

Unit 15
Melbourne Business Park
Model Farm Road
Cork



E:info@ocallaghanmoran.com
www.ocallaghanmoran.com
T: 021 434 5366

ANNUAL ENVIRONMENTAL REPORT

STARRUS ECO HOLDINGS LTD

DEEP WATER QUAY SLIGO

LICENCE NO. W0058-01

JANUARY 2015 – DECEMBER 2015

Prepared For: -

Starrus Eco Holdings Ltd t/a Greenstar
Fassaroe,
Bray,
Co. Wicklow

Prepared By: -

O' Callaghan Moran & Associates,
Unit 15 Melbourne Business Park,
Model Farm Road,
Cork.

March 2016

Project	Annual Environmental Report 2015			
Client	Greenstar W0058-01			
Report No	Date	Status	Prepared By	Reviewed By
0481005	29/03/2015	Draft	Mr Billy Hamilton MSc	Dr. Martina Gleeson PhD.
0481005	31/03/2015	Draft	Mr Billy Hamilton MSc	Jim O'Callaghan MSc, CEnv, MCIWM, IEMA
0481005	31/03/2015	Final	Mr Billy Hamilton MSc	Jim O'Callaghan MSc, CEnv, MCIWM, IEMA

TABLE OF CONTENTS

	<u>PAGE</u>
1. INTRODUCTION.....	1
2. SITE DESCRIPTION.....	2
2.1 SITE LOCATION AND LAYOUT	2
2.2 WASTE MANAGEMENT ACTIVITIES	2
2.2.1 Waste Types.....	2
2.2.2 Plant List.....	4
3. EMISSION MONITORING	5
3.1 SURFACE WATER MONITORING	5
3.2 GROUNDWATER MONITORING.....	6
3.3 FOUL WATER MONITORING	9
3.4 NOISE SURVEY	10
3.5 DUST MONITORING	11
3.6 LANDFILL GAS MONITORING	12
4. SITE DEVELOPMENT WORKS	14
4.1 ENGINEERING WORKS	14
4.2 SUMMARY OF RESOURCE & ENERGY CONSUMPTION	14
5. WASTE RECEIVED AND CONSIGNED 2015	15
6. ENVIRONMENTAL INCIDENTS AND COMPLAINTS	19
6.1 INCIDENTS	19
6.2 REGISTER OF COMPLAINTS.....	19
7. ENVIRONMENTAL DEVELOPMENT	20
7.1 ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT	20
7.1.1 Site Management Structure	20
7.1.2 Staff Training.....	21
7.2 ENVIRONMENTAL MANAGEMENT PROGRAMME PROPOSAL	21
7.2.1 Schedule of Objectives 2015	21
7.2.2 Schedule of Objectives 2016	21
7.3 COMMUNICATIONS PROGRAMME	24
7.4 ELRA & REPORT ON FINANCIAL PROVISION	24
8. OTHER REPORTS.....	25
8.1 EUROPEAN POLLUTANT RELEASE AND TRANSFER REGISTER REGULATION	25
 APPENDIX 1	 - European Pollutant Release and Transfer Register
 APPENDIX 2	 - Procedures List

1. INTRODUCTION

This is the 2015 Annual Environmental Report (AER) for the Starrus Eco Holdings Ltd (Greenstar), Materials Recovery & Transfer facility (MRF) at Deep Water Quay, Sligo. It covers the period from the 1st January 2015 to the 31st December 2015.

The content is based on Schedule B of the Waste Licence (Reg. No. W0058-01) and the report format follows guidelines set in the “Guidance Note for Annual Environmental Report” issued by the Environmental Protection Agency (Agency)¹. Account is also taken of the AER Draft Guidance Document and AER Information Templates issued by the Agency in January 2013².

¹ EPA (Environmental Protection Agency) 1999 Waste Licensing – Draft Guidance on Environmental Management Systems and Reporting to the Agency

² EPA (Environmental Protection Agency) 2012 Draft AER Guidance Document

2. SITE DESCRIPTION

2.1 Site Location and Layout

The facility is located at Deepwater Berths Road, approximately 1.5 km northwest of Sligo town centre and 1 km from a relief road linking the N4 to the N15.

The licensed area, which encompasses approximately 11,000 m² and is accessed off the Deepwater Berths Road, is occupied by one waste transfer building, site offices, open yard areas and a civic amenity area.

The main building encompasses approximately 2,322 m² and is divided into three bays. The site offices, which are located beside the main entrance, comprise a two storey building encompassing approximately 84 m². The north-western yard is paved with concrete and provides access to the waste processing building. The south-eastern yard is also paved and comprises the civic amenity area and an open paved yard area.

2.2 Waste Management Activities

The facility is licensed to accept 100,000 tonnes per annum of household waste, commercial waste, industrial non-hazardous waste and construction and demolition waste for processing and/or transfer for disposal or recovery.

2.2.1 Waste Types

The facility is licensed to accept the following waste types: -

- Household (41,400 tonnes);
- Commercial (4,600 tonnes);
- Industrial Non-hazardous (45,000 tonnes);
- Construction & Demolition (C&D) (9,000 tonnes);

No hazardous wastes or liquid waste are accepted.

Waste bulking and segregation take place inside the waste transfer building, as specified in Condition 5.1 of the Licence and includes:

- Segregation of recyclable material (paper, cardboard, plastic, wood, aluminium cans);
- Baling of segregated materials;
- Sorting and segregation of C&D waste;
- Bulking up of Municipal Solid Waste;
- Transfer of recovered and residual materials to appropriately licensed recycling, recovery and disposal outlets.

Household Waste

Source segregated household dry recyclables are baled and stored prior to transfer to permitted/licensed off-site recycling facilities. Residual or black bin household waste is baled and exported for recovery.

Commercial and Industrial Waste

Both mixed and segregated commercial waste is collected from commercial outlets. Commercial waste containing many recyclable waste streams (paper, cardboard, glass, metal, green waste and wood) is delivered to the facility by both permitted third party hauliers and by Greenstar vehicles. Plastic, card and paper are baled and stored prior to transfer to a suitable permitted/licensed off-site recycling outlet. Biodegradable wastes that are suitable for composting are sent to an offsite authorised composting facility. The remaining non-recyclable material is bulked and sent to appropriately licensed landfills/recovery facilities

C&D Waste

Waste loads include mixed construction and demolition wastes and soil and stone. The material arrives in skips of varying sizes. The waste loads are inspected and then bulked. The majority of the incoming material is recovered and sent off-site either for re-use or recycling at authorised facilities. The non-recyclable elements are transferred to a licensed landfill.

Civic Amenity Area

The civic amenity area is located to the south-east of the waste transfer building and has its own dedicated entrance for members of the public. There are a number of dedicated closed skips for MSW, dry recyclables (cardboard, plastics, metals, papers etc) and WEEE.

2.2.2 Plant List

A list of the plant in use at the facility is given in Table 2.1. The plant provides 100% duty and 50% standby for waste processing.

