



Ms. Siobhain McDonnell,
Office of Environmental Enforcement,
South/South West Region,
Environmental Protection Agency,
Curraleigh,
Inniscarra,
Co. Cork

31st March 2009

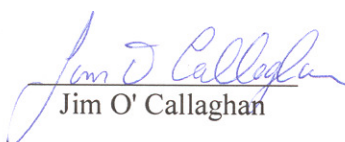
RE: 2008 Annual Environmental Report - Greenstar Ltd. - Sarsfieldcourt (Reg. No. W0136-02)

Dear Ms. McDonnell,

Please find enclosed an original and 2 no. copies of the 2008 Annual Environmental Report (AER) for the above referenced facility. The AER file has been uploaded to the EPA website and is a true copy of the original Annual Environmental Report. The AER/PRTR emissions data reporting workbook has also been uploaded to the EPA website.

If you have any queries, please call me.

Yours sincerely,


Jim O'Callaghan

0804809/MG/JC

Encs.

c.c. Ms. Suzanne Byrne, Greenstar Ltd.
Mr. Tomas Healy, Greenstar Ltd.



ANNUAL ENVIRONMENTAL REPORT
FOR GREENSTAR LTD.
SARFIELD COURT, CORK
LICENCE NO. W0136-02
JANUARY 2008 – DECEMBER 2008

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31st March 2009

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1. INTRODUCTION

This is the 2008 Annual Environmental Report (AER) for Greenstar Ltd's (Greenstar) Materials Recovery Facility (MRF) at Sarsfieldcourt Industrial Estate, Glanmire, County Cork. The report covers the period from the 1st January 2008 to the 31st December 2008. The content of the AER is based on Schedule H of the Waste Licence (W0136-02) and the report format follows guidelines set in the "Guidance Note for Annual Environmental Report" issued by the Environmental Protection Agency (Agency).

2. SITE DESCRIPTION

2.1 Site Location and Layout

The facility is situated within the Sarsfieldcourt Industrial Estate, approximately 8 km northeast of Cork City and 5 km north of Glanmire in the townland of Sarsfieldcourt. The site occupies 1.56 ha and comprises one MRF building and ancillary infrastructure, including administration offices, yard and parking areas and a vehicle wash.

2.2 Waste Management Activities

The Licence allows Greenstar to accept and process 99,017 tonnes of waste per annum, comprising commercial/industrial non-hazardous waste, household waste, source separated biodegradable waste for composting and construction and demolition wastes. All waste processing takes place inside the waste transfer building, as specified in Condition 5.1 of the Licence. The existing plant used at the facility is listed on Table 2.1.

Table 2.1 Existing Plant

No.	Plant	Model	Operational Capacity	Standby Capacity
2	Conveyor lines	-		
1	Picking Line	7-bay sorting line	Not in Use	
1	Baler	Bollegraff	20t/hr	
21	Trucks	Curtain Sider *1	40 hr/wk	-
		Roll on Roll off vehicles *1	35 hr/wk	-
		Skip Trucks *4	35 hr/wk	-
		Refuse Trucks *7	80 hr/wk	-
		Crusher *6		
		Glass*1		
		Transit Tipper*1		
1	Tromel	Turnec	25t/hr	
1	Loading Shovel	JCB 414F	70t/hr	-
2	Fork Lift	Mitsubishi 25	60 hr/wk	-
2	Grab	Liebherr 904	25t/hr	-
1	Weighbridge – 2 scales	-	56hr wk	-
1	Wheel Wash			

2.2.1 *Waste Types*

The facility is licensed to accept the following waste types and quantities, as specified in Schedule A of the Licence: -

- Household (42,129 tonnes),
- Commercial & Industrial (47,130 tonnes),
- Construction & Demolition (4,758 tonnes),
- Source separated biodegradable waste for composting (5,000 tonnes), however composting is not currently carried out.

No hazardous wastes or liquid wastes are accepted.

The maximum tonnage of each waste type accepted, except the source separated biodegradable waste for composting, may be altered with the prior agreement of the Agency as long as the total maximum tonnage is not exceeded.

2.2.2 *Waste Handling*

The key processes carried out at the facility include: -

- Segregation of recyclable materials (paper, cardboards, plastic, wood, metals, glass),
- Baling of Municipal Solid Waste,
- Segregation of C&D waste,
- Transfer of recovered and residual materials to appropriately licensed recycling, recovery and disposal outlets,
- Organic Separation of waste.
- Separation of organic fines from MSW waste by shredding and trommelling of the waste

Household Waste

Mixed household waste delivered in refuse collection vehicles is transferred to large bulk transporters, once food waste has been extracted, and is then sent to an appropriate licensed landfill. Greenstar provides a skip hire service to private individuals in the Cork Region. All skips arriving at the facility are netted or covered. Recyclable material is segregated, where possible, from the waste and transferred off-site to

suitable recycling facilities. The remaining non-recyclable and residual material is sent to licensed landfills post processing.

Commercial and Industrial Waste

Greenstar provides skips of various sizes to a wide range of commercial and industrial premises in the Cork Region. Recyclable material is segregated, where possible, from the waste stream and transferred to suitable recycling facilities. The remaining non-recyclable and residual material is sent to licensed landfills.

In addition Greenstar provides a source segregation service for those clients which generate large quantities of commercial and industrial waste. Trained Greenstar staff sort and segregate waste at source and the waste is then collected in skips and appropriately transported. All recyclable materials are transported to the Sarsfieldcourt facility and off-loaded in designated areas and stored pending consignment to recycling facilities. Non recyclable waste is transported directly to a licensed landfill.

Construction and Demolition Waste

Construction and demolition material arrives on-site in skips of varying sizes. The loads are inspected and segregated on-site. Recoverable materials are extracted and sent off-site either for re-use or recycling. The non-recyclable materials are transferred to a licensed landfill.

Biodegradable waste for composting

The facility is allowed to compost up to 5,000 tonnes/year of source separated biodegradable waste for composting. However, Greenstar has not yet started composting.

3. EMISSION MONITORING

Greenstar implements the comprehensive environmental monitoring programme specified in the Licence to assess the significance of emissions from site activities. The programme includes surface water, wastewater, groundwater, noise and dust monitoring. The monitoring locations are shown on Figure 3.1.

The monitoring results are submitted to the Agency at quarterly intervals. An overview of the results of the monitoring is presented in this Section, with summary data in tables included in Appendix 1.

3.1 Surface Water Monitoring

Surface water monitoring was carried out quarterly at three locations (SW-1, SW-2 and SW-3). SW-3 is the discharge point from the facility to a stream approximately 100 metres from the eastern boundary of the site. SW-2 is located to the north and upstream of the discharge point and SW-1 is located to the south and downstream of the outfall.

The range of analysis was as specified in Schedule D of the Waste Licence and includes pH, electrical conductivity, Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD), total organic carbon (TOC), ammoniacal nitrogen, dissolved oxygen, total suspended solids, mineral oils and oils, fats and greases.

The Emission Limit Value (ELV) and Trigger Levels set in Schedule C3 and Condition 6.4 of the Licence and apply solely to the discharge from the facility (SW-3). The ELV and Trigger Levels were not exceeded in 2008. The quality of the water in the stream is generally good.

