

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 LIMITED
MATERIALS RECOVERY FACILITY
DOCK ROAD, LIMERICK
LICENCE NO. W0082-03
JANUARY 2015 – DECEMBER 2015

Prepared For: -

Starrus Eco Holdings Ltd. (Greenstar),
Fassaroe,
Bray,
Co. Wicklow

Prepared By: -

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

1st April 2016

Project	Annual Environmental Report 2015			
Client	Starrus Eco Holdings Ltd. W0082-03			
Report No	Date	Status	Prepared By	Reviewed By
1504811209	29/03/2016	Draft	Martina Gleeson PhD	Jim O'Callaghan MSc
	01/04/2016	Final	Martina Gleeson PhD	Jim O'Callaghan MSc

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 <i>Waste Types & Processes</i>	2
2.2.2 <i>Plant List</i>	4
3. EMISSION MONITORING	5
3.1 SURFACE WATER MONITORING	5
3.2 FOUL WATER MONITORING	11
3.3 GROUNDWATER MONITORING.....	13
3.4 NOISE MONITORING	15
3.5 DUST MONITORING	16
4. SITE DEVELOPMENT WORKS	18
4.1 SPECIFIED ENGINEERING WORKS (SEW)	18
4.2 SUMMARY OF RESOURCE & ENERGY CONSUMPTION	18
4.3 BUND INTEGRITY & PIPELINE TESTING	18
5. WASTE RECEIVED AND CONSIGNED FROM THE FACILITY	20
6. ENVIRONMENTAL INCIDENTS AND COMPLAINTS	23
6.1 INCIDENTS	23
6.2 REGISTER OF COMPLAINTS.....	23
7. ENVIRONMENTAL DEVELOPMENT & CONTROL	24
7.1 ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT	24
7.1.1 <i>Site Management Structure</i>	24
7.1.2 <i>Staff Training</i>	25
7.2 ENVIRONMENTAL MANAGEMENT PROGRAMME.....	25
7.2.1 <i>Schedule of Objectives 2015</i>	25
7.2.2 <i>Schedule of Objectives 2016</i>	25
7.3 COMMUNICATIONS PROGRAMME	25
7.4 REPORT FINANCIAL PROVISION.....	25
7.5 NUISANCE CONTROLS	28
8. OTHER REPORTS	29
8.1 EUROPEAN POLLUTANT RELEASE AND TRANSFER REGISTER REGULATION	29
APPENDIX 1 - European Pollutant Release and Transfer Register	
APPENDIX 2 Procedures Index	

1. INTRODUCTION

This is the 2015 Annual Environmental Report (AER) for the Starrus Eco Holdings Ltd. (Greenstar), Materials Recovery Facility (MRF) at Ballykeefe, Dock Road, Limerick and covers the reporting period January 2015 to December 2015. Transfer of the licence from Greenstar Limited to Starrus Eco Holdings Ltd was completed in March 2014. A revised Industrial Emission (IE) Licence (W0082-03) for the facility was issued on the 15th May 2015.

The content is based on Schedule F of the Licence and the report format follows guidelines set in the “Guidance Note for Annual Environmental Report” issued by the Environmental Protection Agency (Agency)¹. Cognisance was also taken of the Agency AER Draft Guidance Document and Draft AER Templates issued 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 on the Dock Road in Limerick, in an area dominated by industrial and commercial buildings and activities. It is adjacent to the N69, on the main Limerick to Foynes road.

There are two adjoining buildings, comprising a recycling area and transfer area. There is also a separate office building and adjoining vehicle and plant maintenance workshop located close to the site entrance. The open yard areas are paved and are used for external waste storage bays (C&D, glass, metals and timber), storage of wrapped baled waste, skip storage, truck parking and a vehicle washing area (not in use during the reporting period). The entire site, including the floors of the transfer buildings and the open yards, are paved with concrete.

2.2 Waste Management Activities

The Revised Licence allows Greenstar to accept and process 130,000 tonnes of commercial and industrial, construction and demolition and municipal wastes.

2.2.1 Waste Types & Processes

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

- Municipal waste including biodegradable kitchen and canteen waste
- Packaging waste
- Commercial waste
- Industrial waste
- Construction and demolition waste
- Waste derived from the treatment of waste
- Street sweepings
- Metal waste

No hazardous wastes or liquid waste are accepted. The maximum amount of each waste type accepted, may be altered with the prior agreement of the Agency, as long as the total maximum tonnage is not exceeded.

The key processes carried out at the facility include: -

- Segregation of recyclable materials (paper, cardboards, plastic, wood, metals, glass);
- Bulking up of Municipal Solid Waste;
- Segregation and bulking of C&D waste;
- Transfer of recovered and residual materials to appropriately licensed recycling, recovery and disposal outlets, and
- Timber shredding
- Baling and wrapping of waste material (20 03 01)
- Collection of waste at the Civic Amenity Area.

Commercial and Industrial Waste

Both mixed and segregated commercial waste is collected from commercial sources. Commercial waste rich in recyclables (paper, cardboard, glass, metal, green waste and wood) is delivered by both permitted third party hauliers and by GES vehicles. Plastic, card and paper are baled and stored prior to transfer to a suitable permitted/licensed off-site recycling outlet. Timber recovered from the mixed C&I waste stream and that delivered to the facility as a single waste stream is bulked on-site prior to onward transfer to authorised facility. Biodegradable wastes suitable for composting are sent to an offsite composting facility. The remaining non-recyclable material is bulked and sent to appropriate licensed 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 loads are inspected, with any plasterboard removed and placed in a dedicated skip located inside the building, and the remainder off loaded into an external C&D bay. The majority of the incoming waste is recovered and sent off-site either for re-use or recovery. The non-recyclable materials are transferred to a licensed landfill.

Municipal Waste

All mixed MSW is handled inside the building. The incoming waste is deposited on the floor of the building and is then compacted, for removal and disposal at an approved residual landfill facility or re-directed to the onsite baler for the production of wrapped bales of waste material for export to approved recovery facilities.

Timber Shredding

Untreated timber pallets and untreated construction timbers were formerly shredded in the northern area of the yard and stored in a shred timber bay prior to dispatch either for use as a compost bulking/aeration agent, or as raw material for chipboard/MDF manufacturers. This activity did not take place during 2015.

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 capacity.

Table 2.1 Existing Plant

No.	Plant	Operational Capacity tpd	Standby Capacity tpd
1	360° case Excavator	300	200
1	Volvo Loading Shovel	500	350
1	Doppstadt shredder	200	150
1	Cardboard baler	100	75
1	Waste Baler	350	200
1	JCB tele-porter	350	200
1	Jungenheinrich forklift	100	75

3. EMISSION MONITORING

The monitoring specified in the licence includes surface water, wastewater, groundwater, dust and noise monitoring. The monitoring locations are shown on Figure 3.1. The monitoring results are included in reports submitted to the Agency at quarterly intervals and an overview of the monitoring completed in 2015 is presented in this Section.

3.1 Surface Water Monitoring

Surface water is generated by rainfall on roofs and the paved open yard areas. The run-off is collected and is currently discharged via 1 No. three chambered interceptor near the eastern boundary of the site to a manmade drain that runs alongside three boundaries of the facility. This drain discharges to the Bunlicky Lake, which ultimately joins the River Shannon.

