 8:- Eliminate the possibility of adverse spillages

Advantages to implement objective:-	To eliminate the ingress of oil, etc to sewers in the event of a spillage. Also this will help achieve some ELV parameters not being exceeded.
Target:-	In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets. To reduce instances of spillages occurring at the facility, and prevent the ingress of spilt liquids into drainage system.
Programme for achieving Target	Task 1:– Communication with Mechanic and Maintenance Manager to identify systems that may produce spillage of oil. Task 2:- Agree with a maintenance schedule and a checklist to identify hydraulic piping systems, etc. Task 3: – Conduct Staff Training and also issue copies of procedure for cleaning up spillages. Task 4:- Review effectiveness of the above regularly.
Responsibility for Project:-	The Facility Manager is responsible for the implementation of this project. Environmental Manager will advise in accordance with the Waste Licence Conditions.

2011	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Task 1												
Task 2												
Task 3												
Task 4												
Task 5												
Task 6												

Objective 9:- To increase security measures at the facility and prevent unauthorised entry

Advantages to implement objective:-	Unauthorised access to the site is undesirable at all times. It may lead to injury or a fatality due to moving machinery or possibly an arson attack. In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets.
Target:-	To erect fencing south east of the site blocking access to the lane within six months. Installation of two additional CCTV security cameras – dome type and have them connected to recorder.
Programme for achieving Target	Task 1:– Identify type of fencing and obtain quotations for the length of fencing to be utilised. Task 2:- Prepare schedule of works. Task 3:- Erect Fence Task 4: – Obtain quotations for CCTV Installation upgrade. Task 5:- Install additional CCTV.
Responsibility for Project:-	The Environmental Manager and Facility Manager are responsible for the implementation of this project.

2011	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Task 1												
Task 2												
Task 3												
Task 4												
Task 5												

Objective 10 :- To increase the accuracy of Logging EWC Codes on weighbridge system

Advantages to implement objective:-	The accurate recording of EWC Codes for waste streams entering and leaving the facility yields several benefits. It depicts the nature of the waste that was processed at the facility. It also contributes to provide accurate metrics to the Agency for the production of the National Waste Report, etc. In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets.
Target:-	To accurately log all waste movements at the facility.
Programme for achieving Target	Task 1:– Communication with Weighbridge staff to ensure they understand the significance of logging waste accurately. Task 2:- Provide guidance to weighbridge staff to the proper use of the European Waste Catalogue. Task 3: –Install Camera overlooking weighbridge so Weighbridge Operators have a good view of the waste stream and can record accurately. Task 4:- Review effectiveness of the above regularly.
Responsibility for Project:-	The Environmental Manager and Logistics Manager is responsible for the implementation of this project.

2011	**Jan**	**Feb**	**Mar**	**April**	**May**	**June**	**July**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**
Task 1												
Task 2												
Task 3												
Task 4												

8.4 Benefits Associated with EMS Implementation

The initial drivers, which influenced the scope and focus of EMS development, reflect anticipation of the following benefits:

- An ability to demonstrate due diligence, and therefore operational confidence, more effectively.
- Improved morale by empowering employees to take ownership of the environmental aspects of their jobs.
- Heightened environmental awareness
- More effective emergency procedures
- A platform for implementation of green procurement
- Improved communication within and between staff, management, , public, and regulators.
- Improved corporate image—especially within the community.
- Provides a system for continual improvement.

8.5 Progress Review on Targets & Objectives for 2010

2010 Objectives

1. Increase area of concreted surface, i.e.:- Impermeable Hard standing at the facility
2. To reduce the amount of residual waste going to landfill.
3. Water Conservation
4. Reduce energy wastage at the facility
5. Reduce litter within and around the site vicinity
6. Reduce emissions from the development
7. Reduce instances of hazardous waste coming to the facility
8. To eliminate adverse spillages of engine oil
9. To reduce emissions from vehicles

Objective 1:- In August 2009 the main floor of the Material Recovery Building was concreted again as the original floor finish became defective.
Also, an area of was concreted to the south of the site and this proved to be very effective, particularly in reducing the amount of mud generated on site.
Furthermore, the ramp approaching the wheelwash was concreted as the Tarmacadam was becoming defective in this area.