The Agency carried out surfacewater monitoring in September 2006 and in a letter dated the 8th January 2007 (ref W0136-02/GC06SMcD) requested Greenstar to include nitrate and nitrite in the parameters measured. The nitrate levels measured in SW-3 in all monitoring events in 2008 were low and were below those detected by the Agency in 2006.

3.2 Groundwater Monitoring

The Agency carried out groundwater monitoring in September 2006 and subsequently requested Greenstar to increase the monitoring frequency to biannually in a letter dated the 8th January 2007 (ref W0136-02/GC06SMcD). As with the surface water monitoring, the

Agency requested that nitrite and nitrate be included in the list of parameters to be analysed for in the groundwater samples. Groundwater monitoring was carried out biannually at two locations (W-1 and W-2) in Q1 and Q3 2008. The direction of groundwater flow is most likely from west to east towards the stream, which flows along the eastern side of the Industrial Estate. W-2 is at the upgradient and W-1 is at the downgradient side of the site.

The range of analysis was as specified in Schedule D of the Waste Licence and included TOC, pH, electrical conductivity, ammoniacal nitrogen, total suspended solids and mineral oils, plus the additional parameters requested by the Agency. There are no Emission Limit Value (ELV) and Trigger Levels.

The quality of the groundwater was good and generally consistent with the previous monitoring carried out. The results indicate that the facility is having no impact on groundwater. The levels of nitrate detected in both groundwater monitoring locations were low and similar to those measured previously. Nitrite was not detected at either location in 2008.

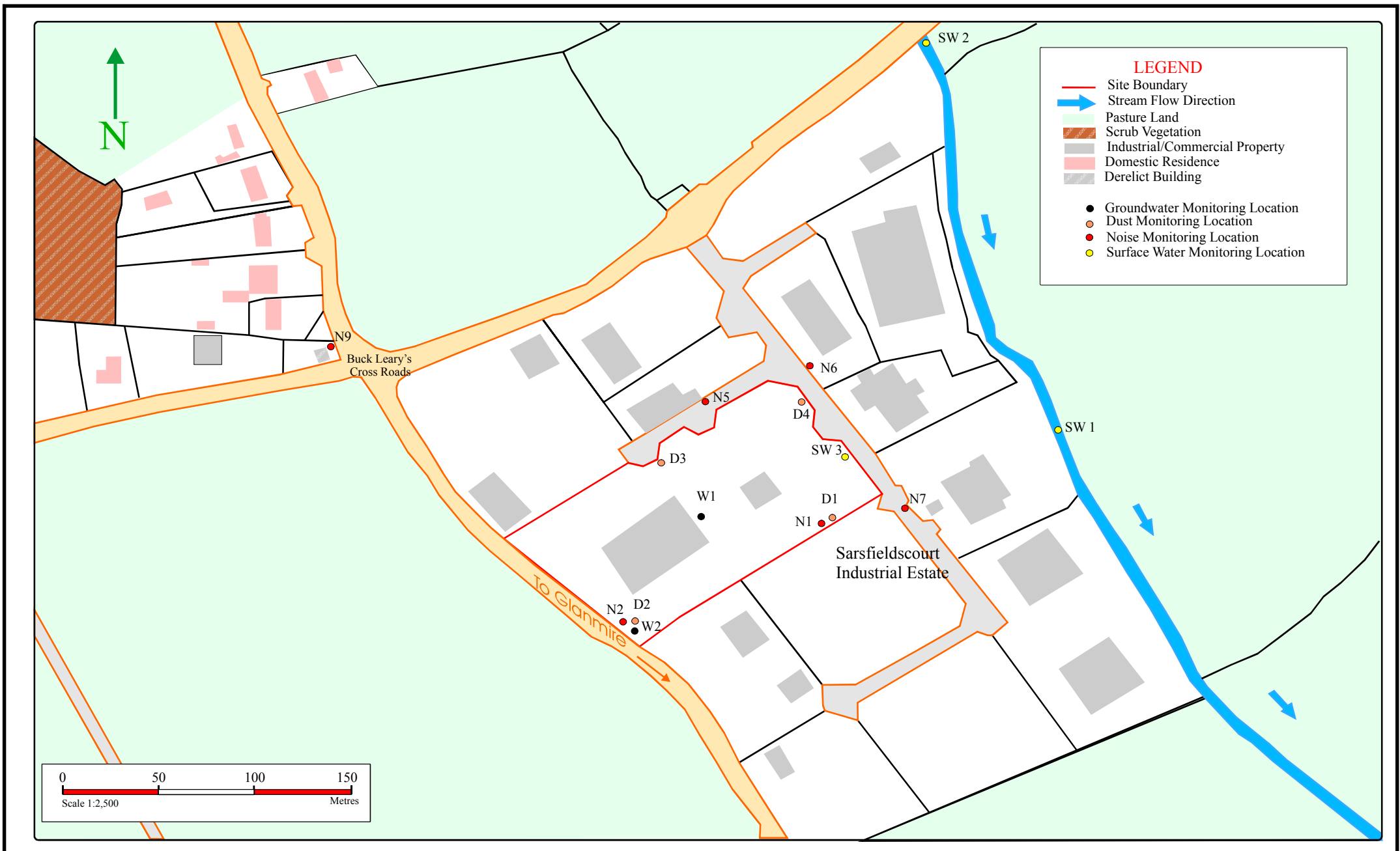
3.3 Wastewater Monitoring

The wastewater drainage system discharges to a holding tank located to the east of the site security hut. The accumulated liquid is removed off-site as required to a wastewater treatment plant in Athy, County Kildare. The volume of wastewater removed in 2008 is shown on Table 5.1.

Wastewater monitoring was undertaken biannually. The range of analysis was as specified in Schedule D of the Waste Licence and included pH, BOD, COD, ammoniacal nitrogen, total suspended solids and mineral oils. There are no ELV or Trigger levels set for wastewater. The results indicate that the wastewater is suitable for treatment at the off-site wastewater treatment plant.

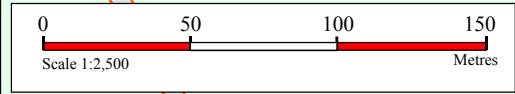
3.4 Noise Survey

Greenstar carried out the annual noise survey at the facility in June 2008 and the results were submitted to the Agency in July 2008. Monitoring was carried out at five noise monitoring locations, N-1, N-2, N-5, N-6 and N-7 specified in the licence and one off-site noise sensitive location N-9. The survey was conducted when the site was fully operational. The survey concluded that the facility was in compliance with its licence requirements.



LEGEND

- Site Boundary
- Stream Flow Direction
- Pasture Land
- Scrub Vegetation
- Industrial/Commercial Property
- Domestic Residence
- Derelict Building
- Groundwater Monitoring Location
- Dust Monitoring Location
- Noise Monitoring Location
- Surface Water Monitoring Location



OM
environmental management for business

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CLIENT
Greenstar Ltd

TITLE
**Sarsfieldscourt
Monitoring Locations**

Details
© Ordnance Survey Ireland. Government of Ireland.

FIGURE NUMBER
3.1

Scale
Not To Scale

Revision
A

3.5 Dust Monitoring

Greenstar conducted dust monitoring on three occasions (May, June and July) at four on-site locations (D-1, D-2, D-3 and D-4). The licence requires that two of these monitoring events be carried out between May and September. The results are included in Appendix 1. The dust deposition limit specified in the Waste Licence ($350 \text{ mg/m}^2/\text{day}$) was not exceeded at any of the monitoring locations.