The Licence requires surface water monitoring at two discharge points from the oil interceptor (FE1A and FE1B). FE1B is at the overflow point and the only flow occurs during periods of very high rainfall. Following discussions with the Agency in January 2012 the discharge point FE1B was sealed and all discharges from the interceptor are directed through FE1A. Monitoring is also required in the drain upstream (WS9) and downstream (WS10) of the discharge point. The licence requires monthly monitoring of the surface water discharged from the site along with the upstream and downstream locations. From May 2015, the revised Licence requires weekly monitoring of the surface water discharge point FE-1A. Due to periods of dry weather, no sampling was carried out in April and May 2015 and it was only possible to carry out weekly sampling in November and early December 2015.

The monitoring results are included on Tables 3.1 to 3.10. The tables include the trigger levels set in the revised licence (W0082-03), the trigger levels set in the previous licence (W0082-02) and the Environmental Quality Standards from the Surface Water Regulations 2009. The trigger level for BOD was exceeded during every monitoring event in 2015. The revised trigger level for Total Ammonia was exceeded in June, July, August, September, October, November and December. The trigger levels for BOD and total ammonia were also exceeded during each of the weekly monitoring events undertaken in Q4 2015. The trigger level for Total Suspended Solids was exceeded in June, July, September, October and November 2015. The agency were notified at the time of the exceedances, along with the Inland Fisheries Board and Limerick City & County Council.

Table 3.1 Surface Water Monitoring Results – 16th January 2015

Parameter	Units	WS9 - UP	FE1A Discharge	WS10-DOWN	Range 2011	Trigger*	ELV*	EQS
pH	pH units	7.22	6.87	7.26		-	-	-
BOD	mg/l	2	50	10	4-106	25	-	-
Total Suspended Solids	mg/l	9	39	19	<1-113	60	60	-
Ammonia Nitrogen	mg/l	1.07	0.85	0.65		4	-	-
Fats Oils Grease	mg/l	<1	<1	<1		-	-	-
Mineral Oils	mg/l	<1	<1	<1		-	5	0.01
TOC	mg/l	5.83	9.01	4.92		-	-	-
Arsenic - dissolved	ug/l	0.700	0.640	0.54		-	-	25
Cadmium - dissolved	ug/l	0.3	<0.125	0.2		-	-	5
Chromium - dissolved	ug/l	1	1	1		-	-	30
Copper - dissolved	ug/l	6	6	6		-	-	30
Mercury - dissolved	ug/l	0.0250	0.048	0.02		-	-	1
Nickel - dissolved	ug/l	<2	<2	<2		-	-	20
Lead - dissolved	ug/l	1	1	0.9		-	-	10
Zinc - dissolved	ug/l	15	23	12		-	-	100

* ELV & Trigger applies to discharges – FE1A only.

Table 3.2 Surface Water Monitoring Results – 25th February 2015

Parameter	Units	WS9 - UP	FE1A Discharge	WS10-DOWN	Range 2011	Trigger*	ELV*	EQS
pH	pH units	7.49	7.03	7.39		-	-	-
BOD	mg/l	12	35	3	4-106	25	-	-
Total Suspended Solids	mg/l	6	21	4	<1-113	60	60	-
Ammonia Nitrogen	mg/l	0.21	0.25	0.21		4	-	-
Fats Oils Grease	mg/l	4.3	3.7	4.1		-	-	-
Mineral Oils	ug/l	<0.001	<0.001	<0.001		-	5	0.01
TOC	mg/l	9.58	14.79	4.25		-	-	-
Arsenic - dissolved	ug/l	0.540	0.570	0.510		-	-	25
Cadmium - dissolved	ug/l	0.3	<0.125	0.2		-	-	5
Chromium - dissolved	ug/l	1	1	1		-	-	30
Copper - dissolved	ug/l	<5	<5	<5		-	-	30
Mercury - dissolved	ug/l	<0.013	0.110	0.014		-	-	1
Nickel - dissolved	ug/l	<2	3	2.4		-	-	20
Lead - dissolved	ug/l	1.4	1.6	1.9		-	-	10
Zinc - dissolved	ug/l	11	41	10		-	-	100

* ELV & Trigger applies to discharges – FE1A only.

Table 3.3 Surface Water Monitoring Results – 30th March 2015

Parameter	Units	WS9 - UP	FE1A Discharge	WS10-DOWN	Range 2011	Trigger*	ELV*	EQS
pH	pH units	7.42	6.66	7.4		-	-	-
BOD	mg/l	2	42	5	4-106	25	-	-
Total Suspended Solids	mg/l	6	23	8	<1-113	60	60	-
Ammonia Nitrogen	mg/l	0.35	0.061	0.37		4	-	-
Fats Oils Grease	mg/l	<1	<1	<1		-	-	-
Mineral Oils	mg/l	<0.001	<0.001	<0.001		-	5	0.01
TOC	mg/l	7.31	37.23	6.32		-	-	-
Arsenic - dissolved	ug/l	0.630	0.630	0.610		-	-	25
Cadmium - dissolved	ug/l	0.3	0.3	0.3		-	-	5
Chromium - dissolved	ug/l	1	2	1		-	-	30
Copper - dissolved	ug/l	5	<5	<5		-	-	30
Mercury - dissolved	ug/l	<0.0130	0.0870	<0.0130		-	-	1
Nickel - dissolved	ug/l	<2	3.7	<2		-	-	20
Lead - dissolved	ug/l	1.7	0.8	<0.8		-	-	10
Zinc - dissolved	ug/l	14	56	18		-	-	100

* ELV & Trigger applies to discharges – FE1A only.

Table 3.4 Surface Water Monitoring Results – 4th June 2015

Parameter	Units	WS9 - UP	FE1A Discharge	WS10-DOWN	Range 2011	W082-03 Trigger Levels	W082-02 Trigger Levels	ELV	EQS
pH	pH units	7.28	6.70	7.16		-	-	-	-
Conductivity	µS/cm	439	349	516		-	-	-	-
COD	mg/l	16	100	28		-	-	-	-
BOD	mg/l	3	43	7	4-106	2.6	25	-	-
Total Ammonia	mg/l	1.05	3.79	2.11		0.14	4	-	-
Total Nitrogen	mg/l	3.2	6.29	2.9		-	-	-	-
TOC	ug/l	6.02	12.04	6.24		-	-	-	-
Fats, Oils & Greases	mg/l	<1	<1	<1		-	-	-	-
Total Suspended Solids	mg/l	20	34	13	<1-113	25	60	60	-
Mineral Oil	mg/l	<0.001	<0.001	<0.001		-	-	5	0.01
Arsenic - dissolved	ug/l	-	0.54	-		-	-	-	25
Cadmium - dissolved	ug/l	-	0.3	-		-	-	-	5
Chromium - dissolved	ug/l	-	1	-		-	-	-	30
Copper - dissolved	ug/l	-	<5	-		-	-	-	30
Mercury - dissolved	ug/l	-	0.0590	-		-	-	-	1
Nickel - dissolved	ug/l	-	2.1	-		-	-	-	20
Lead - dissolved	ug/l	-	2.5	-		-	-	-	10
Zinc - dissolved	ug/l	-	17	-		-	-	-	100