Objective 2 :- Regular Inspections of waste destined for Landfill was carried out to prevent the land filling of recyclables. This proved effective and also increased staff awareness, particularly for operators in the material Recovery Building.

We also identified a facility that can produce RDF (Refuse derived fuel) or solid recoverable fuel from the residual waste we produce after going through our recovery process.
An average of 70% of the waste accepted at this facility that goes through the RDF process is made into RDF. This is used in cement kilns due to the high calorific fuels that are required for the cement manufacturing process.
This development has achieved this objective as we have greatly reduced the amount of material destined for landfill in 2010.

Objective 3:- Water consumption at the facility decreased by 9% when compared with 2009 metrics. This was achieved by rainwater harvesting at the facility. Furthermore, the original taps in toilets were replaced with the timed release type.

Objective 4:- Energy consumption has decreased over 12% for 2010 when compared to 2009 usage, the licensee is confident that the eight floodlights used for night lighting of yard when replaced with the more energy efficient metal halide type contributed greatly to the reduction of energy consumption.

Management regularly conduct checks to ensure that no electrical items are left on unnecessarily, particularly heating appliances.
Communication with all staff and coaching helps achieve this target also.
An assessment was undertaking by our Electrical contractor and the advice provided suggested that most of the motors are new and would be quite efficient. This in conjunction with regular maintenance helps achieve efficiency.

Objective 5:- Regular litter Inspections are carried out and an operator has been designated the task of clearing any litter when required.

Objective 6:- The water bowser seems to prove very effective in reducing dust nuisance. The cladding of the material recovery building is inspected to ensure full integrity so as to mitigate against noise and odour nuisance.

We also have engaged a contractor to provide regular cleaning of the yard that actually vacuums up dust particulates from the ground that greatly contributes towards the reduction of windblown dust nuisance.

The processing plant is housed internally and noise generation does not appear to be a problem externally. To ascertain if the facility was creating a noise nuisance we asked the developer of the nearest receptor (Exchange Business Park) and the findings were that the recycling facility has had no adverse impact.
Furthermore, independent bi-annual noise surveys conducted by Glenside Environmental have concluded same.

Objective 7:- Customer waste profiling is carried out for new regular customers. Also, staff in reception advises customers of non-conforming waste streams. Additionally, letters of acceptance are issued to new waste collectors arriving at the facility that specifies that the facility cannot accept liquid or hazardous waste. The quarantine area contains non-conforming items and these are removed to a permitted facility as agreed with the Agency.

Objective 8:- A set of twelve spillage kits were purchased in addition to the existing ones to facilitate the cleanup of any oil spills that may arise. Staffs have been trained in the proper use of the kits.

Objective 9 :- The conversion of vehicles to run on bio-fuel is still ongoing. Some of the fleet needs to be upgraded before further investment/consideration is given to this objective.
The use of a fuel catalyst (Spectrum D) helps with reduced emissions of up to 50% and fuel savings of up to 10%.

8.6 Corrective Action Procedures

A review of the Environmental Management System will be undertaken at appropriate times and progress and environmental budgetary measures will be discussed.
A meeting dedicated to this will be arranged and the success of the targets and objectives that were identified will be reviewed.

9.0 Bunded Tank Integrity Test

ASHGROVE RECYCLING

CHURCHFIELD INDUSTRIAL ESTSTE, CORK

ASSESSMENT OF BUND INTEGRITY

WASTE LICENCE W0147-01

REPORT BY:
PAT POWER

DATE: 10TH DECEMBER 2009

1.0 Introduction

Glenside Environmental was commissioned by Ashgrove Recycling to carry out bund testing at their facility. The fuel bunds were inspected on 10th and 17th November 2009 and this report presents the findings.

2.0 Scope

The scope of this report is determined by conditions 3.11 and sub-conditions of Waste Licence W0147-01. The sub-conditions state as follows:-

3.11 Tank and Drum Storage Areas

3.11.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein.