Table 2.1 Plant List – 2015

No.	Plant	Model	Operational Capacity	Standby Capacity
1	Baler	Boa	7t/hr	7t/wk
1	Paper Shredder	Alleghney	500kg/hr	500kg/hr
5	Trucks	Skip Trucks *3	60hr/wk	-
		Refuse Trucks *4	60hr/wk	-
1	Hook Lifter	Scania	65hr/wk	-
1	Loading Shovel	Caterpillar 938G	70t/hr	-
1	Fork Lift	Yale x2	65hr/wk	-
1	Grab	Fuchs MHL340	25t/hr	-
1	Weighbridge	Avery Weightronic	46hr/wk	-

3. EMISSION MONITORING

Greenstar implements a comprehensive environmental monitoring programme to assess the significance of emissions from site activities as per Schedule E of the Waste Licence. The programme includes surface water, foul water, groundwater, noise, landfill gas 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 monitoring conducted in 2015 is presented in this Section.

3.1 Surface Water Monitoring

Condition 9.2 and Schedule E of the Licence requires quarterly monitoring at one surface water emission point (SE-2) to the Garvogue River. The range of analysis includes pH, electrical conductivity, Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD), ammoniacal nitrogen, chloride, surfactants, total suspended solids (TSS), mineral oils, and oils, fats and greases.

Following an assessment of the surface water system it was found that SE-2 only served the north-western yard. A second discharge point to the Garvogue was identified which serves the south eastern yard and this emission point, labelled SE-3, was added to the monitoring schedule in Q2 and Q3 2015. Drainage works carried out at the site between 02/10/15 and 20/11/15 included the diversion of storm water run-off from the south eastern yard to the foul sewer. As a result monitoring at point SE-3 is no longer required.

The results, which are shown on Table 3.1, indicate the discharge is generally of good quality. The discharge complied with the ELVs in Q1 and Q4. The total suspended solids detected at both surface water discharge points exceeded the ELVs in Q2 and Q3. Incident reports were submitted to the Agency on both occasions.

A maintenance programme is in place to ensure continued surface water quality. In addition to the drainage maintenance programme, the yard is regularly cleaned and maintained and, in general, housekeeping measures are good. Greenstar will continue to focus their efforts on housekeeping. The diversion of surface water from the South Eastern Yard to foul sewer and hence the elimination of the SE3 emission point will ensure no further exceedances in waste water derived from this part of the facility.

Table 3.1 Surface Water Results for 2015

Parameter	Units	SE-2 Q1 2015	Q2 2015		Q3 2015		SE-2 Q4 2015	Emission Limit (Grab Sample)*
			SE-2	SE-3	SE-2	SE-3		
pH	pH units	6.88	6.95	6.89	7.26	7.38	7.36	6 – 9
Chloride	mg/l	23.6	28.6	40.2	22.6	38.5	19.1	N/A
Ammoniacal Nitrogen	mg/l	0.68	0.61	0.31	0.47	0.12	0.37	N/A
COD	mg/l	<7	<7	<7	<7	<7	<7	N/A
BOD	mg/l	3	<1	1	<1	<1	<1	24
Total Suspended Solids	mg/l	24	111	81	96	179	<10	36
Surfactants	mg/l	0.6	1.2	<0.2	1.2	1.4	1.2	N/A
Mineral Oils	mg/l	<0.01	<0.01	0.67	<0.01	<0.01	<0.01	N/A
Oils, Fats & Greases	mg/l	<0.01	<0.01	0.67	<0.01	<0.01	<0.01	12
Total Coliforms	cfu/100ml	N/A	N/A	N/A	N/A	N/A	N/A**	N/A
Faecal Coliforms	cfu/100ml	N/A	N/A	N/A	N/A	N/A	N/A**	N/A

N/A - not applicable

*Condition 7.7.1.3. No grab sample shall exceed 1.2 times the emission limit value.

** Results not available due to sampling error

3.2 Groundwater Monitoring

There are no direct or indirect emissions to ground from the facility. Groundwater monitoring is carried out annually at the two locations (MW1 and MW2) shown on Figure 3.1. MW1 is on the southern boundary of the site in an open paved yard and MW2 is at the northern boundary, near the main entrance to the site. MW1 is upgradient of site activities, while MW2 is downgradient.

The closed Finiskiln landfill is immediately south west and up hydraulic gradient of the site. The landfill was operated by Sligo Borough Council from 1958 to 1994 and was used for the disposal of municipal solid waste. The Garavogue River estuary is immediately north of the site.

The monitoring was carried out in May 2015. The parameters were ammoniacal nitrogen, BOD, chloride, mineral oils, and pH. Due to a scheduling oversight analysis for coliforms was not carried out.

The methodologies were all ISO/CEN approved or equivalent. There are no trigger limits set in the Licence and the results are compared to the Interim Guideline Values (IGV) on groundwater quality published by the Agency and the Groundwater Threshold Values (GTV) set out in the European Communities Environmental Objectives (Groundwater) Regulations (S.I. 9 of 2010). The IGVs are not statutory, but were developed to assist in the assessment of impacts on groundwater quality. The IGVs are based on, but are more conservative than the Drinking Water quality standards. GTVs have only been established for core indicator parameters. The results are shown on Tables 3.2.

Figure 3.1 Monitoring Locations

Table 3.2 Groundwater Monitoring Results – May 2015

Parameter	Units	MW1	MW2	IGV	GTV
pH	pH units	6.76	7.50	6-9	-
Chloride	mg/l	23.5	32.7	30	24-187.5
Ammoniacal Nitrogen	mg/l	0.78	0.22	0.15	0.065-0.175
BOD	mg/l	43	<1	-	-
Mineral Oils	mg/l	2,316.48	<0.01	0.01	-

Elevated levels of ammoniacal nitrogen and mineral oils were detected in the upgradient well (MW-1). Elevated levels of chloride and ammoniacal nitrogen were detected in the downgradient well (MW-2). The BOD detected in MW-1 was higher than in MW-2.

The elevated ammoniacal nitrogen may be attributable to the former landfill. Elevated chloride has been detected in the groundwater in the recent past and is likely associated with saltwater intrusions from the estuary.

The mineral oil level in MW-1 (2,316mg/l) was significantly higher than recorded in April 2014 (272.88mg/l). MW-1 is approximately 5m from a neighbouring kerosene and diesel distribution centre. There are no on-site sources of hydrocarbon contamination in the vicinity of this well and it is understood that the source of the contamination is a leak that occurred at the distribution centre.

Following receipt of the monitoring results the Agency opened a compliance investigation (CI 001069) regarding the cause of the elevated level. Greenstar conducted additional monitoring to confirm the presence of the mineral oil and, if possible, to identify the source. This carried out in July and November 2015 and the results are presented in Table 3.3 and 3.4 below.