Table 3.5 Surface Water Monitoring Results – 22nd July 2015

Parameter	Units	WS9 - UP	FE1A Discharge	WS10-DOWN	Range 2011	W082-03 Trigger Levels	W082-02 Trigger Levels	ELV	EQS
pH	pH units	7.23	6.55	7.22		-	-	-	-
Conductivity	µS/cm	484	279	414		-	-	-	-
COD	mg/l	36	211	49		-	-	-	-
BOD	mg/l	5	86	7	4-106	2.6	25	-	-
Total Ammonia	mg/l	3.32	3.39	4.07		0.14	4	-	-
Total Nitrogen	mg/l	3.42	7.05	4.91		-	-	-	-
TOC	ug/l	8.59	38.49	8.69		-	-	-	-
Fats, Oils & Greases	mg/l	<1	<1	<1		-	-	-	-
Total Suspended Solids	mg/l	12	47	14	<1-113	25	60	60	-
Mineral Oil	mg/l	<0.001	<0.001	<0.001		-	-	5	0.01
Arsenic - dissolved	ug/l	-	0.55	-		-	-	-	25
Cadmium - dissolved	ug/l	-	<0.125	-		-	-	-	5
Chromium - dissolved	ug/l	-	2	-		-	-	-	30
Copper - dissolved	ug/l	-	<5	-		-	-	-	30
Mercury - dissolved	ug/l	-	0.037	-		-	-	-	1
Nickel - dissolved	ug/l	-	3.4	-		-	-	-	20
Lead - dissolved	ug/l	-	5.7	-		-	-	-	10
Zinc - dissolved	ug/l	-	55	-		-	-	-	100

Table 3.6 Surface Water Monitoring Results – 24th August 2015

Parameter	Units	WS9 - UP	FE1A Discharge	WS10-DOWN	Range 2011	W082-03 Trigger Levels	W082-02 Trigger Levels	ELV	EQS
pH	pH units	7.32	6.77	7.18		-	-	-	-
Conductivity	µS/cm	463	198	378		-	-	-	-
COD	mg/l	24	63	35		-	-	-	-
BOD	mg/l	4	21	9	4-106	2.6	25	-	-
Total Ammonia	mg/l	1.86	1.3	1.74		0.14	4	-	-
Total Nitrogen	mg/l	<2.5	4.66	3.17		-	-	-	-
TOC	ug/l	5.54	19.61	8.18		-	-	-	-
Fats, Oils & Greases	mg/l	<1	<1	<1		-	-	-	-
Total Suspended Solids	mg/l	8	10	6	<1-113	25	60	60	-
Mineral Oil	mg/l	<0.001	<0.001	<0.001		-	-	5	0.01
Arsenic - dissolved	ug/l	-	0.940	-		-	-	-	25
Cadmium - dissolved	ug/l	-	<0.125	-		-	-	-	5
Chromium - dissolved	ug/l	-	4	-		-	-	-	30
Copper - dissolved	ug/l	-	<5	-		-	-	-	30
Mercury - dissolved	ug/l	-	0.0810	-		-	-	-	1
Nickel - dissolved	ug/l	-	2.1	-		-	-	-	20
Lead - dissolved	ug/l	-	<0.8	-		-	-	-	10
Zinc - dissolved	ug/l	-	31	-		-	-	-	100

Table 3.7 Surface Water Monitoring Results – 18th September 2015

Parameter	Units	WS9 - UP	FE1A Discharge	WS10-DOWN	Range 2011	W082-03 Trigger Levels	W082-02 Trigger Levels	ELV	EQS
pH	pH units	7.22	6.54	7.26		-	-	-	-
Conductivity	µS/cm	868	398	795		-	-	-	-
COD	mg/l	27	90	33		-	-	-	-
BOD	mg/l	3	29	7	4-106	2.6	25	-	-
Total Ammonia	mg/l	2.59	1.87	3.3		0.14	4	-	-
Total Nitrogen	mg/l	4.08	5.57	4.78		-	-	-	-
TOC	ug/l	9.03	27.3	9.22		-	-	-	-
Fats, Oils & Greases	mg/l	<1	<1	<1		-	-	-	-
Total Suspended Solids	mg/l	6	34	6	<1-113	25	60	60	-
Mineral Oil	mg/l	<0.001	<0.001	<0.001		-	-	5	0.01
Arsenic - dissolved	ug/l	-	Not Analysed	-		-	-	-	25
Cadmium - dissolved	ug/l	-	Not Analysed	-		-	-	-	5
Chromium - dissolved	ug/l	-	Not Analysed	-		-	-	-	30
Copper - dissolved	ug/l	-	Not Analysed	-		-	-	-	30
Mercury - dissolved	ug/l	-	Not Analysed	-		-	-	-	1
Nickel - dissolved	ug/l	-	Not Analysed	-		-	-	-	20
Lead - dissolved	ug/l	-	Not Analysed	-		-	-	-	10
Zinc - dissolved	ug/l	-	Not Analysed	-		-	-	-	100

Table 3.8 Surface Water Monitoring Results – 27th October 2015

Parameter	Units	WS9 - UP	FE1A Discharge	WS10-DOWN	FE-1a Range 2011 - 2015	W082-03 Trigger Levels	W082-02 ELV	EQS
pH	pH units	7.36	6.95	7.21		-	-	6-9-
Conductivity	µS/cm	237	232	270		-	-	-
COD	mg/l	25	102	39		-	-	-
BOD	mg/l	11	54	13	3-176	2.6	25	2.6-
Total Ammonia	mg/l	0.431	1.276	0.959	0.061 – 5.46	0.14		0.14
Total Nitrogen	mg/l	<2.5	7.16	2.85		-	-	-
TOC	ug/l	6.13	11.8	13.70		-	-	-
Fats, Oils & Greases	mg/l	<1	<1	<1		-	-	-
Total Suspended Solids	mg/l	19	44	14	<1 - 130	25	60	-
Mineral Oil	mg/l	0	0	0		-	5	0.01
Arsenic - dissolved	ug/l	-	0.720	-		-	-	25
Cadmium - dissolved	ug/l	-	0.53	-		-	-	0.6
Chromium - dissolved	ug/l	-	1.91	-		-	-	30
Copper - dissolved	ug/l	-	5.63	-		-	-	30
Mercury - dissolved	ug/l	-	0.02	-		-	-	0.07
Nickel - dissolved	ug/l	-	4.7	-		-	-	20
Lead - dissolved	ug/l	-	4.10	-		-	-	10
Zinc - dissolved	ug/l	-	53	-		-	-	100

Table 3.9 Surface Water Monitoring Results -10th November 2015

Parameter	Units	WS9 - UP	FE1A Discharge	WS10-DOWN	Range 2011-2015	W082-03 Trigger Levels	W082-02 ELVs	EQS
pH	pH units	7.38	6.63	7.33		-	-	6-9
Conductivity	µS/cm	404	392	390		-	-	-
COD	mg/l	26	301	42		-	-	-
BOD	mg/l	4	175	8	3-176	2.6	25	2.6
Total Ammonia	mg/l	1.215	1.883	1.271	0.061-5.46	0.14		0.14
Total Nitrogen	mg/l	<2.5	<2.5	24.67		-	-	-
TOC	ug/l	6.25	53.14	10.40		-	-	-
Fats, Oils & Greases	mg/l	<1	<1	<1		-	-	-
Total Suspended Solids	mg/l	10	62	13	<1-130	25	60	-
Mineral Oil	mg/l	<1	<1	<1		-	-	0.01
Arsenic - dissolved	ug/l	-	1.2	-		-	-	25
Cadmium - dissolved	ug/l	-	0.23	-		-	-	0.6
Chromium - dissolved	ug/l	-	4.16	-		-	-	30
Copper - dissolved	ug/l	-	3.96	-		-	-	30
Mercury - dissolved	ug/l	-	0.07	-		-	-	0.07
Nickel - dissolved	ug/l	-	23.04	-		-	-	20
Lead - dissolved	ug/l	-	6.41	-		-	-	10
Zinc - dissolved	ug/l	-	62	-		-	-	100