3.11.2 All tank and drum storage areas shall, as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:

(a) 110% of the capacity of the largest tank or drum within the bunded area; or

(b) 25% of the total volume of substance which could be stored within the bunded area.

3.11.3 All drainage from bunded areas shall be diverted for collection and safe disposal.

3.11.4 All inlets, outlets, vent pipes, valves and gauges must be within the bunded area.

3.11.5 The integrity and water tightness of all the bunds and their resistance to penetration by water or other materials stored therein shall be confirmed by the licensee and shall be reported to the Agency following its installation and prior to its use as a storage area.

This confirmation shall be repeated at least once every three years thereafter and reported to the Agency on each occasion.

3.0 Methodology

The assessment of the bunds' integrity was based on visual inspection of the type and standard of construction, evidence for structural failure or potential failure and evidence of water ingress or leakage from the structures. The bunds were then filled with water to a pre-calculated, recorded level, reflecting sub-condition 3.11.5 above. After this the period the water level was recorded to calculate any fluctuations. The total permissible drop in level, during the testing period, after allowing for evaporation and rainfall, should not exceed 1/500th or 10mm of the average water depth of the full tank.

4.0 Bund Inspection

There was no evidence (dampness) to suggest that liquid is seeping from the interior to the exterior in any of the bunds.

All of the bunds comply with the storage capacity requirements i.e. >110% of the largest tank therein allowing for that part of the bund capacity taken up by the tank volume within the bund.

5.0 Results

The results are presented in Tables 1 and 2.

6.0 Conclusion

The structural integrity of the fuel bunds were satisfactory on the day tested

Table 1: Ashgrove Recycling: Bund 1Schedule and Inspection Notes

Largest Tank Size (l)	Construction [1]	Inspection	Liquid inside	Dampness or staining outside
220	Steel	No visible cracks or bulges. In excellent condition.	Yes	No

Table 2: Ashgrove Recycling: Bund Schedule and Inspection Notes

Largest Tank Size (l)	Construction [1]	Inspection	Liquid inside	Dampness or staining outside
220	Steel	No visible cracks or bulges. In excellent condition.	Yes	No

Table 3: Ashgrove Recycling: Final Bund Inspection Notes

Bund ID	Vol. Water Added (L)	Height from top after Filling (m)	Height from top @ 7 days (m)	Total Loss / gain (l)	Total Loss / gain (%)
Bund No. 1 – Fuel Bund	0	0.390	0.390	0	0

Table 4: Ashgrove Recycling: Final Bund Inspection Notes

Bund ID	Vol. Water Added (L)	Height from top after Filling (m)	Height from top @ 7 days (m)	Total Loss / gain (l)	Total Loss / gain (%)
Bund No. 2 – Fuel Bund	0	0.320	0.320	0	0

Drainage Integrity Testing:-

Pipeline hydrostatic testing of both surface water and foul water drainage systems was undertaken by Mescal & Associates, Pollution Control Engineers. The testing was carried out in January 2008 and all systems demonstrated to be watertight. The results of this testing can be viewed at the facility upon request.
Furthermore, remedial works undertaken by a contractor on behalf of Cork City Council conducted a CCTV survey of the surface and foul water system north of the facility and it transpired that no defects in the system was evident.

10. Reported Incidents &Complaints Summary:-

10.1 Complaints

No public complaints were received at the facility or reported to the Facility Manager during the reporting period.

10.2 Incidents

The following table shows a summary of the incidents that occurred at the facility in 2010. These were reported to the Agency and preventive meausures put in place to prevent re-occurrence.

Number	Incident Description	Reported to Agency
1.	Exceedence in ELV for foul Water – (F01) Sulphate 127mg/l on the 14.01.10	Yes
2.	Exceedence in ELV for Foul Water– (FO1) Sulphate 296 mg/l on 15.04.10	Yes
3.	Exceedence in ELV for Foul Water – (F01) Sulphate 354mg/l on 27.05.10	Yes

11.0 Review of Nuisance Controls:-

11.1 Odour Control

The loading of residual waste only occurs in the main recovery building. All waste is removed from the facility in an efficient manner and normally within 24 hours from arriving at the facility to prevent adverse odour impact.
The facility has never received complaints with respect to odour. If putrescent material arrives onsite, an additive can be used in the probe atomiser to mitigate against odour until the waste is removed from site.