In response to the elevated mineral oil levels Greenstar conducted further monitoring in July, September and November and the results are presented in Tables 3.3, 3.4 and 3.5

Table 3.3 Groundwater Monitoring Results – July 2015

Parameter	Units	MW1	MW2	IGV	GTV
pH	pH units	7.3	7.46	6-9	-
Chloride	mg/l	25.3	91.0	30	24-187.5
Ammoniacal Nitrogen	mg/l	0.55	4.08	0.15	0.065-0.175
BOD	mg/l	15	3	-	-
Mineral Oils	mg/l	43.8	<0.01	0.01	-

Table 3.4 Groundwater Monitoring Results-September 2015

Parameter	Units	MW1	MW2	IGV	GTV
pH	pH units	7.5	7.3	6-9	-
Chloride	mg/l	21.3	80.3	30	24-187.5
Ammoniacal Nitrogen	mg/l	0.628	3.57	0.15	0.065-0.175
BOD	mg/l	<1	<1	-	-
Mineral Oils	mg/l	0.083	0.409	0.01	-

Table 3.5 Groundwater Monitoring Results – November 2015

Parameter	Units	MW1	MW2	IGV	GTV
pH	pH units	6.94	10.50	6-9	-
Chloride	mg/l	42.2	529.3	30	24-187.5
Ammoniacal Nitrogen	mg/l	0.86	1.37	0.15	0.065-0.175
BOD	mg/l	22	20	-	-
Mineral Oils	mg/l	3.715	<0.01	0.01	-

While mineral oil was detected in MW-1 in all three events, the levels were significantly lower than the concentrations detected in May. Trace levels of mineral oil were also detected in MW-2 in September, but not in July and November.

Elevated levels of mineral oil have been detected in MW-1 since 2006 and were associated with leaks/spills at the adjoining fuel depot. There is no record that any clean-up/remedial works have been carried out at the depot in the intervening period.

A trend assessment established that the levels have fluctuated over time, peaking at 2,316mg/l in May 2015. The levels detected in July, September and November 2015 were significantly lower, 43.8mg/l, 0.083mg/l and 3.71mg/l respectively. The cause of the fluctuations are not known, but they may be associated with either seasonal rainfall, the tidal cycle in the Garvogue River or both.

It was recommended that the groundwater monitoring be carried out quarterly to confirm the declining trend in concentrations since May 2015.

3.3 Foul Water Monitoring

In July 2010, following agreement with the Agency, the drainage system was connected to the Sligo County Council municipal sewer serving the municipal waste water treatment plant located approximately 500 m from the facility.

Prior to Q4 2015 foul water was generated by floor runoff in the transfer building and sanitary discharges only. As mentioned in Section 3.1 above, drainage works carried out between 02/10/15 and 20/11/15 included the diversion of storm water run-off from the South Eastern Yard from the Garvogue River estuary to the foul sewer.

Monitoring is carried out at one location (SE-1), the final discharge point from the facility. A technical amendment issued in January 2013 defines the current monitoring schedule for emissions to sewer. Foul water monitoring is carried out quarterly in accordance with Condition 9.2 and Schedule E.7 of the licence. The sampling location is shown on Figure 3.1 and the monitoring results are presented on Table 3.5.

The range of analysis as specified in Schedule E.7 of the amended Waste Licence includes pH, BOD, COD, ammoniacal nitrogen, chloride, detergents, total suspended solids, mineral oils and oils, fats and greases. The sampling and analysis was carried out in accordance with recognised quality assurance and control procedures.

The ELVs are based on a direct discharge to the Garavogue River. As the discharge to the river has stopped, the ELVs are no longer applicable. In approving the connection to the municipal sewer, the Sanitary Authority set discharge limits and these are included in Table 3.5. The foul water discharge complied with the Sanitary Authority ELVs..

A technical amendment granted in January 2013 significantly altered the existing monitoring regime and introduced a requirement to obtain composite samples of foul water samples for a number of parameters (including pH, BOD, COD, chloride, detergents, total suspended solids, mineral oil and Oils Fats and Greases). This requirement to obtain composite samples was appealed by Greenstar and with the agreement of Sligo County Council, the Agency advised that it was appropriate to maintain the current sampling technique (grab sampling).

Table 3.5 Foul Water Monitoring Results for 2015

Parameter	Units	SE-1 Q1 2015	SE-1 Q2 2015	SE-1 Q3 2015	SE-1 Q4 2015	Sanitary Authority Emission Limits
pH	pH Units	7.12	6.95	7.40	7.85	6 – 10
BOD	mg/l	4	<1	<1	<1	3,000
COD	mg/l	9	<7	<7	<7	6,000
Chloride	mg/l	24.2	22.1	22.5	20.4	-
Ammoniacal Nitrogen	mg/l	0.67	0.33	0.47	0.99	100
Total Suspended Solids	mg/l	21	15	26	<10	1,250
Surfactants	mg/l	0.3	1.3	1.6	1.2	100
Oils, Fats & Greases	mg/l	<0.01	<0.01	<0.01	<0.01	100
Mineral Oils	mg/l	<0.01	<0.01	<0.01	<0.01	10

3.4 Noise Survey

All waste processing is carried out internally which provides significant attenuation for noise emissions from waste processing. The annual noise survey was carried out on the 9th June 2015 in accordance with Schedule E of the Licence. Monitoring was carried out at the four noise monitoring locations, N-1, N-2, N-5 and N-6 shown on Figure 3.1. The results are summarised on Table 3.6. The survey concluded that the facility was fully compliant with its licence requirements as there were no impacts from facility activities at any potentially noise sensitive locations.

The nearest sensitive receptors to the facility are private residences located approximately 200 metres to the east of the facility across the Garavogue River at Cartron. There are also some individual residences located close to the Finiskiln Industrial Estate approximately 200 metres south of the facility. An inspection undertaken by the acoustic consultant in the vicinity of the nearest sensitive locations prior to the onsite noise survey established that noise emissions from the study site were not audible or discernible at these locations.

Table 3.6 Noise Monitoring Results June 2015

Station	Time	L _{Aeq} 30 min dB	L _{AF10} 30 min dB	L _{AF90} 30 min dB	Specific level* dB	Noise audible
N1	1400-1630	55	53	45	55	Clamp truck in building and on yards clearly audible. Truck and vehicle movements in weighbridge area also audible. Grab not in use during interval. Offsite, Crows and starlings audible regularly. During lulls in site activity, noise audible from traffic on surrounding industrial estate roads, aircraft, and activity at adjacent coal facility, all contributing to L _{Aeq} -system at nearby premises. Birdsong audible.
N2	1206-1236	57	59	50	57	Sporadic car movements at CAS dominant when present. Noise from waste disposal activities also audible. Clamp truck audible at low level in building 1601-1606. Offsite, intermittent traffic on adjacent industrial estate road dominant when present. Crow calls and starlings audible throughout interval. No other noise audible apart from aircraft and bird calls on water.
N5	1014-1044	57	56	49	57	Intermittent truck, car and van movements around adjacent yard and weighbridge area dominant when present. Clamp truck and grab in building also significant. Near field correction applied to specific level. Offsite, none other than nearby crow calls and intermittent traffic passing outside entrance.
N6	1119-1149	60	55	48	60	Grab in building clearly audible to 1524. Sporadic car and van movements in building also audible. Several car movements and waste disposal activities at CAS audible at low level. Offsite, traffic movements on surrounding industrial estate roads dominant when present. Distant traffic also audible. Crow and starling calls frequently audible. Aircraft.