Table 3.10 Surface Water Monitoring Results – 9th December 2015

Parameter	Units	WS9 - UP	FE1A Discharge	WS10-DOWN	Range 2011-2015	W082-03 Trigger Levels	W082-02 ELV	EQS
pH	pH units	7.49	7.53	7.49		-	-	6-9
Conductivity	µS/cm	390	371	264		-	-	-
COD	mg/l	26	30	48		-	-	-
BOD	mg/l	8	3	12	3-176	2.6	25	2.6
Total Ammonia	mg/l	0.667	0.486	0.170	0.061-5.46	0.14		0.14-
Total Nitrogen	mg/l	<2.5	<2.5	<2.5		-	-	-
TOC	ug/l	4.160	4.080	4.3		-	-	-
Fats, Oils & Greases	mg/l	<1	<1	<1		-	-	-
Total Suspended Solids	mg/l	10	8	14	<1-130	25	60	-
Mineral Oil	mg/l	<1	<1	<1		-	5	0.01
Arsenic - dissolved	ug/l	-	0.65	-		-	-	25
Cadmium - dissolved	ug/l	-	0.32	-		-	-	0.6
Chromium - dissolved	ug/l	-	1.21	-		-	-	30
Copper - dissolved	ug/l	-	3.95	-		-	-	30
Mercury - dissolved	ug/l	-	0.13	-		-	-	0.07
Nickel - dissolved	ug/l	-	1.91	-		-	-	20
Lead - dissolved	ug/l	-	<0.8	-		-	-	10
Zinc - dissolved	ug/l	-	17	-		-	-	100

Table 3.11 Surface Water Monitoring Weekly results – Q4 2015

Parameter	Units	5 th Nov	18 th Nov	27 th Nov	3 rd Dec	Range 2011-2015	W082-03 Trigger Levels	W082-02 ELV	EQS
pH	pH units	7.31	7.16	6.67	6.95		-	-	6-9
Conductivity	µS/cm	342	262	682	362		-	-	-
COD	mg/l	341	220	261	293		-	-	-
BOD	mg/l	145	116	121	133	3-176	2.6	25	2.6
Total Ammonia	mg/l	2.386	0.485	3.573	2.014	0.061-5.46	0.14		0.14
Total Nitrogen	mg/l	9.12	2.680	8.6	5.760		-	-	-
TOC	ug/l	99.47	62.3	81.8	104.38		-	-	-

3.2 Foul water Monitoring

Foul water is treated in the on-site Klargestor treatment plant, with the treated effluent discharged to an on-site percolation area. Following a request by the Agency in December 2011 a detailed Waste Water Treatment System Risk Assessment was completed by IE Consulting Engineers in 2012. Further flow monitoring data suggests that there is a total average daily flow of approximately 18m³/day, of which 67% originates upstream of the Greenstar site.

Foul water monitoring is required at two monitoring locations - FE2a which is the discharge from the treatment plant and FE2b which is the truckwash discharge. The truckwash has not been used since Q3 2010 and therefore no samples were collected at FE2b in the reporting period.

The monitoring results are included on Table 3.12. There are no ELVs set in the licence and for comparative purposes the table includes the performance standards set in the EPA Waste Water Treatment Manual Guidelines.

Throughout the year there were exceedances of the performance standards for BOD (8 occasions), TSS (10 occasions) and Ammoniacal Nitrogen (4 occasions).

The treated effluent discharges to ground and it is understood that the percolation area is not categorised as being located in a nutritionally sensitive area.

Subject to final wayleave agreement from Limerick City and County Council, it is intended to construct a connecting pipeline to the nearby municipal waste water treatment plant. Following this, waste water from the facility including trade effluent will be discharged to the municipal plant and the on-site system will be decommissioned. It is hoped that construction can be completed in 2016.

Table 3.12 – Foul Water Monitoring Results 2015

Parameter	Units	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Performance Standards
pH	pH units	7.67	7.95	7.61	7.67	7.83	7.39	7.78	7.73	7.68	7.81	7.38	7.87	-
BOD	mg/l	39	17	26	84	46	48	47	16	19	11	25	81	20
TSS	mg/l	69	19	30	102	58	31	51	32	61	48	88	76	30
Ammonia Nitrogen	mg/l	17.07	7.02	1.38	26.78	52.96	32.02	2.98	5.84	25	7.52	19.24	12.029	20
Fats Oils Grease	mg/l	1.7	8.3	<1	<1	<1	<0.010	<1	<1	<1	<1	<1	<1	-
Sulphate	mg/l	26.8	1,744.3	78.6	91.10	47.7	18.14	<20	37.3	88	68.867	108.773	88.788	-
Total Phosphorous	mg/l	0.930	1.16	1.110	3	6.08	3.635	2.60	2.74	5.3	2.48	4.64	<2	-
Total Nitrogen	mg/l	18.01	22.21	5.85	26.96	67.26	37.5	43.38	23.42	73.77	19.3	32.47	19.760	-
Nitrate	mg/l	<2	<4.8	<4.8	<4.8	<4.8	<0.2	94.27	65.87	215	<21.2	37.961	<21.2	-
Nitrite	mg/l	0.01	0.03	0.02	0.07	0.26	<0.02	7.6	<0.66	1.58	<0.660	1.026	<0.660	-
COD	mg/l	104	75	82	271	176	257	132	112	141	199	146	271	-

3.3 Groundwater Monitoring

Groundwater monitoring is carried out bi-annually at three wells, GWM1, GWM2 and GWM3. GWM1 is close to the entrance to the dry recyclables recycling building, GWM2 is at the northern site boundary and is downgradient of site activities. GWM3 is outside the operational area and is upgradient of site activities.

There are no ELVs or Trigger Levels set in the Licence. For interpretation purposes the results had, up to Q2 2011, been compared to the Interim Guideline Values (IGV) for groundwater published by the Agency. Since then, the results are also compared to the Threshold Values for groundwater (GTV) quality introduced by the European Communities Environmental Objectives (Groundwater) Regulations 2010 S.I. No 9 of 2010. The IGV levels represent typical background or unpolluted conditions, however levels higher than the IGV can occur naturally, depending on the local geological and hydrogeological conditions. While the Threshold Values are more appropriate for large scale abstraction wells used for potable supply, they can be used to assess the significance of contamination where present in groundwater. Because not all parameters monitored have been assigned Threshold Values, the relevant IGV continue to be used for comparative purposes.

In October 2013, OCM on behalf of GES submitted proposed groundwater trigger levels for the Agency's approval. Although the proposed trigger levels have not yet been approved they are included for information purposes in Table 3.11. The monitoring results are summarised in Tables 3.14 and 3.15.