11.2 Litter

The facility is checked for litter on a daily basis. Any litter nuisance is cleaned up immediately. Waste vehicles bringing waste to site are all covered with appropriate netting and some are thoroughly enclosed. This also prevents litter nuisance in transit. The facility owns and operates a mechanical sweeper on a daily basis. Records of a weekly nuisance inspection are on file at the facility.

11.3 Noise

The facility has never had complaints in relation to excessive noise emanating from the facility. The cladding installed in the material recovery building has a large noise Reduction index and good acoustic properties which helps reduce noise levels at sensitive receptors. Furthermore, noise monitoring is conducted bi-annually at the facility and these respective reports are contained within this report.
The exhaust and baffle systems are checked and maintained by our Mechanical Fitter.

11.4 Flies

The facility does not process large quantities of organic or putrescent material. Historically, flies were never a problem at the facility. However, if fly infestation becomes problematic, a contractor will be engaged to conduct insecticide fogging.

11.5 Mud

Excessive mud generation was never a serious problem at the facility or on nearby acces roads. The facility has a wheel wash installed and this has proved effective in the spread of mud.

11.6 Rodents

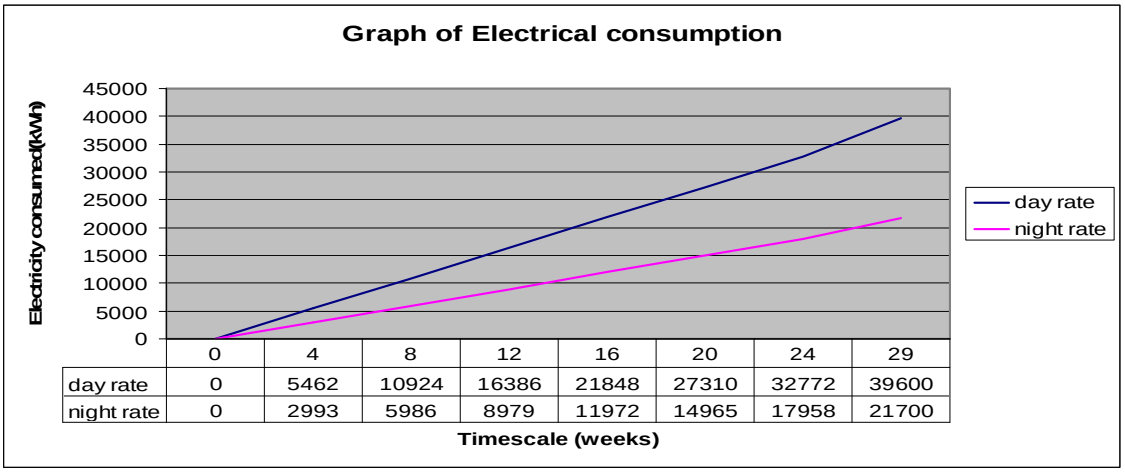
Rats and mice are not a significant problem at the facility. Pest control companies have provided surveillance visits and placed rodenticide at strategic points since the facility started operations. Full written records of such visits are available at the facility for Inspection.