3.6 Nuisance Control Review

Greenstar installed and commissioned an air emission abatement system in the MRF building in 2006. The system is designed to control dust and odour emissions from the facility and has been working successfully since June 2006. In 2007 the two deep bed carbon filters were removed and replaced with one $45,000 \text{ m}^3/\text{hr}$ annular vessel. This eliminates any possibility of carbon shifting and bed fluidisation. New automatic fast acting doors were installed on both the tunnel and the out doorways. These systems in the main worked successfully in 2008.

Other nuisance controls include routine inspections and litter collections, cleaning of site roads and yard areas, closing of the facility doors when not in use, vermin control (Rentokil) and internal processing of wastes.

Greenstar has introduced an Environmental Management System (EMS). Greenstar, as part of this EMS, has developed a list of environmental management procedures, details of which are outlined in Section 7 and include nuisance control measures.

4. SITE DEVELOPMENT WORKS

4.1 Engineering Works

Table 4.1 and Table 4.2 show the development works carried out in 2008 and those proposed for 2009.

Table 4.1 Site Infrastructural Works Carried Out in 2008

Description of Works	Scheduled Date	Date Completed
Office Upgrade	Q2/Q3 2009	On hold
Roof of diesel bund	Q2 2008	Q2 2008
Electrical Upgrade	Q3 2008	Q3 2008

Table 4.2 Site Infrastructural Works Proposed for 2009

Description of Works	Proposed Date of Completion
Weighbridge Modification	Q2 2009
Removal of Porto cabin office	Q2 2009

4.2 Summary of Resource & Energy Consumption

Table 4.3 presents an estimate of the resources used on-site during the reporting period.

Table 4.3 Estimate of Resources Used On-Site

Resources	Quantities
Road Diesel	440,845 litres
Gas Oil	189,348 litres
Gear Oil	20 litres
Ad Blue	1,000 litres
Hydraulic, Transmission, Engine Oil	5,108 litres
Anti Freeze	100 litres
Electricity	291,350 units
Truck Wash Detergent	200 litres
Carbon	25,000 kg

4.3 Bund Integrity Test

Bund integrity tests were carried out in 2006 and therefore are not due to be carried out again until 2009.

5. WASTE RECEIVED AND CONSIGNED FROM THE FACILITY

Table 5.1 shows the total quantities of waste received and consigned from the facility in 2008. For comparative purposes the amounts of waste received and consigned in 2007 are presented in Table 5.2. A breakdown of the waste types is provided in accordance with the European Waste Catalogue and Hazardous Waste (EWC/HWL) list.

The total amount received in 2008 was 61,288.72 tonnes. The total amount consigned was 61,976.71 tonnes. 243 tonnes remained on site at the end of 2007 and was consigned in 2008 and 208 tonnes remained onsite at the end of 2008. The difference (<1%) is therefore considered insignificant and is most likely due to discrepancies with the weighbridge over the year and the removal of liquid waste from the waste water storage tank over the year.

The recovery rate is estimated at 34.29%. The reason for the reduction in the recovery rate from 2006 (44%) is due to the acquisition by Greenstar of a dry recyclables facility permitted by Cork County Council (WP CK(S) 329/06) also located within Sarsfieldcourt Industrial Estate in late 2006. The dry recyclables waste stream, which was processed at the licensed site is now directed to the permitted site as this site specialises in the recovery of this waste type.

All the wastes consigned from the site went to recovery and disposal facilities agreed with the EPA. The name and location of the facilities are given in Table 5.3.

It is Greenstar's intention to apply for a technical amendment to the Licence in regard to the 50% recycling rate. The recycling rate has reduced in recent years due to the increase in MSW accepted at the facility and the reduction in recyclables which are diverted to specialised facility Glyntown Enterprises Ltd. Sarsfieldcourt Industrial Estate, Glanmire.

Table 5.1 Waste Received & Consigned 1st Jan 2008 – 31st Dec 2008

EWC	Description	Waste In	Waste Out	Destination
02 07 05	Sludge	7.14		
06 13 99	LDF Activated Carbon		28.66	Ormonde Organic
15 01 01	Cardboard Packaging	156.49		
15 01 02	Plastic Bottles	2.22		
	Plastic Packaging	136.92	4.76 185.07	Glyntown Enterprises Thorndale Env. Recycling
15 01 03	Pallets	32.90	57.68	Misc. Business
			233.94	Cork Recycling Company
			16.46	Cork Togher Pallets
			6.90	Glyntown Enterprises
	Wooden Packaging	153.86		
15 01 04	Steel Cans		27.00	Glyntown Enterprises
15 01 06	Mixed Packaging	171.71	1.90	Glyntown Enterprises
15 01 07	Glass Packaging	1,183.06	1,114.06	Glyntown Enterprises
17 01 07	C&D Inert Mixed	13.34	444.62	John Butler & Sons
17 05 04	C&D Inert Mixed	1,190.03	18.08	John Butler & Sons
19 08 05	Liq Waste		214.90	Rilta Environmental
19 09 02	Sludge	80.28		
19 12 09	Fines C&I	4.16		
19 12 12	C&I Dry Mixed	8,279.38	39,224.90	KTK Landfill
			328.31	Greenstar Fassaroe
			35.68	Greenstar Millennium
	MSW Municipal Mixed	15,854.92	1,281.92	Knockharley Landfill
			7,638.76	Greenstar Fassaroe
			21.20	Greenstar Millennium
	Fines MSW		45.26	KTK Landfill
			5,105.11	Miltown Composting
			5,575.01	O'Toole Composting
20 01 01	Cardboard & Paper	17.27		
	Recy Paper	2.09		
20 01 08	Biodegradable kitchen & canteen waste	58.62		
20 01 35*	Rec Electronics & Electrics	38.53	4.08	E Waste Experts Ltd.
			13.10	Immark
20 01 38	Wood	295.43	198.24	Cork Recycling Company
20 01 39	Plastic	161.97		
20 01 40	Metal	262.81	116.61	Cork Metal Company
			26.42	Davis Recycling
			2.46	Pouladuff Dismantlers
	Metal Dust	4.45	5.62	KMK Metals Recycling
20 03 01	MSW Municipal Mixed	14,385.07		
20 03 07	C&I Dry Mixed	18,796.07		
	Total Received	61,288.71		
	Total Consigned		61,879.66	
	Total Recovered		21,254.99	
	Total Disposed		40,721.72	
	Recovery Rate		34.29%	