The results are generally consistent with those of previous monitoring events which have found elevated levels of ammoniacal nitrogen at each location. Although the ammoniacal nitrogen levels exceeded the GTV levels the proposed trigger levels were not exceeded. In November, the GTV for Chloride was exceeded at GWM2, the reason for this exceedance is unknown, but will be investigated further in 2016.

Although hydrocarbons occurred intermittently at GWM1 and GWM3 in 2013 none were identified in 2014 or 2015. The reason for the low levels of hydrocarbons detected at GWM1 and GWM3 in 2013 is unknown. There have been no known incidents at the facility likely to have caused contamination.

Table 3.13 Proposed Trigger Levels

Borehole	Electrical Conductivity Proposed Trigger Level (mS/cm)	Ammoniacal Nitrogen Proposed Trigger Level (mg/l)
GWM1	1.140	11.89
GWM2	1.790	10.31
GWM3	1.120	1.87

Table 3.14 - Groundwater Monitoring Results – June 2015

Parameter	Units	GWM1	GWM2	GWM3	GTV	IGV
Temperature**	°C	13.2	12.7	13.7	-	25
pH**	pH Units	6.68	6.76	7.03	-	6.5 - 9.5
COD	mg/l	53	15	<7	-	-
BOD	mg/l	8	1	1	-	-
Total Suspended Solids	mg/l	277	328	18	-	-
Total Ammonia (as NH ₃)	mg/l	11.05	4.36	0.94	0.65 - 0.175	0.15
Total Nitrogen	mg/l	11.3	5.3	2.4	-	NAC
Mineral Oils	mg/l	<0.01	<0.01	<0.01	-	0.01
Sulphate	mg/l	3.248	1.383	0.771	187.5	200
Total Phosphorous	mg/l	0.813	0.460	0.078	-	-
Nitrate (as NO ₃)	mg/l	0.3	0.4	0.4	37.5	25
Nitrite (as NO ₂)	mg/l	<0.02	<0.02	<0.02	0.375	0.1
Fats, Oils & Greases	mg/l	<0.01	<0.01	<0.01	-	-
Diesel Range Organics	mg/l	<0.01	<0.01	<0.01	-	0.01
Aliphatic Hydrocarbons	mg/l	<0.01	<0.01	<0.01	-	0.01
Undecane	mg/l	<0.01	<0.01	<0.01	-	-
Conductivity**	mS/cm	1.146	1.016	0.815	0.8 - 1.875	1.000
Chloride	mg/l	115.7	63.7	83.6	24 - 187.5	30
Fluoride	mg/l	<0.3	0.3	0.6	-	1

** Field Readings

Table 3.15 - Groundwater Monitoring Results – November 2015

Parameter	Units	GWM1	GWM2	GWM3	GTV	IGV
Temperature**	°C	13.3	13.1	12.6	-	25
pH**	pH Units	6.62	6.70	7.07	-	6.5 - 9.5
COD	mg/l	33	24	16	-	-
BOD	mg/l	11	10	2	-	-
Total Suspended Solids	mg/l	415	651	1,060	-	-
Total Ammonia (as NH ₃)	mg/l	8.88	6.66	0.85	0.65 - 0.175	-
Total Nitrogen	mg/l	11.6	9.4	2.2	-	NAC
Mineral Oils	mg/l	<0.01	<0.01	<0.01	-	0.01
Sulphate	mg/l	5.03	11.85	21.04	187.5	-
Total Phosphorous	mg/l	0.621	0.709	0.345	-	-
Nitrate (as NO ₃)	mg/l	2.1	0.8	0.8	37.5	-
Nitrite (as NO ₂)	mg/l	0.16	0.25	<0.02	0.375	-
Fats, Oils & Greases	mg/l	<0.01	<0.01	<0.01	-	-
Diesel Range Organics	mg/l	<0.01	<0.01	<0.01	-	0.01
Aliphatic Hydrocarbons	mg/l	<0.01	<0.01	<0.01	-	0.01
Undecane	mg/l	<0.01	<0.01	<0.01	-	-
Conductivity**	mS/cm	1.278	1.407	0.840	0.8 - 1.875	-
Chloride	mg/l	142.5	196	84.4	24 - 187.5	-
Fluoride	mg/l	<0.3	0.3	0.6	-	1

3.4 Noise Monitoring

The annual noise survey was carried out on the 8th June 2015 at three onsite boundary monitoring (NI1 – NI3) locations and one offsite location (NI4). The survey was conducted when the site was fully operational and confirmed that noise emissions fully complied with the licence conditions and that the facility is not impacting negatively on the nearest sensitive receptors. A summary of the noise results is shown on Table 3.16.

Noise limits set out in the waste licence are considered applicable to Noise Sensitive Locations (NSLs). An inspection of the nearest NSLs during the survey indicated that facility operations were not audible, and thus lower than the 55 dB daytime noise limit. The three onsite locations are dominated by facility activities but there are no NSLs in the vicinity of these locations. At NI4, site emissions were not audible.

Table 3.16 Noise Monitoring Results 2015

Station	Date	Time	L _{Aeq} 30 min dB	L _{AF10} 30 min dB	L _{AF90} 30 min dB	Specific L _{Aeq} 30 min dB
NI1	08.06.15	1045-1115	66	66	48	66
	<p>Site: Loader in building almost continuously audible at low level. Intermittent truck movements on main yard clearly audible when present, particularly several local truck manoeuvring operations from 1106. Yard sweeper truck locally intrusive 1059-1101.</p> <p>Extraneous: Local starlings & lightly rustling trees. All other sources masked by site activity.</p>					
NI2	08.06.15	1119-1149	72	73	57	72
	<p>Site: Loader in building and around yard, forklift truck movements on yard, intermittent truck movements, & sweeper truck moving around yard all clearly audible variously, with last occasionally approaching measurement position. Tracked excavator with grab operating within 20 m dominant 1125-1132. Wastewater tanker trucks x2 at approx 80 m dominant after excavator moved away, with energy at 63 & 80 Hz, partially masking all other site sources.</p> <p>Extraneous: No noise audible other than local starlings.</p>					
NI3	08.06.15	1010-1040	69	62	54	69
	<p>Site: Baling plant & conveyor in adjacent building audible continuously at low level. Pant and truck movements on main yard also audible at low level. Forklift truck operation adjacent to position during last minute dominant.</p> <p>Extraneous: Rustling trees outside boundary almost continuously clearly audible, masking all other noise including offsite noise.</p>					
NI4	08.06.15	1201-1231	65	68	58	<<58
	<p>Site: No emissions audible.</p> <p>Extraneous: Passing road traffic continuously intrusive, masking all noise except vehicle movements on adjacent access road.</p>					

Specific L_{Aeq}: Level considered attributable to source under consideration, determined using real time assessment, field notes, time history profiles, statistical analysis, frequency spectra, spectral statistics and near field correction if applicable.
Audibility scale: Inaudible; faintly audible; slightly audible; audible at low level; quite audible; clearly audible; dominant; intrusive; excessive.