*Specific level: Sound pressure level contribution considered attributable to facility, determined using real time assessment, field notes, time history profiles, statistical analysis, frequency spectra, near field correction if applicable, and other parameters.

3.5 Dust Monitoring

There are significant off-site sources of dust in the vicinity of the facility which is located in an industrial area of Sligo Port. In dry weather Greenstar dampen down access roads and the paved yards. Dust monitoring was carried out three times during the year in accordance with Schedule E of the Licence at four on-site locations (D1, D2, D3 and D4) as shown on Figure 3.1. The Licence requires that two of these monitoring events be carried out between May

and September. Dust monitoring was carried out in August, September/October and December. The results of the dust monitoring are presented in Table 3.7.

The dust deposition limit (350 mg/m²/day) was exceeded at two of the four monitoring locations (D3, 546 mg/m²/day and D4, 375 mg/m²/day) in September/October 2015. The limits were not exceeded at any location in either August or December 2015.

The sources of the dust at each gauge is not exclusively the Greenstar facility, which is located in a busy port surrounded by a variety of industrial activities, including an open coal storage facility to the west and south west, a petrol and oil distribution centre to the south, a fish meal storage warehouse to the east and an unvegetated partially restored local authority landfill to the south. The facility is also bounded to the north by the Port road leading to other industrial units further along the quay.

Locations D3 & D4 are at the southern corner and eastern corners of the facility. Given the low levels recorded at D1 and D2 it is not considered that the levels recorded at D3 and D4 are indicative of emissions from the Greenstar facility. It is considered that the elevated levels are due to off-site sources.

Table 3.7 Dust Monitoring Results 2015

	August 2015 mg/m²/day	September/ October 2015 mg/m²/day	December 2015 mg/m²/day	Deposition Limit mg/m²/day
D1	211	246	182	350
D2	138	181	78	350
D3	165	546	57	350
D4	179	375	58	350

3.6 Landfill Gas Monitoring

The annual gas monitoring was carried out in accordance with Schedule E of the Licence and included measurements of methane, carbon dioxide, oxygen and atmospheric pressure from the two groundwater monitoring wells (MW1 & MW2) and the facility office on the 7th May 2015.

OCM carried out the gas measurements using a Gas Data LSMx gas analyser. The meter was calibrated before use. The detection limit is 0.1% for methane, carbon dioxide and oxygen. The results are shown on Table 3.8. There are no trigger limits set in the waste licence. Carbon dioxide and methane were not detected at any of the monitoring locations. There is no evidence that landfill gas is present in the soils beneath the facility.

Table 3.8 Landfill Gas Monitoring Results 2015

LANDFILL GAS MONITORING FORM				Baseline		Ambient	x
Site Name: Greenstar Ltd. – Sligo Depot				Site Address: Greenstar, Sligo.			
Operator: GREENSTAR				National Grid Reference:			
Site Status: Operational				Date: 07/05/2015			
Instrument used: Gas Data LMSx		Normal Analytical Range: 0 – 100%					
Monitoring Personnel: OCM				Weather: Drizzle overcast			
Results							
Sample ID	Borehole/ spike/other	CH ₄ (% v/v)	CO ₂ (% v/v)	O ₂ (% v/v)	Barometric Pressure (mb)	Comment	
MW1	Borehole	0.0	0.0	21.4	986		
MW2	Borehole	0.0	0.0	21.2	986		
OFFICE	-	0.0	0.0	21.0	986		

4. SITE DEVELOPMENT WORKS

4.1 Engineering Works

The latest phase of works was carried out between 02/10/15 and 20/11/15 by Donlon Civil Engineering, included;

- Diversion of existing storm water arising from the South East Yard, from Garavogue estuary to existing foul sewer
- Installation of attenuation tank
- Installation of pumping system from attenuation tank
- Diversion of roof rainwater to stormwater system

4.2 Summary of Resource & Energy Consumption

Table 4.1 presents an estimate of the resources used on-site during the reporting period and the previous two years. An energy audit was completed in compliance with Condition 9.13 of the Technical Amendment during 2013 and an Energy Management Policy was developed subsequent to this.

Table 4.1 Estimates of Resources Used On-Site 2015, 2014 & 2013

Resources	Quantities 2015	Quantities 2014	Quantities 2013
Vehicle Diesel	126,698 Litres	134,332 Litres	129,152 Litres
Diesel (green)	18,900 Litres	18,000 Litres	19,800 Litres
Electricity	103,945 Units	117,681 Units	87,018 Units
Hydraulic & Engine Oil	600 litres	400 litres	600 litres

5. WASTE RECEIVED AND CONSIGNED 2015

Table 5.1 shows the quantities of wastes accepted and consigned for the reporting period. A more detailed description of the wastes received and consigned in 2015 is presented in the PRTR submission in Appendix 1.

The total quantity of waste received was 23,550 tonnes and the total amount consigned was 25,433 tonnes. For comparative purposes the amounts of waste received and consigned from 2003 to 2015 are presented in Tables 5.2 and 5.3. As per Condition 5.8 of the Licence all the wastes consigned from the site went to authorised recovery and disposal facilities and a copy of the relevant Facility Permit or Waste Licences retained on site for Agency inspection.

The records show that more waste was consigned from the site than accepted. The difference was 1882.89 tonnes and was due to the waste remaining on-site at the end of 2014.

Table 5.1 Waste Received & Consigned 2015

EWC	Description	Waste In	Waste Out
02 07 05	Interceptor Sludge	333.38	271.2
030199	Chip/Grit		
15 01 01	Cardboard Packaging	1135.32	1,103.04
15 01 02	Plastic Packaging	532.138	112.931
150103	Wooden Packaging		11.38
15 01 04	Metallic Packaging	23.25	8.68
15 01 05	Tetrapak	13.47	
15 01 06	Mixed Packaging	1,974.23	2321.58
15 01 07	Glass Packaging	13.495	4.82
16 03 06	Silver Strips	9.82	6.62
160601	Battery		
17 01 07	Concrete, Bricks, Tiles & Ceramics		125.72
17 02 03	Plastic	78.94	
17 09 04	Mixed C&D	15.22	
19 08 02	Waste from Desanding	5.72	
19 12 07	Wood other	0.24	
19 12 09	minerals	48.49	
191210	Solid Recovered Fuel (SRF)	9.48	
19 12 12	Other Wastes	11.64	79.58
20 01 01	Paper & Cardboard	338.905	190.14
20 01 02	Glass Municipal	132.67	152.68
20 01 08	Biodegradable Kitchen & Canteen Waste Wastes	192.692	48.02
20 01 11	Textiles		14.62
200133	Haz Battery		1.68
200135	REC Electronics & Electrics	118.92	197.9
20 01 38	Wood from municipal sources	114.66	18.04
20 01 39	Plastic from municipal sources	26.532	
20 01 40	Metal from municipal sources	33.86	37.02
20 02 01	Biodegradable garden & park waste	8.84	1.08
20 03 01	Mixed Residual Waste from mechanical treatment	9,144.52	19,696.5
200303	C&I Dry Mixed	304.34	
20 03 07	Bulky Waste	8,929.4	1,030.52
	Total Accepted	23,550	
	Total Consigned		25,433
	Recovery		8,470.32
	Disposal		16,962.68
	Recovery Rate		33.3%