Table 5.2 Waste Received & Consigned 2007

EWC	Description	Waste In	Waste Out	Destination
02 07 05	Sludge	132.32	101.76	McGill Environmental
			35.86	Milltown Composting
13 05 03*	Liquid Sludge	3.29	19.42	Athy County Council
			114.52	Athy County Council
			43.86	Lehane Environmental & Ind
			8.22	Ormonde Environmental
			96.1	Rilta Environmental Ltd
15 01 01	Cardboard Packaging	902.05	353.38	Glyntown Enterprises
	Cardboard & Paper	25.55		
15 01 02	PET Rolls	71.21		
	Plastic Bottles	3.65		
	Plastic Film	8.08		
	Plastic Packaging	225.81	70.30 325.93	Glyntown Enterprises Thorndale Env Recycling
15 01 03	Pallets	68.70	82.22	Cork Recycling Company
	Wooden Packaging	32.07	17.76	Cork Recycling Company
15 01 04	Aluminium Cans	0.43		
15 01 06	Mixed Packaging	1,383.89	20.12	Miltown Composting
			1,194.20	Glyntown Enterprises
15 01 07	Glass Packaging	235.10	52.88	Glassco Recycling
			25.80	Glyntown Enterprises
15 01 09	Textile	10.80		
16 03 06	Food Packaging	0.12		
17 01 07	C&D Inert Mixed	423.05	142.84	Cork Co. Co. Youghal
			1,002.91	John A Butler
			97.32	KTK Landfill
17 05 04	C&D Inert Mixed	610.69	199.62	Cork Co. Co. Youghal
			14.68	John A Butler
			230.48	Cork Co. Co. Youghal
19 12 01	Recy Confidential		3.50	Glyntown Enterprises
19 12 02	Metal		150.44	Cork Metal Co
			9.52	Pouladuff Dismantlers Ltd.
19 12 04	Rubber	10.72		
	Plastic		1.02	Glyntown Enterprises
19 12 05	Glass		44.40	Rehab Enterprise
19 12 07	Wood	7.68	10.98	Ashgrove Recycling
			706.62	Cork Recycling Company
			11.90	CTO/Cork City Council
			11.25	Glyntown Enterprises
			34.72	Waste Recovery Services
19 12 09	Fines C&I		68.02	KTK Landfill
			1,486.49	Ballynagran Landfill

EWC	Description	Waste In	Waste Out	Destination
19 12 12	C&I Dry Mixed	501.56	143.08	Panda Waste
			61,597.56	KTK Landfill
			1,200.80	Greenstar Fassaroe
			112.54	Milltown Composting
			11.10	Glyntown Enterprises
	MSW Municipal Mixed	12,392.24	81.58	Panda Waste
			2,220.40	Greenstar Fassaroe
			0.90	Glyntown Enterprises
	MSW Fines	217.72	15,841.30	Milltown Composting
			133.50	Greenstar Fassaroe
			933.20	O'Toole Composting
			81.78	Ballynagran Landfill
20 01 01	Annealing Paper	67.64		
	Bedding Paper	4.92		
	Newsprint	1.62		
	Recy Confidential	17.50		
	Recy Paper	5.86		
20 01 02	Glass	259.65		
20 01 08	Compost	12.92		
20 01 25	Cooking Oil	6.50		
20 01 35*	Monitors	17.66		
20 01 36	Electronics & Electrics	7.58	11.36	Techrec
20 01 38	Wood	916.19		
20 01 39	Plastic	151.94		
	Plastic Re grind	49.30		
20 01 40	Metal	10.99		
	Aluminium	79.31	71.75	Lee Metal
	Foil	1.53		
20 02 01	Green Mixed	2.54		
20 03 01	MSW Municipal Mixed	41,269.39		
20 03 07	C&I Dry Mixed	27,858.27		
91 00 00	None	0.13		
	Total Received	88,009.32	89,229.89	
	Total Recycled		23,797.77	
	Total Disposed		65,432.12	
	Recycling Rate		26.67%	

Table 5.3 Off-Site Disposal / Recovery Agents

Final Recovery or Disposal Destination	Waste Licence or Permit	Waste Type Accepted
Cork Metal Company, Dublin Hill, Co. Cork	CK (S) 204/05	Metal
Cork Recycling Company Ltd., Lehenaghmore, Togher, Cork	CK (S) 17/02	Timber
Cork Togher Pallets, Lehenaghmore, Togher, Cork	CK(S) 17/02	Wooden Pallets
Davis Recycling	WP 98067	Metal
E Waste Experts (Tech Rec)	W0233-01	Electrical
Glyntown Enterprises Ltd., Sarsfieldcourt, Glanmire, Co. Cork	CK (S) 329/06	Paper, Cardboard, Plastic & Metals, Glass
Greenstar Recycling, Fassaroe, Bray, Co. Wicklow	W0053-03	MSW & C&I
Greenstar Recycling, Millennium Business Park, Ballycoolin, Dublin 11	W0183-01	Wood, Cardboard Packaging & C&I
Immark, Greenogue Industrial Estate, Rathcoole, County Dublin	W0185-01	Electronics & Electrics
John Butler, Cork	CK (S)113/04	C&D Inert Mixed
KMK Metals Recycling Limited, t/a WEEE Recycle, Cappincur Industrial Estate, Daingean Road, Tullamore, Co. Offaly	W0113-03	Metal Dust
Knockharley Landfill, Navan, Co. Meath	W0146-01	Residuals
KTK Landfill, Kilcullen, Co. Kildare	W0081-03	C&I
Milltown Composting Systems Ltd., Miltownmore, Fethard, Co. Tipperary.	WP 019 02	MSW fines
O'Toole Composting, Ballintrane, Co. Carlow	WP 01/07	MSW Fines
Ormonde Organics, Rockwell, New Inn, Co. Tipperary	WP 072/01	Liquid Waste
Pouladuff Dismantlers Ltd, Forge Hill, Pouladuff Road, Cork.	CK(S)168/04	Metal
Rilta Environmental Ltd, Block 402, Grant's Drive, Greenogue Business Park, Rathcoole, County Dublin	W0192-02	Waste Water
Thorndale Environmental Recycling Ltd., 77 Clooney Road, Campsie, Co. Derry BT473PA	WDL-14	Paper, cardboard, plastic

6. ENVIRONMENTAL INCIDENTS AND COMPLAINTS

6.1 Incidents

There were no incidents in 2008.

6.2 Register of Complaints

Greenstar maintains a register of complaints received in accordance with Condition 10.4 of the waste licence. Four complaints were received during the reporting period in relation to odour from the facility. The full list of complaints can be found in Appendix 2.

7. ENVIRONMENTAL DEVELOPMENT

7.1 Environmental Management Programme Report

Greenstar has introduced an Environmental Management System (EMS) for the facility and the facility has been certified to ISO 14001. The EMS includes environmental, management, operating and maintenance procedures, in 2008 a new procedure for the handling of gypsum waste was developed, a copy of which is included in Appendix 3. An overview of the EMS including the proposed schedule of objectives and targets for 2009 is presented in this Section.

7.1.1 Site Management Structure

Details of the site management structure are included on Table 7.3.

Table 7.3 Site Management Structure

Name	Position	Replacement	Experience
Thomas Healy	General Manager, overall responsibility for the running of the business, including environmental compliance	Louise Demir / Ger Scanlon or M Hannon	FÁS course completed. Four years waste management experience
Louise Demir	MRF Operations Manager; overall responsibility for the day to day site operations of the site including environmental compliance.	Christine Fitzgerald / Michael Hannon	FÁS course completed except final module. One year waste management experience. Currently on Maternity Leave
Christine Fitzgerald	MRF Supervisor; responsibility for the on-site activities including facility inspection and waste records maintenance.	-	Extensive supervision experience
Michael Hannon	Support Service Manager / Deputy Operations Manager		FÁS course completed. Eight years waste management experience

7.1.2 Staff Training

Staff training carried out during the year included induction, health and safety, TMS training, manual handling training, waste facility operations, waste management, fire safety and extinguisher, forklift training, safety representative training, chemical handling, spill training, ISO 14001 training and environmental awareness training. Details on staff training 2008 are included in Appendix 4.