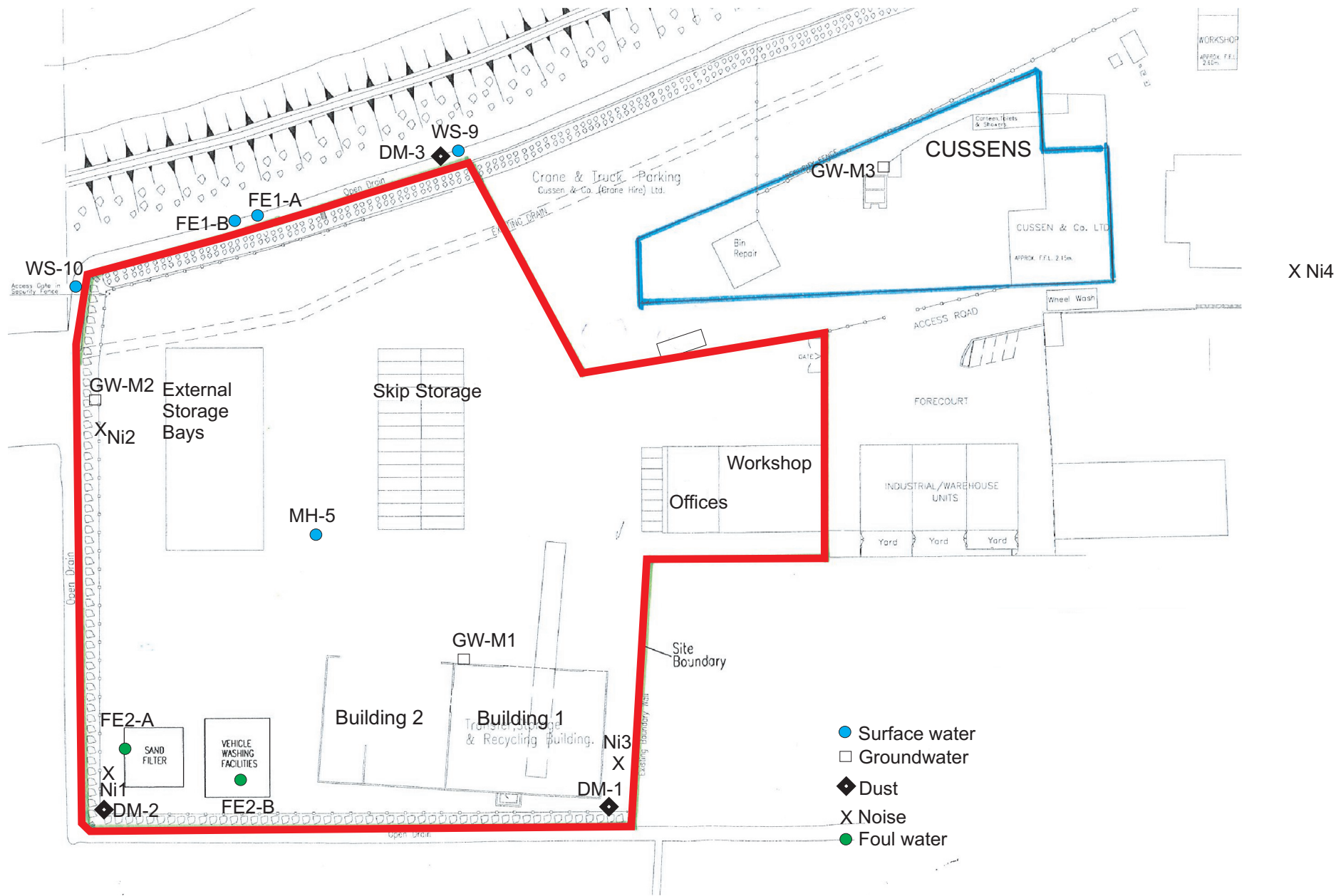
3.5 Dust Monitoring

The revised Licence requires dust monitoring to be carried out quarterly at four monitoring locations, D1, D2, D3 and D4. However as the Licence was only issued in May 2015 only three monitoring events were carried out in 2015. Due to an oversight only the original three monitoring locations were sampled in June. The results of the monitoring are included on Table 3.17.

The dust emission limit (350 mg/m²/day) was not exceeded at any monitoring location during the monitoring period.

Table 3.17 Dust Monitoring Results 2015

Dust Emission (mg/m²/day)	June	July/August	Nov	Emission Limit
Sample Location	30 Days	30 Days	30 Days	(mg/m²/day)
D1	31.7	74.5	90.6	350
D2	14.4	116	94.42	350
D3	41.1	46	52.96	350
D4	-	34.7	35.23	350



O' Callaghan Moran & Associates.
 Granary House, Rutland Street,
 Cork Ireland.
 Tel. (021) 4321521 Fax. (021) 4321522
 email : info@ocallaghanmoran.com

CLIENT

Greenstar Environmental Services Ltd.

TITLE

Monitoring Locations
 Limerick W0082-02

FIGURE NUMBER

3.1

Scale

Not To Scale

Revision

A

This drawing is the property of O'Callaghan Moran & Associates and shall not be used, reproduced or disclosed to anyone without the prior written permission of O'Callaghan Moran & Associates and shall be returned upon request.

4. SITE DEVELOPMENT WORKS

4.1 Specified Engineering Works (SEW)

No Specified Engineering Works were completed during 2015. It is proposed to carry out major works on the drainage infrastructure following approval to connect to Bunlicky Wastewater Treatment Plant in 2016.

4.2 Summary of Resource & Energy Consumption

Table 4.1 presents an estimate of the resources used on-site during the reporting period and for comparative purposes the volumes for 2012, 2013 and 2014.

Table 4.1 Estimate of Resources Used On-Site 2012, 2013, 2014 and 2015

Resources	2015	2014	2013	2012
Diesel (green)	85,700 litres	82,432 litres	69,608 litres	60,000 litres
Electricity	325,376 kWh	298,451 kwh	126,266 kwh	113,567 kwh
Hydraulic Oil	3,000 litres	3,000 Litres	4,500 litres	4,500 litres
Engine Oil	600 litres	1,000 Litres	1,000 litres	1,500 litres
Mains Water	5,972 m ³	12,178m ³	11,873 m ³	8,200 m ³

4.3 Bund Integrity & Pipeline Testing

The Licence was renewed on the 15th May 2015 and condition 6.8 states that the integrity testing of all underground pipelines and tanks must be carried out within six months of date of grant of the Licence and every 3 years thereafter. Bund integrity testing was carried out in September 2015 and all bunds were passed fit for purpose. Testing will be carried out again in 2018. The reports are retained at the facility for Agency inspection.

In 2015 the Agency agreed to a Greenstar request to defer integrity testing pending approval to connect to the WWTP in 2016.

5. WASTE RECEIVED AND CONSIGNED FROM THE FACILITY

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 88,985.904 tonnes. For comparative purposes the amounts of waste received and consigned from 2008 to 2015 are presented in Table 5.2. The total waste consigned was 89,555.793 tonnes. The difference (569.89 tonnes) remained onsite at the end of 2015 pending removal offsite in 2016.

All the wastes consigned from the site went to authorised recovery and disposal facilities.