11.7 Dust Control

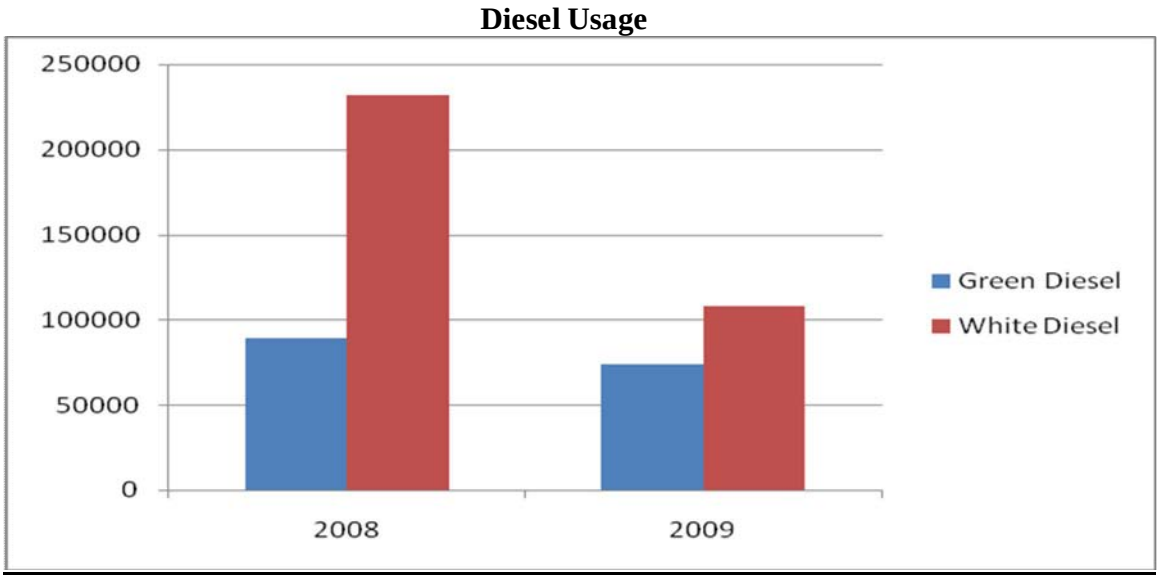
The facility is monitored for dust deposition three times annually. As the facility is quite elevated and exposed, windblown dust during dry hot weather coupled with vehicular movements can generate unfavourable dust. The hard standing areas of the facility are wetted with a water bowser and also swept using a mechanical sweeper. This practice in conjunction with a wheel wash is effective in reducing dust generation and associated nuisance.
The Material Recovery Building has a probe atomiser in operation that sprays a fine mist to reduce dust levels within the building. Furthermore, dust sprays are concentrated on the finger screen and on the stockpiles and these are activated when necessary.

12.0 Resource &Energy Consumption

Type	Consumption and Unit
2008 Electricity 2009 Electricity 2010 Electricity	 64,134 kw/h 64,566 kw/h 56,500kw/h
2008 Diesel Fuel – Green 2009 Diesel Fuel – Green 2010 Diesel Fuel – Green 2008 Diesel Fuel – White 2009 Diesel Fuel – White 2010 Diesel Fuel- White	89009 litres 73940 litres 70548 litres 231657 Litres 107739 Litres 88430 Litres



	0	4	8	12	16	20	24	29
day rate	0	5462	10924	16386	21848	27310	32772	39600
night rate	0	2993	5986	8979	11972	14965	17958	21700



12.1 Diesel Fuel Usage

The usage of green diesel used in 2008 and 2009 showed no significant variation. This is due to the fact that plant and machinery will have very similar usage patterns.
However, the difference between the white road diesel when 2008 and 2009 are compared shows a very significant decrease in usage. This is due to the fact the number of collection vehicles have reduced marginally and the articulated vehicle work is now sub-contracted out.

12.2 Water Consumption

Year	Consumption/ m3
2009	**1012**
2010	**924**

The facility used 924 m^3 of water derived from the public water supply network operated by Cork City Council.

Usage Values

Toilet Flush 8 litres
Dishwasher cycle 50 litres
Running hose pipe 600 litres per hour

12.3 Foul Water

The facility has a 20m^3 limit per day for the volume emitted to public sewer north of the facility. This limit was not exceeded for the reporting period.

The foul water is conveyed to a waste water treatment plant operated by Cork City Council.

The volume of foul water discharged to public sewer during reporting period equated to 5532 m^3.

13.0 Financial Provision

Ashgrove Plant Ltd had traded successfully as a Limited Company for over two decades. The company has sufficient assets that would finance any environmental remediation works that may be required should an Environmental Incident arise.

The company has independently audited accounts and when these are reviewed it can be concluded that the company is financially strong and any incidents that may arise will not hinder the financial solvency of the company.