7.2 Environmental Management Programme

7.2.1 Schedule of Objectives 2008

The objectives that were achieved during this reporting period are outlined in Table 7.2.

7.2.2 Schedule of Objectives 2009

A schedule of targets and objectives for 2009 has been set by the management of the facility. These objectives are outlined in Table 7.3.

Table 7.2 Schedule of Objective and Targets 2008

No	2008 Objective	Target	Responsibility	Update
1	Awareness & Training Programme	Determine training frequency required for each type of training.	Facility Manager	Complete, training matrix by skill in use
		Prepare Training Matrix for 2008	Facility Manager	As above
		Review Progress with completing the training programme to continue for 2008	Facility Manager	As above
		Site Supervisor to attend FAS Waste Management Course.	Site Supervisor	Complete except Mod 7 – to be completed after Mat leave
		Training of Environmental Awareness, Emergency Response, waste licence W0136-2 and ISO14001 for all staff.	Facility Manager	Complete
		Emergency Response Training for all staff eg. Fire drills. Train specific fire crew for each shift	Facility Manager	Fire training complete, Agreed not to continue with fire crews
2	Prevent Water Pollution from run-off, fire-water, flooding, etc.	Ensure all drains and interceptors are maintained, and regularly serviced	Facility Manager / Supervisor	Complete
		Use drain cover mats to prevent release of liquid spills to sewer	Facility Manager	Available
		Install cover around oil bund area to prevent rain water entering bund and improve management of fuel lines	Facility Manager	Complete
3	Assess & Continually Review Resources & Energy Consumption at the site	Review-recommendations from Energy Audit.	Facility Manager	Review complete and further assessment started
		Review progress made on implementing energy audit recommendations from Energy Audit.	Facility Manager	Review complete, awaiting lighting costs
		Summary energy/resource usage on a quarterly basis.	Facility Manager	Complete

No	2008 Objective	Target	Responsibility	Update
4	Recycling Rates	Continue to improve on recycling rates of the total quantity of waste handled at the site. Achieve a recycling rate of 50% as required by waste licence.	Facility Manager	Technical amendment to be requested
		Complete technical assessment of residual mix and available opportunities for recovery	Facility Manager	Ongoing
		Review additional collection of separate material (e.g. Glass)	Facility Manager	Complete, commercial glass now available
5	Maintain & Develop the Environmental Management System	Maintain documentation for EMS and implement on site	Environmental Department/Facility Manager	Ongoing
		Update Manual and Procedures when required	Environmental Department/Facility Manager	Ongoing
		Recommend change from biannual internal audits of the EMS to quarterly internal audits	Environmental Department/Facility Manager	Complete
		Retain certification of ISO 14001 certification	Environmental Department/Facility Manager	Complete
6	Environmental Monitoring	Ensure monitoring results comply with licence limits & investigate any exceedances of emission limit values (ELV's)	Facility Manager	Ongoing
7	Review & Assess the Effectiveness of Nuisance Control Procedures	Continually Review and assess all nuisance control procedures to ensure minimal impact on the surrounding area.	Facility Manager	Ongoing
		Continue to ensure that litter is removed at the end of each working day		Ongoing
		Install abatement for noise around shredder unit		Not complete as site review on shredder is imminent

No	2008 Objective	Target	Responsibility	Update
8	Operational Management	Repair and improve quarantine area on site	Facility Manager	Complete
		Add additional cameras on site for security		Complete – three new cameras installed
		Review and improve night time security		Complete – night patrols in place
		Install upgraded diesel monitoring unit for improved fleet management		Complete – PC based system in place
9	EHS Meetings	Continue quarterly EHS Meetings	Facility Manager	Complete

Table 7.3 Schedule of Objective and Targets 2009

No	2009 Objective	Target	Responsibility	Timescale
1	Customer Communication & Awareness	Improve Customer Recycling Rates through the implementation of AMCS Environmental (GPS reporting system)	Facility Manager	Q3 2009
		Increase route and truck efficiency		
		Monitor customer recycling rates		
2	Operational Management	Review the bin storage system and ability to reuse bins	Facility Manager	Q3 2009
		Review positioning of diesel fill area		
3	Assess & Continually Review Resources & Energy Consumption at the site	Continue to review-opportunities for energy efficiency	Facility Manager	Ongoing
		Implement system to recover additional metal from the MSW waste stream	Facility Manager	Ongoing
		Continue to review energy/resource usage on a quarterly basis.	Facility Manager	Ongoing
4	Prevent Water Pollution from run-off, fire-water, flooding, etc.	Ensure all drains and interceptors are maintained, and regularly serviced	Facility Manager / Supervisor	Ongoing
		Use drain cover mats to prevent release of liquid spills to sewer Install additional spill kits on site	Facility Manager	Ongoing
5	Environmental Monitoring	Ensure monitoring results comply with licence limits & investigate any exceedances of emission limit values (ELV's)	Facility Manager	Ongoing
6	Maintain & Develop the Environmental Management System	Maintain documentation for EMS and implement on site	Environmental Department/Facility Manager	Ongoing
		Update Manual and Procedures when required	Environmental Department/Facility Manager	Ongoing
		Change from biannual internal audits of the EMS to quarterly internal audits	Environmental Department/Facility Manager	Ongoing
		Retain certification of ISO 14001 certification	Environmental Department/Facility Manager	Complete

No	2009 Objective	Target	Responsibility	Timescale
7	Awareness & Training Programme	In-house environmental awareness training to be carried out.	Facility Manager	Q3/ Q4 2009
		Develop and implement standard training package for new employees		
8	Housekeeping	Continue to ensure that facility is maintained in a tidy manner and litter does not cause a nuisance	Facility Manager	Ongoing
		Implement bin less office recycling		
9	Odour Abatement System	Complete full review and model of the odour systems	Facility Manager	Q4 2009
		Install additional sniff ports onto the system		
		Additional staff training on AAF unit		
		Install door alarms on MRF pedestrian doors		

7.3 Communications Programme

Greenstar is committed to setting the standard in waste management and ensuring environmental compliance in all operations. In addition, Greenstar's Environmental Policy makes a specific commitment to ensuring that the policy itself and records are available to the public and interested parties.

Greenstar has drawn up a Communications Programme, which details how members of the public are facilitated in accessing environmental information at the facility.

Records available for public inspection on site include:-

- Environmental Policy,
- Waste Licence,
- Licence Application and Review documentation,
- Monitoring Records,
- Complaints File,
- EPA Correspondence File.

Opening Times for Inspection of Records are from 10 am – 4 pm.

Visits to the site should be arranged in advance by ringing the Facility Manager or Supervisor at 1890 600 900.

A liaison officer meets with any interested other occupants of the Industrial Estate and the representatives of the Glanmire Residence Association to discuss the environmental performance of the facility and address any environmental issues or concerns that may arise.

7.4 Report Financial Provision

Greenstar has accrued over €3,000,000 in funds, to provide for any potential environmental liabilities at this facility. Greenstar also has adequate insurance cover for environmental liabilities to €6,350,000 for any one occurrence, which will apply to "sudden identifiable and unintended incidents".

7.5 European Pollutant Release and Transfer Register

Under the European Pollutant Release and Transfer Register Regulation (EC) No. 166/2006 Greenstar are required to submit information annually to the Agency. A copy of the information submitted to the Agency via the web-based data reporting system is included in Appendix 5.

8. OTHER REPORTS

There are no other reports requested by the Agency.