Table 5.1 Waste Received & Consigned 2015

EWC	Description	Waste In	Waste Out
02 07 04	Powder	5.18	
15 01 01	Paper & cardboard packaging	5,638.745	5,970.54
15 01 02	Plastic packaging	287.94	399.065
15 01 03	Wooden packaging	10.52	87.98
15 01 05	Composite Packaging	0.92	
15 01 06	Mixed packaging	1,593.54	680.58
15 01 07	Glass Packaging	164.31	205.04
16 06 01	Lead Batteries		0.14
17 01 07	Mixture of concrete, bricks, tiles and ceramics		2,128.39
17 02 03	Plastic	14.96	
17 05 04	Soil & stones		
17 08 02	Gypsum-based construction materials	0.10	
17 09 04	Mixed construction and demolition wastes	2,133.47	96.54
18 01 04	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection	37.16	
19 05 02	Non-composted fraction of animal and vegetable waste	8.85	
19 12 07	Wood	3.64	474.56
19 12 09	Minerals	173.32	
19 12 12	Other wastes	115.44	1,224.78
20 01 01	Paper & cardboard	1,001.76	799.25
20 01 02	Glass	403.86	292.46
20 01 08	Biodegradable kitchen and canteen waste	4,675.44	4,279.582
20 01 35	Discarded electrical and electronic equipment	4.38	
20 01 38	Wood	1,540.54	905.36
20 01 39	Plastics	332.86	
20 01 40	Metals	347.162	486.62
20 02 01	Biodegradable waste	139.43	216.38
20 03 01	Mixed municipal waste	63,809.90	59,980.416
20 03 03	Street-cleaning residues	1,586.18	1,714.58
20 03 07	Bulky waste	4,956.297	9,613.53
	Total Received	88,985.904	
	Total Consigned		89,555.793
	Disposal		9,037.98
	Recovery		80,517.813
	Recovery Rate		89.91%

Table 5.2 Waste Received and Consigned 2014

EWC	Description	Waste In	Waste Out
15 01 01	Paper & cardboard packaging	4725.395	5,047.148
15 01 02	Plastic packaging	375.6	279.98
15 01 03	Wooden packaging		37.98
15 01 04	Metallic packaging	25.24	
15 01 06	Mixed packaging	1509.77	813.55
15 01 07	Glass Packaging		24.6
13 05 03	Interceptor sludges	30.84	
16 01 03	End of Life Tyres		4.42
16 06 01	Lead Batteries		0.397
17 01 07	Mixture of concrete, bricks, tiles and ceramics	246.26	3524.76
17 02 03	Plastic	18.98	
17 05 04	Soil & stones	30.4	
17 08 02	Gypsum-based construction materials	0.68	
17 09 04	Mixed construction and demolition wastes	3200.976	67.76
18 01 04	Wastes whose collection and disposal is not subject to special requirements in order to prevent infection	15.06	
19 05 02	Non-composted fraction of animal and vegetable waste	3.28	
19 09 02	Sludges from water clarification	515.92	474.68
19 12 07	Wood	25.08	
19 12 09	Minerals	58.94	
19 12 12	Other wastes	784.72	1998.23
20 01 01	Paper & cardboard	1470.9	669.14
20 01 02	Glass	248.28	189.72
20 01 08	Biodegradable kitchen and canteen waste	3462.515	3303.74
20 01 35	Discarded electrical and electronic equipment	7.7	
20 01 36	Discarded electrical and electronic equipment		
20 01 38	Wood	1173.02	1168.58
20 01 39	Plastics	146.61	
20 01 40	Metals	211.82	465.668
20 02 01	Biodegradable waste	62.5	97.34
20 03 01	Mixed municipal waste	74782.656	74056.40
20 03 03	Street-cleaning residues	1675.79	1709.06
20 03 07	Bulky waste	4835.299	4765.90
	Total Received	99,646.21	
	Total Consigned		98,699.10
	Disposal		6,192.40
	Recovery		92,506.683
	Recovery Rate		93.73%

Table 5.3 Waste Received & Consigned

	2014	2013	2012	2011	2010	2009	2008
Total Received	99,646	87,928	55,992	32,550	34,835	42,536	58,203
Total Consigned	98,699	88,345	55,430	33,335	34,476	41,547	58,654

6. ENVIRONMENTAL INCIDENTS AND COMPLAINTS

6.1 Incidents

The trigger level for surface water for BOD was exceeded during every monitoring event in 2015. The revised trigger level for Total Ammonia was exceeded in June, July, August, September, October, November and December. The trigger levels for BOD and total ammonia were also exceeded during each of the weekly monitoring events undertaken in Q4 2015. The trigger level for Total Suspended Solids was exceeded in June, July, September, October and November 2015.

Throughout the year there were exceedances of the performance standards for foul water for BOD (8 occasions), TSS (10 occasions) and Ammoniacal Nitrogen (4 occasions).

All exceedances were reported to the Agency and where relevant, to Limerick City & County Council and the Fisheries Board.

6.2 Register of Complaints

Greenstar maintains a register of complaints received in accordance with Condition 10.4 of the Licence. No complaints were received during the reporting period.

7. ENVIRONMENTAL DEVELOPMENT & CONTROL

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 account the requirements of the Waste Licence Conditions. Greenstar has prepared and effectively implemented documented procedures and instructions in accordance with the requirements of both the OHSAS 18001:2007 and ISO 14001:2004. A successful ISO re-certification audit was completed at the facility in December 2015. The facility is accredited to both standards.

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. An index of procedures used at the facility is included in Appendix 2.

7.1.1 Site Management Structure

Management and Staffing structure: -

Name: Dominic Broadhurst,

Responsibility: Operations Manager

Experience: 5 years experience waste management experience; Completed the CIWM accredited training course in Managing Waste and Waste Licence Compliance.

Name: Philip O'Sullivan

Responsibility: Yard Supervisor

Experience: 7 years waste management experience; Completed the CIWM accredited Waste Management and compliance course.

7.1.2 Staff Training

Details on staff training for 2015 are available in the facility office. Philip O'Sullivan undertook a managing waste and compliance course in 2015, accredited to the CIWM.

7.2 Environmental Management Programme

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

A schedule of targets and objectives for 2016 has been set by the management of the facility. These objectives are outlined in Table 7.2.

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, Health & Safety Policy makes a specific commitment to ensure that this policy and environmental records are available to the public and interested parties.

To this end Greenstar has drawn up a Communications Programme, which details how members of the public are facilitated in accessing and viewing environmental information at the facility. Members of the public who wish to inspect these files may do so at any reasonable time by making an appointment with the Operations Manager using the telephone number posted on the main facility entrance sign.

7.4 Report 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 and provision is in place with agreement of the Agency. A review of both reports will take place in 2016

Table 7.1 Objectives and Targets for 2015

No.	Objective	Target	Responsibility	Timescale	Status
1	Connect the waste water emissions to the Local Authority WWTP	Progress the proposed connection of the foul water to the municipal WWTP	Site Management / EHS	Q2 – Q3	Planned for 2016
2	Decommission Klargester	Decommission the onsite Klargester WWTP following connection to the municipal sewer.	EHS	Subject to Council Agreement	Planned for 2016
3	Environmental Training of Facility Staff	Update training presentation and ensure training of key managerial staff (Philip O’Sullivan)	Site Management / EHS	Q2 - Q3	Philip O'Sullivan trained
4	Review of Emergency Response Plan to incorporate fire prevention procedure and new structure	Revision of Plan and additional training for site personnel	Site Management / EHS	Q2	ERP Updated
5	Firewater Retention Risk Assessment Report	Preparation of Report to see if facility requires a fire water retention facility.	Site Management / EHS	Q4	Draft Report Completed
6	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	Site Management / EHS	Q1 - Q2	On going, site specific PM plans currently under review
7	Document PM plan for all hardstand and drainage infrastructure on site	Incorporate into existing Site Inspection Database (EF-10A)	Site Management / EHS	Q1 - Q2	Completed
8	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	EHS / Finance / WIMS	Q2 - Q3	Completed
9	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	Site Management / EHS	Q1 - Q2	Completed
10	Track Energy Usage on site	Record electricity, gas, water and fuel consumption on site group wide	Site Management / EHS	Q2 - Q3	On going
11	Installation of Dust Curtains on MRF Building	Install Dust Curtains on MRF Building	Site Management / EHS	Q2 – Q3	Completed