Table 5.2 Waste Received & Consigned 2014

EWC	Description	Waste In	Waste Out
02 07 05	Interceptor Sludge	562.22	559.48
030199	Chip/Grit	0.18	
15 01 01	Cardboard Packaging	804.74	1,110.84
15 01 02	Plastic Packaging	291.62	195.3
150103	Wooden Packaging	1.28	
15 01 04	Metallic Packaging	37.95	12.94
15 01 05	Tetrapak	12.86	
15 01 06	Mixed Packaging	2,961.93	2,697.18
15 01 07	Glass Packaging	65.87	98.26
16 03 06	Silver Strips	27.52	27.52
160601	Battery		0.63
17 02 03	Plastic	53.05	
170802	Plasterboard	0.36	
17 09 04	Mixed C&D	78.08	30.62
19 08 02	Waste from Desanding	11.52	
191201	Paper & Cardboard Residue	0.36	
19 12 07	Wood other	20.46	6.54
19 12 09	minerals	101.49	29.06
191210	Solid Recovered Fuel (SRF)	23.12	
19 12 12	Other Wastes	21.60	2,254.88
20 01 01	Paper & Cardboard	340.10	200.04
20 01 02	Glass Municipal	88.46	50.87
20 01 08	Biodegradable Kitchen & Canteen Waste Wastes	261.06	108.04
20 01 11	Textiles	3.80	7.66
200133	Haz Battery		0.71
200135	REC Electronics & Electrics	188.36	174.20
20 01 38	Wood from municipal sources	144.80	37.74
20 01 39	Plastic from municipal sources	38.79	
20 01 40	Metal from municipal sources	53.16	45.68
20 02 01	Biodegradable garden & park waste	9.44	12.50
20 03 01	Mixed Residual Waste from mechanical treatment	3,373.16	9,628.77
200303	C&I Dry Mixed	341.48	133.68
20 03 07	Bulky Waste	8,249.92	529.98
	Total Accepted	18,169	
	Total Consigned		17,953.2
	Recovery		12,020.29
	Disposal		5,932.83
	Recovery Rate		66.9%

Table 5.3 Total Tonnages Received and Consigned in 2003-2015

Year	Tonnes per Annum	Tonnes Recovered	Tonnes Landfilled
2003/2004	14,484	2,199	12,285
2004	18,548	6,351	12,197
2005	21,500	6,750	12,694
2006	23,196	8,393	15,634
2007	32,271	9,224	24,672
2008	36,993	7,082	32,148
2009	24,267	8,760	16,864
2010	17,359	7,215	11,277
2011	24,982	8,961	16,021
2012	19,201	7,423	11,778
2013	16,556	7,140	9,416
2014	18,169	12,020	5,932
2015	25,433	8,470	16,963

6. ENVIRONMENTAL INCIDENTS AND COMPLAINTS

6.1 Incidents

There was one minor environmental incident during the reporting period which related to an exceedance of the dust deposition limit. There were no other incidents at the facility as defined by the Licence.

The dust deposition limit (350 mg/m²/day) was exceeded at two of the four monitoring locations (D3, 546 mg/m²/day and D4, 375 mg/m²/day) in September/October 2015. The limits were not exceeded at any location in either August or December 2015. It is considered that the dust source was off site rather than an emission associated with site activities. The exceedance was reported to the Agency in accordance with Condition 3.3 of the Licence.

6.2 Register of Complaints

Greenstar maintains a register of complaints received in accordance with Condition 3.12 of the Licence. One odour complaint was received during the reporting period.

7. ENVIRONMENTAL DEVELOPMENT

7.1 Environmental Management Programme Report

Greenstar have implemented an Integrated Management System (IMS) in accordance with the requirements of Occupational Health and Safety Assessment Series (OHSAS) 18001:2007 and International Standard Organisation (ISO) 14001:2004 in order to manage the Health, Safety and Environmental performance of their business and to control health and safety risk and to minimise their environmental aspects and impacts.

The IMS has been developed for the achievement of continual improvement taking into the requirements of the Waste Licence Conditions. Greenstar has prepared and effectively implement documented procedures and instructions in accordance with the requirements of both the OHSAS 18001:2007 and ISO 14001:2004. A successful IMS external surveillance audit was conducted on 4th July 2013. The next IMS surveillance audit is due in June 2016.

As part of this IMS, Greenstar has developed a list of environmental, management, operating and maintenance procedures, details of which are outlined in Appendix 2. The schedule of Objectives and Targets, including their status for 2015 (Table 7.1), as well as the proposed Objectives and Targets for 2016 (Table 7.2) are presented below.

7.1.1 *Site Management Structure*

Name: Barry Gallagher

Responsibility: Operations Manager; overall management of the site, responsible for management of all fleet activities

Experience: 23 years experience. N.C.B.S

Name: Anthony Lynch

Responsibility: Yard Foreman, management of baler, pickers, forklift driver and yard cleaner

Experience: 12 years

Name: Claire McMahon

Responsibility: Office administration

Experience: 9 years in the waste industry. Has completed the “FAS” Waste Management course.

7.1.2 Staff Training

Claire McMahon did a First Aid course and the Materials Recovery Facility staff underwent Fire Safety training in 2015.

7.2 Environmental Management Programme Proposal

7.2.1 Schedule of Objectives 2015

The objectives that were achieved during this reporting period are outlined in Table 7.1.

7.2.2 Schedule of Objectives 2016

The schedule of targets and objectives for 2016 are presented in Table 7.2.