In addition, the company has submitted to the Agency an ELRA and the company has provisions to cater for incidents that may inadvertently arise.
Ashgrove Plant Ltd is insured by Zurich Insurance Plc for Pollution and Contamination that may occur at the facility.

14.0 Management and Staffing Structure

Directors
Jim Collins Snr
Pauline Collins

Facility Manager
Mr. Jim Collins Jnr

Environmental Manager
Mr. Trevor Parry

HR Manager/ Accounts Manager
Mrs. Susan Wallace

Weighbridge/Dispatch Manager
Mr. Alan Meade

15.0 Programme for Public Information:-

Ashgrove Recycling are fully committed to providing the general public, neighbouring residences and businesses with information relating to the Environmental Performance of the facility if requested.

The facility has a designated meeting room w2hich can be used for the public if they wish to review various reports, etc.

All information in respect to the operation of the facility is maintained onsite and can be viewed upon request. Furthermore, if an individual wishes to see the facility in operation, we operate an open door policy and endeavour to provide information to the public in both a timely and accurate manner.

16.0 Noise Reduction Measures

All recovery activities are conducted internally within the material recovery building. The structure has acoustic cladding with very good sound insulation properties to reduce noise levels that may become a nuisance to nearby properties or sensitive receptors.

The landscaping to the south and west boundaries of the site has developed well and it is planned to feed the trees and thin them at the appropriate times to encourage further growth whick will help noise nuisance and visually screen the site.

Vehicles that have a defective exhaust system will have the system replaced immediately so as to reduce noise generated from mobile vehicles.

17.0 Development / Infrastructural Works

The plant type currently utilised was discussed in the beginning of this report. It is anticipated that the Viper City Sizer vibrating finger screen will be replaced by a rotating trommel. The trommel will be used in conjunction with a vibrating flip flow screen to increase the volume of clean inert material such as concrete and soil. An increase in the number of air knifes and blowers is also to be considered.

Additional magnetic belts will also be incorporated into the design to increase the quantity of ferrous metals that will be recovered.
Its anticipated these works should commence shortly and will yield positive results for the processing capacity of the plant.

The trommel is more efficient in processing waste streams than the existing finger screen. Additionally, the planned modifications will help achieve a safer environment for the employees within the waste transfer station. The implementation of the above shall result in increased recovery rates.

Currently, all mechanical work on vehicles is subcontracted out, however the licensee is considering renting adjacent premises so this work can be done in-house.

18.1 Staff Training

- Manual Handling
- Safe Pass Training
- Waste licence Familiarisation
- Induction
- Fire / ERP Training
- Machinery Operation and driver certification

18.2 Site Security

In addition to a night watchman and his guard dog, management are obtaining quotations to upgrade the CCTV system within the facility.

ISO 14001

It is envisaged that a vote take place between management and see if sufficient funds are available within environmental budget to achieve ISO 14001 accreditation.

18.0 Plant Capacity

A detailed report on plant capacity and standby provisions, etc was previously submitted to the Agency as required under the existing Waste Licence.
For the tonnages that are processed at the facility, the existing plant has the capabilities to process it.
Ashgrove Recycling employs a fulltime mechanical fitter who ensures that spare parts for items of plant that are deemed critical are always in stock.
The table below outlines the plant & machinery along with spares and contingency plans if appropriate. The processing capacity of plant outlined below was specified in previous report submitted to the Agency.
Annual tonnages have declined over the past few years due to the decline in the construction industry, so it can be construed that the existing plant at the facility for waste processing is adequate for the projected tonnages envisaged to be processed at the facility.