APPENDIX 1

Environmental Monitoring Summary Tables

SURFACE WATER MONITORING RESULTS

Surfacewater Monitoring Results 2008 Sarsfieldcourt W0136-01: SW-1

Parameter	Units	Q1	Q2	Q3	Q4
pH	pH units	7.8	6.66	7.25	7.00
Conductivity	mS/cm	0.244	0.315	0.225	0.28
Temperature	°C	9.3	14.8	14	7.1
BOD	mg/l	1	<1	<2	<2
COD	mg/l	<20	<20	26	<15
Ammoniacal Nitrogen	mg/l	0.8	<0.3	0.5	<0.1
Dissolved Oxygen	mg/l	4.5	3	8.7	10.3
TOC	mg/l	2	2.1	10	3.49
Total Suspended Solids	mg/l	7	14	<10	6
Oils, Fats & Greases	mg/l	<4	<4	<1	<10
Nitrate as NO ₃	mg/l	37.64	31.88	26.6	30.11
Nitrite as NO ₂	mg/l	<0.33	<0.33	<0.05	<1.6
TPH > C6-C40 /Mineral Oils	mg/l	<0.05	0.106	<0.01	0.024

Surfacewater Monitoring Results 2008 Sarsfieldcourt W0136-01: SW-2

Parameter	Units	Q1	Q2	Q3	Q4
pH	pH units	7.9	7.27	7.53	7.6
Conductivity	mS/cm	0.235	0.519	0.215	0.268
Temperature	°C	9.3	15.7	13.9	6.9
BOD	mg/l	<1	5	<2	<2
COD	mg/l	26	20	34	19
Ammoniacal Nitrogen	mg/l	0.3	0.8	<0.2	0.1
Dissolved Oxygen	mg/l	5	4.1	9	11.1
TOC	mg/l	1.6	2.6	<2	3.82
Total Suspended Solids	mg/l	5	59	11	9
Oils, Fats & Greases	mg/l	<4	<4	<1	<10
Nitrate as NO ₃	mg/l	39.41	45.17	26.9	29.23
Nitrite as NO ₂	mg/l	<0.33	<0.33	<0.05	<1.6
TPH > C6-C40 /Mineral Oils	mg/l	<0.05	0.112	<0.01	0.011

Surfacewater Monitoring Results 2008 Sarsfieldcourt W0136-01: SW-3

Parameter	Units	Q1	Q2	Q3	Q4
pH	pH units	7.8	7.19	7.06	7.2
Conductivity	mS/cm	0.46	0.515	0.331	0.439
Temperature	°C	10.3	13.6	14.6	8.5
BOD	mg/l	<1	1	2	4
COD	mg/l	<20	30	<15	20
Ammoniacal Nitrogen	mg/l	0.5	<0.3	0.4	1.6
Dissolved Oxygen	mg/l	1.7	1.2	8.7	6.3
TOC	mg/l	2.9	2.2	<2	3.04
Total Suspended Solids	mg/l	8	30	<10	13
Oils, Fats & Greases	mg/l	<4	<4	<1	<10
Nitrate as NO ₃	mg/l	19.06	24.8	26	19.93
Nitrite as NO ₂	mg/l	0.66	<0.33	<0.05	<1.6
TPH > C6-C40 /Mineral Oils	mg/l	0.151	0.036	<0.01	0.181

WASTEWATER MONITORING RESULTS

Wastewater Monitoring Results 2008 Sarsfieldcourt W0136-01: SE-1

Parameter	Units	May-08	Nov-08
Temperature	°C	15.7	8.6
pH	pH units	7.39	7.3
BOD	mg/l	10	173
COD	mg/l	34	360
Ammoniacal Nitrogen	mg/l	1	1.7
Total Suspended Solids	mg/l	95	37
TPH >C6 – C40	mg/l	13.8	*

GROUNDWATER MONITORING RESULTS

Groundwater Monitoring Results 2008 Sarsfieldcourt W0136-01: W-1

Parameter	Units	Feb '08	Aug '08
pH	pH units	6.6	6.01
Conductivity	mS/cm	0.25	0.186
TOC	mg/l	0.7	4
Ammoniacal Nitrogen	mg/l	<0.3	<0.2
Total Suspended Solids	mg/l	1,170	141
Nitrate as NO ₃	mg/l	22.14	23.5
Nitrite as NO ₂	mg/l	<0.33	<0.05
Mineral Oils	mg/l	<0.05	<0.01

Groundwater Monitoring Results 2008 Sarsfieldcourt W0136-01: W-2

Parameter	Units	Feb '08	Aug '08
pH	pH units	6.6	6.41
Conductivity	mS/cm	0.183	0.21
TOC	mg/l	2.6	13
Ammoniacal Nitrogen	mg/l	<0.3	<0.2
Total Suspended Solids	mg/l	4,140	2385
Nitrate as NO ₃	mg/l	21.26	18
Nitrite as NO ₂	mg/l	<0.33	<0.05
Mineral Oils	mg/l	<0.05	<0.01

DUST DEPOSITION RESULTS

Dust Monitoring Results 2008 Sarsfieldcourt W0136-01

	May '08	June '08	July '08
DS-01	*	290	268
DS-02	31	41	91
DS-03	10	101	138
DS-04	197	66	165

NOISE RESULTS

Noise Monitoring Results 2008 Sarsfieldcourt W0136-01

Station	Time	LAeq 30 min dB	LA10 30 min dB	LA90 30 min dB	Noise audible
N1	1529-1559	64	65	52	Frequent movements through industrial estate dominant, particularly trucks accessing surrounding premises. Greenstar compressor slightly audible here due to reflections. Vehicles accessing Greenstar site sporadically. Birdsong and crows. Rustling vegetation. Angle grinders at offsite premises significant.
N2	1455-1525	59	62	53	Greenstar compressor audible continuously and dominant, except while off 1458-1521. Generator also audible continuously. Intermittent truck movements around yard clearly audible. Offsite truck movements at surrounding commercial premises audible.
N5	1711-1741	51	52	46	Continuous emissions from compressor at adjacent premises audible at low level in background. Greenstar compressor emissions also slightly audible. Truck movements audible regularly throughout estate. Public road traffic also audible.
N6	1637-1707	63	65	49	No noise audible from facility apart from reversing alarm x1 and sporadic truck movements at entrance. Traffic through industrial estate dominant. Road traffic also audible. Birdsong. Various noise sources audible at low level at adjacent premises. Plastic fluttering in breeze nearby.
N7	1603-1633	69	74	57	No noise audible from facility apart from sporadic truck movements through entrance. Ejector trailer at nearby premises dominant from start measurement to 1608. Thereafter, repeated vehicle movements at surrounding premises, including vehicle testing facility, and on industrial estate access road, dominant.
N9	1346-1416	55	58	39	Traffic through junction almost continuous and dominant. Occasional emissions slightly audible from industrial estate, sources variable. Compressor at industrial estate (most likely at Greenstar facility) faintly audible during traffic lulls. Birdsong and

APPENDIX 2

Complaints Register


Complaints Register – GS 024b

Date	Complaint/Enquiry Details	Information supplied	Signed
20 th July 2008 22/July/2008	J Inde	Below complaint	[Signature]
22/July/2008	J Inde	Below complaint	[Signature]
24/July/2008	J Inde	Below complaint	[Signature]
23 July 2008	J Inde	Below complaint	[Signature]

Form Reference No.	GS 024b	Issued by	Fiona Farrell
Issue	1	Date	1/4/05

APPENDIX 3

New Procedures

DOCUMENT TYPE	PROCEDURE	SOP 080	
TITLE	Gypsum Based Material		
Controlled Document			

1. SCOPE/OBJECTIVE

This procedure will apply to all Greenstar facilities.