Table 7.1 Schedule of Objective and Targets 2015

No.	Objective	Target	Timescale	Responsibility	Status
1	Infrastructural Development – Hardstanding and drainage	Investigate the costs and develop SEW proposals to concrete the empty wheelie bin storage area and also to raise the floor at the southern section of the MRF building to come into line with the newer floor at the northern portion of the building. Complete integrity testing of all pipelines on site.	Q3-Q4 2015	Site Management/EHS	Integrity testing completed April 2015 and MRF floor leveling Jan 2015
2	Reduce energy consumption, provide energy awareness training to employees and track energy usage on site.	Tenders will be sought to review the current lighting system and introduce a lighting system with lower energy demands.	Q2 2015	Site Management/EHS	Ongoing
3	Odour Impacts	Compile an Odour Management Plan for the facility and include it on the training matrix	Q2 – Q3 2015	Site Management/EHS	Completed
4	Development and adoption of Fire Prevention Procedure at the facility and review of Emergency Response Plan	Additional training for site staff required	Q2 2015	Site Management/EHS	ERP updated
5	Install new Fire Detection (Aspiration) System	Reduce risk of fire and enable early detection	Q2 2015	Site Management/EHS	01/08/2015
6	Develop and maintain traffic management plan at the facility	Review of all on-site traffic management	Q2/Q3 2015	Site Management/EHS	On going, site specific PM plans currently under review
7	Environmental Training of Facility Staff	Update training presentation and ensure training of key managerial staff	Q2/Q3 2015	Site Management/EHS	Fire training completed for MRF staff - April 2015
8	Document a Preventative Maintenance (PM) plan for the inspection and cleaning of plant & equipment wrt fire	Incorporate into existing Site Inspection Database (EF-10A) and site specific PM plans	Q2-Q3	Site Management/EHS	On going, site specific PM plans currently under review
9	Document PM plan for all hardstand and drainage infrastructure on site	Incorporate into existing Site Inspection Database (EF-10A)	Q2-Q3	Site Management/EHS	Completed
10	Review EWC codes in active use group wide and implement recommendations at each site	Review EWC codes with Finance/WIMS & advise changes to site management	Q2-Q3	EHS/Finance/WIMS	Completed

Table 7.2 Schedule of Objective and Targets 2016

No.	Objective	Target	Timescale	Responsibility
1	Increase awareness of Odour Management on site group wide	Specify Odour detection in Site Inspection Database (EF-10A) on a daily basis and generate actions as appropriate	Q1-Q2	Site Management/EHS
2	Waste storage practices	Review waste storage practices on each site to ensure that they are inline with licence conditions, fire prevention and insurance recommendations	Q2	Site Management/EHS
3	Emergency response procedures - ER pack update	Review the Emergency Response Pack on each site and ensure that all information & equipment required in case of an emergency is available. Confirm that relevant staff training adequately addresses.	Q2	Site Management/EHS
4	CRAMP, ELRA & Financial Provision	CRAMP, ELRA & Financial Provision to be reviewed	Q2/Q3	EHS team
5	Waste acceptance, classification & records	EWC training for all weighbridge ops. Centralisation of all licences & permits inc NWCPs for hauliers.	Q2/Q3	EHS team

7.3 Communications Programme

Greenstar are committed to setting the standard in waste management and ensuring environmental compliance in all operations. To this end 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, Health & Safety 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 071 - 9143037.

7.4 ELRA & Report on Financial Provision

A Decommissioning Management Plan (DMP) and Environmental Liabilities Risk Assessment (ELRA) including Financial Provision (FP) were submitted to the Agency in 2013 as part of the transfer of the licence which occurred in Q1 2014. Both the DMP and ELRA have been approved by the Agency.

8. OTHER REPORTS

8.1 European Pollutant Release and Transfer Register Regulation

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 1.

APPENDIX 1

European Pollutant Release and Transfer Register



| PRTR# : W0058 | Facility Name : Starrus Eco Holdings Limited (Sligo) | Filename : W0058_2015.xls | Return Year : 2015 |

07/04/2016 14:31

[Guidance to completing the PRTR workbook](#)

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2015
-----------------------	------

1. FACILITY IDENTIFICATION

Parent Company Name	Starrus Eco Holdings Limited
Facility Name	Starrus Eco Holdings Limited (Sligo)
PRTR Identification Number	W0058
Licence Number	W0058-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Deepwater Quay
Address 2	Sligo
Address 3	
Address 4	
	Sligo
Country	Ireland
Coordinates of Location	-8.48919 54.28
River Basin District	IEWE
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Malcolm Dowling
AER Returns Contact Email Address	malcolm.dowling@greenstar.ie
AER Returns Contact Position	Group Compliance Manager
AER Returns Contact Telephone Number	012947976
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	0
User Feedback/Comments	Waste water discharge improved between 20013 and 2014 reflected 1 reduction in thelevels of COD, BOD, FOG, TSS and Mineral Oil.
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(c)	Installations for the disposal of non-hazardous waste
5(c)	Installations for the disposal of non-hazardous waste
50.1	General

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

Is it applicable?	
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

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

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

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : W0058 | Facility Name : Starrus Eco Holdings Limited (Sligo) | Filename : W0058_2015.xls | Return Year : 2015 |

07/04/2016 14:31

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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)

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

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO WATERS	
POLLUTANT	
No. Annex II	Name

* Select a row by double-clicking on the Pollutant Name (Column B) th

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS	
POLLUTANT	
No. Annex II	Name

* Select a row by double-clicking on the Pollutant Name (Column B) th

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

RELEASES TO WATERS	
POLLUTANT	
Pollutant No.	Name

* Select a row by double-clicking on the Pollutant Name (Column B) th

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT

Please enter all quantities in this section in KGs

		Method Used			
M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	
			0.0	0.0	

en click the delete button

Please enter all quantities in this section in KGs

		Method Used			
M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	
			0.0	0.0	

en click the delete button

Please enter all quantities in this section in KGs

		Method Used			
M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	
			0.0	0.0	

en click the delete button

be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

QUANTITY	
A (Accidental) KG/Year	F (Fugitive) KG/Year
0.0	0.0

QUANTITY	
A (Accidental) KG/Year	F (Fugitive) KG/Year
0.0	0.0

QUANTITY	
A (Accidental) KG/Year	F (Fugitive) KG/Year
0.0	0.0

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
No, Annex II	Name	M/C/E	Method Code	Method Used	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
06	Ammonia (NH3)	C	PER	Designation or Description Calculated based on annual flow rate. Analysis is ISO accredited.	0.01845	0.01845	0.0	0.0

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

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

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Method Used	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
238	Ammonia (as N)	C	PER	Designation or Description Calculated based on annual flow rate. Analysis is ISO accredited.	0.01845	0.01845	0.0	0.0
303	BOD	C	PER	Designation or Description Calculated based on annual flow rate. Analysis is ISO accredited.	0.12	0.12	0.0	0.0
306	COD	C	PER	Designation or Description Calculated based on annual flow rate. Analysis is ISO accredited.	0.27	0.27	0.0	0.0
308	Detergents (as MBAS)	C	PER	Designation or Description Calculated based on annual flow rate. Analysis is ISO accredited.	0.033	0.033	0.0	0.0
324	Mineral oils	C	PER	Designation or Description Calculated based on annual flow rate. Analysis is ISO accredited.	0.0003	0.0003	0.0	0.0
314	Fats, Oils and Greases	C	PER	Designation or Description Calculated based on annual flow rate. Analysis is ISO accredited.	0.0003	0.0003	0.0	0.0
240	Suspended Solids	C	PER	Designation or Description Calculated based on annual flow rate. Analysis is ISO accredited.	0.62	0.62	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

[Link to previous years emissions data](#)

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND	
POLLUTANT	
No. Annex II	Name