Plant / Machinery	Replacement	Critical Spare Parts in Stock
Leibher 924	Leibher 902	Yes
Kawasaki Loading Shovel	Manitou Telescopic Loading Shovel	Yes
Viper City Sizer	Powerscreen Trommel (Rental)	Yes
Hitachi 18 Ton Excavator	Hitachi 16 Ton Excavator	Yes
Do		

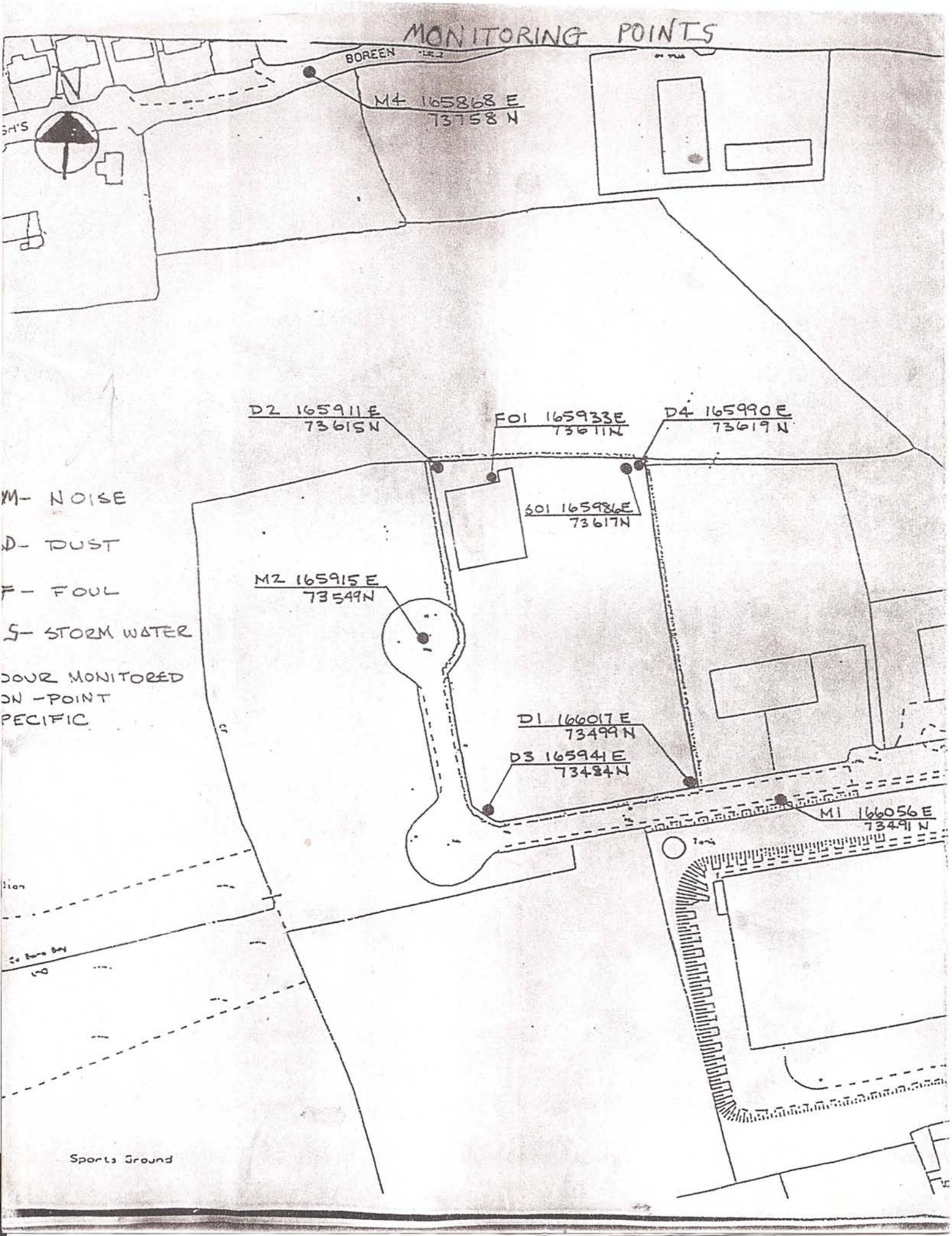
In the event of a complete shutdown of the facility due to unforeseen circumstances, waste material will be brought to an alternative facility for processing. The facility is licensed to accept 50,000 tonnes of waste per annum, which is approximately 137 tonnes per day. The plant outlined above is adequate to process this quantity of incoming waste streams.