The purpose of this procedure is to ensure the safe and efficient handling, rejection and/or quarantining of gypsum based material.

2. RESPONSIBILITY

The Facility Manager (FM) will implement this procedure.

The FM, Environment Manager (EM), Site Operatives (SO) and Customer Care (CC) personnel will follow this procedure.

3. DEFINITION

“Non -hazardous gypsum-based materials” typically include plaster board waste from construction and demolition sites which can often be present in general C&D waste skips. In terms of the European Waste Catalogue, separately collected gypsum based construction material is coded as 17 08 02 and source separation of this material is encouraged. Typically, however, gypsum wastes arising from works of demolition in particular may arise in general C&D waste loads. In this instance the appropriate code is 17 09 04 (mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03).

COUNCIL DECISION of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of Annex II to Directive 1999/31/EC states:

“2.2.3. Gypsum Waste;

Non hazardous gypsum-based materials should be disposed of only in landfills for non-hazardous waste in cells where no biodegradable waste is accepted”.

Mixing gypsum wastes with biodegradable wastes can lead to the evolution of hydrogen sulphide and consequently where gypsum based material is accepted at a non landfill site, this material must be segregated from the general (C&D) waste accepted.


Site Safety Statement

4. PROCEDURE

4.1. Generalities

Gypsum based material may arrive on site mixed with general Construction and Demolition (C&D) waste. Where possible and practicable, all gypsum-based products must be segregated from other types of C&D waste and stored separately in a suitable, clearly labelled, covered container pending removal off-site to a licensed or permitted facility.

DOCUMENT NUMBER	SO P 018	ISSUE DATE	08/05/08	REVISION NUMBER	6	Page 1 of 2	ISSUED BY	S B	AUTHORISED BY	M D
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DOCUMENT TYPE	PROCEDURE	SOP 080	 <i>greenstar</i> <small>setting the standard</small>
TITLE	Gypsum Based Material		
Controlled Document			

Where large proportions of gypsum waste are found to be contaminating skips received from a particular customer on an on-going basis, the FM must contact the Customer Account Manager to explain that further loads of this nature will not be received at the facility, giving reasons why and insisting that the customer site in question avail of separate covered storage and collection of gypsum-based waste for removal to licensed facilities.

The FM will arrange for the transport and disposal off-site of segregated gypsum based material by an approved third party specialist contractor (Ref. SOP 016, and GS028).

This material will only be sent to a fully approved (licensed or permitted) facility.

DOCUMENT NUMBER	SOP 018	ISSUE DATE	08/05/08	REVISION NUMBER	6	Page 2 of 2	ISSUED BY	S B	AUTHORISED BY	M D
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APPENDIX 4

Staff Training

Name	Health and Safety	Induction	TMS Training	Manual Handling	Waste Facility Operations	Waste Management	Fire Safety&Extin guisher	Forklift	Safety Rep/mgrs	Chemical Handling & Spill Training	ISO 14001	Environmental Awareness
Michael Kelly											X	
Edel Lennon							X				X	
Anita Buckley	X	X										X
Lorraine O Sullivan			X								X	X
Pat Coleman							X	X				X
Louise Demir	X			X	X		X		X		X	
Juozas Grazinskas							X	X			X	
Martin McCarthy	X										X	
Olive Newman							X					
Mary O Brien							X					
Christopher O Sullivan										X		
Arkadiusz Raczynski										X		
Ger Scanlon	X						X				X	
Pawel Chrostowski							X	X			X	
Michael Hannon	X					X					X	
Daniel Zmuda							X	X			X	
Jakub Bojanowicz										X		
Josephine Lee										X		
James O Shea										X		
Radoslaw Pilat								X				
Ivan Ryan										X		
Viktoras Rygertas								X				
Thomas McLoughlan	X											
Tomas Healy	X											
Christine Fitzgerald	X	X	X									
Brian McSweeney							X	X				
Derek O Shea								X				

APPENDIX 5

European Pollutant Release and Transfer Register

AER Returns Worksheet

Version 1.1.03

REFERENCE YEAR	2008
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1. FACILITY IDENTIFICATION

Parent Company Name	Greenstar Recycling (Munster) Limited
Facility Name	Greenstar Recycling (Munster) Ltd
PRTR Identification Number	W0136
Licence Number	W0136-02

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).
4.3	Recycling or reclamation of metals and metal compounds.
4.4	Recycling or reclamation of other inorganic materials.
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.
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.

Address 1	Sarsfieldcourt Industrial Estate
Address 2	Glanmire
Address 3	Cork
Address 4	
Country	Ireland
Coordinates of Location	251100.000
River Basin District	IESW
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Suzanne Byrne
AER Returns Contact Email Address	suzanne.byrne@greenstar.ie
AER Returns Contact Position	Environmental Executive
AER Returns Contact Telephone Number	01-2947949
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	01-2947900
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
5c	Installations for the disposal of non-hazardous waste

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

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

4.1 RELEASES TO AIR

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR								
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
						0.0	0.0	0.0

* 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								
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
						0.0	0.0	0.0

* 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								
POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
						0.0	0.0	0.0

* 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:	Greenstar Recycling (Munster) Ltd				
Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Code	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

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 facility

RELEASES TO WATERS									
POLLUTANT		Method Used			QUANTITY				
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
76	Total organic carbon (TOC) (as total C or COD/3)	E	EN ISO 17025	Flow is based on annual rainfall amount and the area of the facility	SW-1	40.7 0.0	40.7 0.0	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									
POLLUTANT		Method Used			QUANTITY				
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
						0.0	0.0	0.0	0.0

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

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

RELEASES TO WATERS									
POLLUTANT		Method Used			QUANTITY				
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
303	BOD	E	EN ISO 17025	Flow is based on annual rainfall amount and the area of the facility	SW-3	35.0	35.0	0.0	0.0
306	COD	E	EN ISO 17025	Flow is based on annual rainfall amount and the area of the facility		375.0	375.0	0.0	0.0
238	Ammonia (as N)	E	EN ISO 17025	Flow is based on annual rainfall amount and the area of the facility		12.5	12.5	0.0	0.0
327	Nitrate (as N)	E	EN ISO 17025	Flow is based on annual rainfall amount and the area of the facility		76.0317	76.0317	0.0	0.0
240	Suspended Solids	E	EN ISO 17025	Flow is based on annual rainfall amount and the area of the facility		255.0	255.0	0.0	0.0
324	Mineral oils	E	EN ISO 17025	Flow is based on annual rainfall amount and the area of the facility		1.84	1.84	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

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER									
POLLUTANT		METHOD			QUANTITY				
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year	
			Method Code	Designation or Description					
						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								
POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description				
303	BOD	C	PER	Calculated based on results and amount of wastewater tankered off site	SE-1 19.66335	19.66335	0.0	0.0
306	COD	C	PER	Calculated based on results and amount of wastewater tankered off site	42.3353	42.3353	0.0	0.0
238	Ammonia (as N)	C	PER	Calculated based on results and amount of wastewater tankered off site	0.290115	0.290115	0.0	0.0
240	Suspended Solids	C	PER	Calculated based on results and amount of wastewater tankered off site	14.1834	14.1834	0.0	0.0
348	Total petroleum hydrocarbons	C	PER	Calculated based on results and amount of wastewater tankered off site	2.96562	2.96562	0.0	0.0