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

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

RELEASES TO LAND	
POLLUTANT	
Pollutant No.	Name

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

METHOD			Please enter all quantities
M/C/E	Method Used		Emission Point 1
M/C/E	Method Code	Designation or Description	Emission Point 1
			0.0

) then click the delete button

METHOD			Please enter all quantities
M/C/E	Method Used		Emission Point 1
M/C/E	Method Code	Designation or Description	Emission Point 1
			0.0

) then click the delete button

in this section in KGs	
QUANTITY	
T (Total) KG/Year	A (Accidental) KG/Year
0.0	0.0

in this section in KGs	
QUANTITY	
T (Total) KG/Year	A (Accidental) KG/Year
0.0	0.0

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

[PRT08 - W0058] | Facility Name: [Status: Eco Holdings Limited (Eco)] | Plan Name: [W0058_2015.xlsx] | Return Year: 2015

07/04/2016 14:31

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Site Name and Licence Permit No. of Host Destination Facility	Site Name and Licence Permit No. 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 Recoverer/ Disposer (HAZARDOUS WASTE ONLY)		
						MCE	Method Used						Site Name and Licence Permit No. of Recover/Disposer	Site Name and Licence Permit No. of Recover/Disposer
Within the Country	02 07 05	No	271.2	sludges from on-site effluent treatment	R13	M	Weighed	Offsite in Ireland	Envirogrind Ltd,env/143,wp4	Droichead Road Pettigo, Droichead, Ireland	Millennium Business Park, Ballycoolin, Dublin 11, Ireland			
Within the Country	15 01 01	No	220.3	paper and cardboard packaging	R13	M	Weighed	Offsite in Ireland	Greenstar Limited, W0183-01					
Within the Country	15 01 01	No	24.32	paper and cardboard packaging	R13	M	Weighed	Offsite in Ireland	Materia Environment, Ireland					
To Other Countries	15 01 01	No	72.08	paper and cardboard packaging	R13	M	Weighed	Abroad	Callmark USA, IRE/G180/11	200 Tantal Plaza, California, 95245, United States				
To Other Countries	15 01 01	No	564.38	paper and cardboard packaging	R13	M	Weighed	Abroad	M.M Ltd (ACM Europe UK), TFS Broker, IRE/G02/111	UNITED KINGDOM			
To Other Countries	15 01 01	No	98.0	paper and cardboard packaging	R13	M	Weighed	Abroad	Mark Lyden Enterprises, LQUREG021/12	United Kingdom			
To Other Countries	15 01 01	No	123.96	paper and cardboard packaging	R13	M	Weighed	Abroad	Paste Recycling TFS Broker, IRE/G08/11		Netherlands, Netherlands, Net			
Within the Country	15 01 02	No	104.711	plastic packaging	R13	M	Weighed	Offsite in Ireland	Leinster Environmental, WP 2008/06	Haggartstown, Dundalk, Co Louth, Ireland				
Within the Country	15 01 02	No	8.22	plastic packaging	R13	M	Weighed	Offsite in Ireland	Agrial Ltd Broker, Sale	Cherrywood, Croseer Rd, Dublin 22, Ireland				
Within the Country	15 01 06	No	2295.64	mixed packaging	R13	M	Weighed	Offsite in Ireland	Barna Waste, W0106-02		Carroonbane Headford, R6, Co Galway, Ireland			
Within the Country	15 01 06	No	35.94	mixed packaging	R13	M	Weighed	Offsite in Ireland	Greenstar Limited, W0183-01		Millennium Business Park, Ballycoolin, Dublin 11, Ireland			
Within the Country	15 01 07	No	4.82	glass packaging	R13	M	Weighed	Offsite in Ireland	Rehab Recycling Ltd, WPR 004	Ballymount Avenue, Clontarf, Dublin 22, Ireland				
To Other Countries	16 03 06	No	6.62	organic wastes other than those mentioned in other wastes (including mixtures of materials) from mechanical treatment of wastes other	R4	M	Weighed	Abroad	JBR Recovery Ltd, EPH/BJ/267/03		and, 870 985, UNITED KINGDOM			
Within the Country	19 12 12	No	79.58	other wastes (including mixtures of materials) from mechanical treatment of wastes other	R13	M	Weighed	Offsite in Ireland	Greenstar MRF	Dock Rd, Limerick, Ireland	Millennium Business Park, Ballycoolin, Dublin 11, Ireland			
Within the Country	20 01 01	No	32.92	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Greenstar Limited, W0183-01		Millennium Business Park, Ballycoolin, Dublin 11, Ireland			
Within the Country	20 01 01	No	127.1	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Greenstar Bray Depot, W0053		Fassaroe Bray, Wicklow, Wicklow, Ireland			
Within the Country	20 01 01	No	20.12	paper and cardboard	R13	M	Weighed	Offsite in Ireland	03		Shed Rd, Dublin 12, Ireland			
Within the Country	20 01 02	No	100.9	glass	R13	M	Weighed	Offsite in Ireland	CIornel Waste, WP-008-02		Lawlessstown, Clornel, Co. Tipperary, Ireland			
Within the Country	20 01 02	No	43.24	glass	R13	M	Weighed	Offsite in Ireland	Rehab Recycling Ltd, WPR 004	Ballymount Avenue, Clontarf, Dublin 22, Ireland				
Within the Country	20 01 08	No	48.02	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Barna Waste, W0106-02		Carroonbane Headford, R6, Co Galway, Ireland			
Within the Country	20 01 11	No	14.62	batteries	R13	M	Weighed	Offsite in Ireland	Teale Recycling, LQWPR014		24, Ireland			
Within the Country	20 01 33	Yes	1.68	batteries and accumulators containing these other than those mentioned in 20 01 21 and 20 01 23 containing hazardous	R4	M	Weighed	Offsite in Ireland	KMK Metals, W0113-03	Tullamore, Co Offaly, Ireland	KMK Metals, W0113-03, Tullamore, Co Offaly, Ireland	tullamore, Co Offaly, Ireland		
Within the Country	20 01 35	Yes	197.9	components	R4	M	Weighed	Offsite in Ireland	KMK Metals, W0113-03	Tullamore, Co Offaly, Ireland	KMK Metals, W0113-03, Tullamore, Co Offaly, Ireland	tullamore, Co Offaly, Ireland		
Within the Country	20 01 38	No	6.1	wood other than that mentioned in 20 01 37	R1	M	Weighed	Offsite in Ireland	Envirogrind Ltd, env/143, wp4		Droichead Road Pettigo, Pettigo, Droichead, Ireland			
Within the Country	20 01 40	No	25.78	metals	R4	M	Weighed	Offsite in Ireland	Multimetals Recycling Ltd, Ireland	, Ireland			
Within the Country	20 01 40	No	9.82	metals	R4	M	Weighed	Offsite in Ireland	Clearway Metals Ltd, Clearway, WTF DC 09-0013	, Ireland			
Within the Country	20 01 40	No	1.42	metals	R4	M	Weighed	Offsite in Ireland	01		Quay, Finskin, Ireland			
Within the Country	20 02 01	No	1.08	biodegradable waste	R3	M	Weighed	Offsite in Ireland	Barna Waste, W0106-02		Carroonbane Headford, R6, Co Galway, Ireland			
Within the Country	20 03 01	No	6389.19	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Rathreen Landfill, W0067-02		Kilala Road, Balina, Ireland			
Within the Country	20 03 01	No	7457.89	mixed municipal waste	R1	M	Weighed	Offsite in Ireland	Indaver, W0167-02		Carranstown, Duleek, Meath, Ireland			
Within the Country	20 03 07	No	781.96	bulky waste	R13	M	Weighed	Offsite in Ireland	Greenstar Bray Depot, W0053		Fassaroe Bray, Wicklow, Wicklow, Ireland			
Within the Country	15 01 03	No	11.38	wooden packaging	R3	M	Weighed	Offsite in Ireland	Envirogrind Ltd, env/143, wp4		Droichead Road Pettigo, Pettigo, Droichead, Ireland			
Within the Country	17 01 07	No	125.72	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	D5	M	Weighed	Offsite in Ireland	Harringtons Quarry, COR-SO 12 002 01		Abbeytown, Ballyporee, Ireland			
Within the Country	20 01 02	No	4.64	glass	R13	M	Weighed	Offsite in Ireland	Rehab Glassco Recycling, Ireland	, Ireland			
Within the Country	20 01 02	No	3.8	glass	R13	M	Weighed	Offsite in Ireland	Rehab Recycle Cork, Ireland	, Ireland			
Within the Country	20 01 38	No	11.94	wood other than that mentioned in 20 01 37	R1	M	Weighed	Offsite in Ireland	Arigna Fuels Ltd, WMP 14/06		Ireland			
To Other Countries	20 03 01	No	1724.82	mixed municipal waste	R1	M	Weighed	Abroad	Attero BV, Ireland	, Netherlands			
Within the Country	20 03 01	No	796.8	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Barna Waste, W0106-02		R6, Co Galway, Ireland			
Within the Country	20 03 01	No	2770.66	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Knockisley Landfill, Ireland		Navan, Meath, Ireland			
Within the Country	20 03 01	No	548.18	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Greenstar MRF		Dock Rd, Limerick, Ireland			
Within the Country	20 03 07	No	48.6	bulky waste	D5	M	Weighed	Offsite in Ireland	Rathreen Landfill, W0067-02		Kilala Road, Balina, Ireland			
Within the Country	20 03 07	No	117.92	bulky waste	R13	M	Weighed	Offsite in Ireland	Indaver, W0167-02		Carranstown, Duleek, Meath, Ireland			
Within the Country	20 03 07	No	82.94	bulky waste	D5	M	Weighed	Offsite in Ireland	Knockisley Landfill, Ireland		Navan, Meath, Ireland			
Within the Country	15 01 04	No	3.0	metallic packaging	R4	M	Weighed	Offsite in Ireland	01		Quay, Finskin, Ireland			
Within the Country	15 01 04	No	5.68	metallic packaging	R4	M	Weighed	Offsite in Ireland	01		Clearway, WTF DC 09-0013, 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](#)
[Link to Waste Guidance](#)