Appendices

Appendix A : Monitoring Locations Map
Appendix B: Certificate of Conformity Fuel Bunds
Appendix C: PRTR

Appendix A

MONITORING POINTS



M- NOISE

D- DUST

F- FOUL

S- STORM WATER

DOUR MONITORED
ON -POINT
PECIFIC

Appendix B

FUEL FLASK LIMITED

CERTIFICATE OF CONFORMITY & TEST

FUEL FLASK Certify that their tanks to be bunded to at least 110%
And comply to the following BS code, BS799 Part Five & Oil Pollution
Guidelines (England & Wales) 2002 PPG2, And tested using NDT dye and pressure tested on the date of manufacture.
The tank is suitable for the supply of fuel to a generator via the flow & return pipe work..

Signature S wood

Date 25/10/07

Appendix C

Appendix C

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	17 04 02	No	16.4	aluminium	R13	M	Weighed	Offsite in Ireland	Cork Metal Company Ltd,CK(S) 491/07	Dublin Hill,,Cork,,,Ireland		
Within the Country	15 01 01	No	303.36	paper and cardboard packaging	R13	M	Weighed	Offsite in Ireland	Country Clean Recycling Ltd,07/02/2011	Churchfield Industrial Estate,,Cork,,Ireland		
To Other Countries	19 12 05	No	1369.42	glass	R13	M	Weighed	Abroad	Glassdon,LN/08/103	Creagh Road,Antrim,,,United Kingdom		
Within the Country	17 08 02	No	175.2	gypsum-based construction materials other than those mentioned in 17 08 01	R13	M	Weighed	Offsite in Ireland	Sandyhills Environmental Services,WPT 112	St Margarets,Dublin,,,Ireland		
Within the Country	**17 08 02**	**No**	55.1	gypsum-based construction materials other than those mentioned in 17 08 01	R13	M	Weighed	Offsite in Ireland	Nurendale Ltd t/a Panda,W0140/03	Navan,,,,Co. Meath,Ireland		
Within the Country	17 04 07	No	842.0	mixed metals	R13	M	Weighed	Offsite in Ireland	Cork Metal Company Ltd,CK(S) 491/07	Dublin Hill,,Cork,,,Ireland		
Within the Country	16 02 14	No	8.18	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R13	M	Weighed	Offsite in Ireland	KMK Metals,W0113/03	Co. Offaly,,,,,,Ireland		
Within the Country	20 03 01	No	802.0	Dry Recyclables	R13	M	Weighed	Offsite in Ireland	Thorntons Recycling,W0242-01	Killeen Rd,,,,Dublin,Ireland		
Within the Country	19 12 04	No	30.4	plastic and rubber	R13	M	Weighed	Offsite in Ireland	W.F Recycling Ltd,WP 01/09	Centre Park Rd,,Cork,,Ireland		
Within the Country	17 05 04	No	1494.0	soil and stones other than those mentioned in 17 05 03	R13	M	Weighed	Offsite in Ireland	Eamonn O'Shea,CK (S) 397/07	Watergrasshill,,,,,Co. Cork,Ireland		
Within the Country	17 01 07	No	9752.56	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R13	M	Weighed	Offsite in Ireland	Mallow Contracts Ltd,CK (No) 277/05	Mourneabbey,Mallow Road,Cork,,Ireland		
Within the Country	19 12 07	No	860.0	wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	Medite Europe,P0027-02	Clonmel,,,,Co. Tipperary,Ireland		
Within the Country	19 12 07	No	1225.54	wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	Eirbloc,CK (S) 503/.7	Lisarda,,,,Co. Cork,Ireland		
Within the Country	19 12 12	No	609.84	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	D15	M	Weighed	Offsite in Ireland	Youghal landfill,W0068-02	Foxhole,Youghal ,Co. Cork,,Ireland		
Within the Country	19 12 12	No	2477.46	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R13	M	Weighed	Offsite in Ireland	Greyhound Recycling,W0205-01	Clondalkin,,,,,,Ireland		
Within the Country	19 12 12	No	916.44	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R13	M	Weighed	Offsite in Ireland	Greenstar Recycling (Munster) Ltd,W0136-02	Sarsfield Court,Glanmire,Co. Cork,,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