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

4.4 RELEASES TO LAND

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND							
POLLUTANT		METHOD			QUANTITY		
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
			Method Code	Designation or Description			
					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							
POLLUTANT		METHOD			QUANTITY		
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
			Method Code	Designation or Description			
					0.0	0.0	0.0

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR#: W0136 | Facility Name : Greenstar Recycling (Munster) Ltd | Filename : W0136_2008.xls | Return Year : 2008 |

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Transfer Destination	European Waste Code	Hazardous	Quantity T/Year	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Name and Licence / Permit No. of Recoverer / Disposer / Broker	Address of Recoverer / Disposer / Broker	Name and Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)	Licence / Permit No. of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	06 13 99	No	28.66	Activated Carbon	R3	M	Weighed	Offsite in Ireland	Ormonde Organics, WP 072/021	Rockwell, New Inn, Co. Tipperary		
Within the Country	15 01 02	No	4.76	Plastic Packaging	R12	M	Weighed	Offsite in Ireland	Glyntown Enterprises CK (S) 329/06	Sarsfieldcourt Industrial Estate, Glanmire, Co. Cork		
To Other Countries	15 01 02	No	185.07	Plastic Packaging	R3	M	Weighed	Abroad	Thorndale Environmental Recycling WDL-14	77 Clooney Road, Campsie, Co. Derry, BT473PA		
Within the Country	15 01 03	No	57.68	Pallets	R3	M	Weighed	Offsite in Ireland	Miscellaneous Business Cork Recycling Company CK (S) 17/02	Various		
Within the Country	15 01 03	No	233.94	Pallets	R3	M	Weighed	Offsite in Ireland	Cork Recycling Company CK (S) 17/02	Lehenaghmore, Togher, Cork		
Within the Country	15 01 03	No	16.46	Pallets	R3	M	Weighed	Offsite in Ireland	Cork Togher Pallets CK (S) 17/02	Lehenaghmore, Togher, Cork		
Within the Country	15 01 03	No	6.9	Pallets	R13	M	Weighed	Offsite in Ireland	Glyntown Enterprises CK (S) 329/06	Sarsfieldcourt Industrial Estate, Glanmire, Co. Cork		
Within the Country	15 01 04	No	27.0	Steel Cans	R13	M	Weighed	Offsite in Ireland	Glyntown Enterprises CK (S) 329/06	Sarsfieldcourt Industrial Estate, Glanmire, Co. Cork		
Within the Country	15 01 06	No	1.9	Mixed Packaging	R13	M	Weighed	Offsite in Ireland	Glyntown Enterprises CK (S) 329/06	Sarsfieldcourt Industrial Estate, Glanmire, Co. Cork		
Within the Country	15 01 07	No	1114.06	Glass Packaging	R13	M	Weighed	Offsite in Ireland	Glyntown Enterprises CK (S) 329/06	Sarsfieldcourt Industrial Estate, Glanmire, Co. Cork		
Within the Country	17 01 07	No	444.62	C&D Inert Mixed	R5	M	Weighed	Offsite in Ireland	John A. Butler CK (S) 113/04	The Rectory, Cullen, Riverstick, Co. Cork		
Within the Country	17 05 04	No	18.08	C&D Inert Mixed	R5	M	Weighed	Offsite in Ireland	John A. Butler CK (S) 113/04	The Rectory, Cullen, Riverstick, Co. Cork		
Within the Country	19 08 05	No	117.85	Liquid Waste	R3	M	Weighed	Offsite in Ireland	Riita Environmental Ltd. W0109-02	Block 402, Grant's Drive, Greenogue Business Park, Rathcoole, Co. Dublin		
Within the Country	19 12 12	No	39224.9	C&I Dry Mixed	D5	M	Weighed	Offsite in Ireland	KTK Landfill W0081-03	Kilcullen, Co. Kildare		
Within the Country	19 12 12	No	328.31	C&I Dry Mixed	R13	M	Weighed	Offsite in Ireland	Greenstar Fassaroe W0053-03	Fassaroe, Bray, Co. Wicklow		
Within the Country	19 12 12	No	35.68	C&I Dry Mixed	R5	M	Weighed	Offsite in Ireland	Greenstar Millennium W0183-01	Millennium Business Park, Ballycoolin, Dublin 11		
Within the Country	19 12 12	No	1281.92	MSW Municipal Mixed	D5	M	Weighed	Offsite in Ireland	Knockharley Landfill W0146-01	Navan, Co. Meath		
Within the Country	19 12 12	No	7638.76	MSW Municipal Mixed	R13	M	Weighed	Offsite in Ireland	Greenstar Fassaroe W0053-03	Fassaroe, Bray, Co. Wicklow		
Within the Country	19 12 12	No	21.2	MSW Municipal Mixed	R13	M	Weighed	Offsite in Ireland	Greenstar Millennium W0183-01	Millennium Business Park, Ballycoolin, Dublin 11		
Within the Country	19 12 12	No	45.26	Fines MSW	R3	M	Weighed	Offsite in Ireland	KTK Landfill W0081-03	Kilcullen, Co. Kildare		
Within the Country	19 12 12	No	5105.11	Fines MSW	R3	M	Weighed	Offsite in Ireland	Milltown Composting WP 019 02	Milltownmore, Fethard, Co. Tipperary		
Within the Country	19 12 12	No	5575.01	Fines MSW	R3	M	Weighed	Offsite in Ireland	O'Toole Composting WP 01/07	Ballintrane, Co. Carlow		
Within the Country	20 01 35	Yes	4.08	Electronics & Electrics	R5	M	Weighed	Offsite in Ireland	E Waste Experts (Tech Rec) W0233-01	Unit 51, Park West Industrial Estate, Nangor Road, Dublin 12		
Within the Country	20 01 35	Yes	13.1	Electronics & Electrics	R5	M	Weighed	Offsite in Ireland	Immark W0185-01	Greenogue Industrial Estate, Rathcoole, County Dublin		
Within the Country	20 01 40	No	116.61	Metal	R4	M	Weighed	Offsite in Ireland	Cork Metal Company CK (S) 204/05	Dublin Hill, Cork		
Within the Country	20 01 40	No	26.42	Metal	R4	M	Weighed	Offsite in Ireland	Davis Recycling Ltd WP 98067	Pigeon House Road, Dublin 14		
Within the Country	20 01 40	No	2.46	Metal	R4	M	Weighed	Offsite in Ireland	Pouladuff Dismantlers Ltd. CK (S) 168/04	Forge Hill, Pouladuff Road, Cork		
Within the Country	20 01 40	No	5.62	Metal Dust	R4	M	Weighed	Offsite in Ireland	KMK Metals Recycling t/a WEEE Recycle W0113-03	Cappincur Industrial Estate, Daingean Road, Tullamore, Co. Offaly		
Within the Country	20 01 38	No	198.24	Wood	R3	M	Weighed	Offsite in Ireland	Cork Recycling Company CK (S) 17/02	Lehenaghmore, Togher, Cork		