APPENDIX 2

Procedures List



Doc. No.: Control	Revision No.: As Shown	Issue Date: As Shown
Approved By:	Malcolm Dowling – Group Environmental Manager Oliver Callan – Group H&S Manager	Page 1 of 2

Integrated Procedures - IP

IP-01	Document & Record Control Procedure	Rev 01, 28/04/14
IP-02	Health & Safety Risk Assessment Procedure	Rev 01, 28/04/14
IP-03	Environmental Aspects & Impacts Procedure	Rev 01, 28/04/14
IP-04	Legal & Regulatory Requirements Procedure	Rev 01, 28/04/14
IP-05	Objectives, Targets & Management Programmes Procedure	Rev 01, 28/04/14
IP-06	Competence, Training & Awareness Procedure	Rev 01, 28/04/14
IP-07	Communication & Consultation Procedure	Rev 01, 28/04/14
IP-08	Monitoring, Measurement & Improvement Procedure	Rev 01, 28/04/14
IP-09	Evaluation of Compliance Procedure	Rev 01, 28/04/14
IP-10	Non Conformances, Corrective/Preventive Actions Procedure	Rev 01, 28/04/14
IP-11	Internal Audit Procedure	Rev 01, 28/04/14
IP-12	Management Review Procedure	Rev 01, 28/04/14
IP-13	Control of Contractors/Visitors Procedure	Rev 01, 28/04/14
IP-14	Health & Safety & Environmental Monitoring	Rev 01, 28/04/14
IP-15	Emergency Preparedness & Response Procedure	Rev 01, 28/04/14
IP-16	Fire Prevention Procedure	Rev 01, 28/04/14
IP-17	Bin Washing Procedure	Rev 01, 28/04/14

Safety Procedures - SP

SP-01	Permit to Work Procedure	Rev 01, 28/04/14
SP-02	Maintenance & Calibration Procedure	Rev 01, 28/04/14
SP-03	Mobile Plant Procedure	Rev 01, 28/04/14
SP-04	Fork Truck Procedure	Rev 01, 28/04/14
SP-05	Operation of Fixed Plant Procedure	Rev 01, 28/04/14
SP-06	Lock Out / Tag Out Procedure	Rev 01, 28/04/14
SP-07	Health & Safety Notification Procedure	Rev 01, 28/04/14
SP-08	MSW Shredder routine Maintenance & Clearing of Blockages Procedure (SCGT)	Rev 01, 28/04/14
SP-09	Weighbridge & Tipping Procedure (SCGT)	Rev 01, 28/04/14
SP-10	Cleaning of Washing Bay (Greenogue)	Rev 01, 28/04/14



Doc. No.: Control	Revision No.: As Shown	Issue Date: As Shown
Approved By:	Malcolm Dowling – <i>Group Environmental Manager</i> Oliver Callan – <i>Group H&S Manager</i>	Page 2 of 2

Environmental Procedures - EP

EP-01	Office Waste & Energy Management Procedure	Rev 01, 28/04/14
EP-02	Decommissioning and Aftercare Procedure	Rev 01, 28/04/14
EP-03	Environment Communications Procedure	Rev 01, 28/04/14
EP-04	Waste Permits & Licences Procedure	Rev 01, 28/04/14
EP-05	Waste Acceptance Procedure	Rev 01, 28/04/14
EP-06	Unacceptable Waste Procedure	Rev 01, 28/04/14
EP-07	Waste & Material Storage Procedure	Rev 01, 28/04/14
EP-08	Waste Processing Procedure	Rev 01, 28/04/14
EP-09	Site Infrastructure Procedure	Rev 01, 28/04/14
EP-10	Nuisance Management Procedure (Site Specific)	(Site Specific) Rev 01, 28/04/14
EP-11	Civic Amenity Site Procedure	Rev 01, 28/04/14