Table 7.2 Schedule of Objective and Targets 2016

No	Objective	Target	Responsibility	Timescale
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 in line 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
6	Pipeline integrity & bund testing	Arrange for integrity testing of pipelines and bunds as per licence requirements.	Q2/Q3	Site Management/EHS
7	Energy Audit	Completed energy audit as per amended licence conditions	Q4	Site Management/EHS
8	Connect the waste water emissions to the Local Authority WWTP	Progress the proposed connection of the foul water to the municipal WWTP	Q2 – Q3	Site Management / EHS
9	Decommission Klargester	Decommission the onsite Klargester WWTP following connection to the municipal sewer.	Subject to Council Agreement	EHS
10	Occupational Noise Survey	Completion of Occupational Noise Survey	Q1/Q2	EHS

7.5 Nuisance Controls

Greenstar has contracted a vermin control company to carry out nuisance control at the facility. Rentokil Initial Ltd provides and maintains forty bait boxes at the facility and also carries out insect control measures as required. Weekly nuisance and litter inspections are carried out and litter picks are carried out daily.

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



Environmental Protection Agency

| PRTR# : W0082 | Facility Name : Starrus Eco Holdings Limited (Dock Road) | Filename : W0082_2015.xls | Return Year : 2015 |

[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 (Dock Road)
PRTR Identification Number	W0082
Licence Number	W0082-03

Classes of Activity

No.	class name
-	Refer to PRTR class activities below

Address 1	Ballykeefe Townland
Address 2	Waste Management Section
Address 3	Dock Road
Address 4	Limerick
	Limerick
Country	Ireland
Coordinates of Location	-8.66662 52.651
River Basin District	IEGBNISH
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	Environmental Executive
AER Returns Contact Telephone Number	01-2947949
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	
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) ?	
--	--

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : W0082 | Facility Name : Starrus Eco Holdings Limited (Dock Road) | Filename : W0082_2015.xls | Return Year : 2015 |

29/03/2016 11:41

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		RELEASERS TO AIR			Please enter all quantities in this section in KGs			
No. Annex II	Name	M/C/E	METHOD		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		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		RELEASERS TO AIR			Please enter all quantities in this section in KGs			
No. Annex II	Name	M/C/E	METHOD		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		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		RELEASERS TO AIR			Please enter all quantities in this section in KGs			
Pollutant No.	Name	M/C/E	METHOD		Emission Point 1	QUANTITY		
			Method Code	Designation or Description		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 (Dock Road)

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
		Method Code	Designation or Description	
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](#)

| PRTR# : W0082 | Facility Name : Starrus Eco Holdings Limited (Dock Road) | Filename : W0082_2015.xls | Return Year : 2015 |

29/03/2016 11:41

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 t

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

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

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

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : W0082 | Facility Name : Starrus Eco Holdings Limited (Dock Road) | Filename : W0082_2

29/03/2016 11:41

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 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					Please enter all quantities in this section in KGs			
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				
					0.0	0.0	0.0	0.0

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

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : W0082 | Facility Name : Starrus Eco Holdings Limited (Dock Road) | Filename : W0082_2015.xls | Return Year : 2015 |

29/03/2016 11:42

SECTION A : PRTR POLLUTANTS

POLLUTANT		RELEASERS TO LAND			Please enter all quantities in this section in KGs		
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
					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)

POLLUTANT		RELEASERS TO LAND			Please enter all quantities in this section in KGs		
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
					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# : W0082 | Facility Name : Starrus Eco Holdings Limited (Dock Road) | Filename : W0082_2015.xls | Return Year : 2015 |

29/03/2016 11:42

Please enter all quantities on this sheet in Tonnes

0

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Non-Non	Non Haz Waste: Address of Recover/Disposer			
Within the Country	15 01 01	No	205.32	paper and cardboard packaging	R13	M	Weighed	Offsite in Ireland	Agnail Ltd,TFS Broker IRE/AG117/11		Ballymacken Industrial Estate,Ballymacken,Portlaoise,Co. Laois,Ireland		
Within the Country	15 01 01	No	1015.98	paper and cardboard packaging	R13	M	Weighed	Offsite in Ireland	Panda Waste Services Ltd,W0140-03		Rathdrinagh,Beauparc,Navan,Co. Meath,Ireland		
Within the Country	15 01 01	No	53.02	paper and cardboard packaging	R13	M	Weighed	Offsite in Ireland	Agnail Ltd,TFS Broker IRE/AG117/11		Ballymacken Industrial Estate,Ballymacken,Portlaoise,Co. Laois,Ireland		
To Other Countries	15 01 01	No	501.26	paper and cardboard packaging	R13	M	Weighed	Abroad	MLM ltd T/A ACN Europe UK,TFS Broker IRE/G022/11		2DX,United Kingdom		
Within the Country	15 01 01	No	126.5	paper and cardboard packaging	R13	M	Weighed	Offsite in Ireland	Materia Environment LTD,IRE/AG/161/11		The Kipper House,Scilly ,Kinsale,Co. Cork,Ireland		
To Other Countries	15 01 01	No	4068.46	paper and cardboard packaging	R13	M	Weighed	Abroad	Saica Natue Uk Limited,IRE/G277/15	,United Kingdom		
Within the Country	15 01 02	No	5.14	plastic packaging	R13	M	Weighed	Offsite in Ireland	Munster Polymers Ltd,WFP-CK-10-0066-02-A1		Ballinrinsig ,Waterfall ,Co Cork , ,Ireland		
Within the Country	15 01 02	No	51.55	plastic packaging	R13	M	Weighed	Offsite in Ireland	Agnail Ltd,TFS Broker IRE/AG117/11		Ballymacken Industrial Estate,Ballymacken,Portlaoise,Co. Laois,Ireland		
Within the Country	15 01 02	No	222.835	plastic packaging	R13	M	Weighed	Offsite in Ireland	Leinster Environmental,WFP-LH-09-0004-01		Dundalk,....,Louth,Ireland		
To Other Countries	15 01 02	No	42.94	plastic packaging	R13	M	Weighed	Abroad	Peute Recycling,TFS Broker IRE/G006/11	,Ireland		
To Other Countries	15 01 02	No	76.6	plastic packaging	R3	M	Weighed	Abroad	WRC Recycling,IRE/AG121/15	,United Kingdom		
Within the Country	15 01 03	No	87.98	wooden packaging	R3	M	Weighed	Offsite in Ireland	Quitman O neill Packaging LTD,.		...Galway,..Ireland		
Within the Country	15 01 06	No	366.68	mixed packaging	R13	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02		..Carrowbrowne,Headford Road,Galway,Ireland		
Within the Country	15 01 06	No	297.84	mixed packaging	R3	M	Weighed	Offsite in Ireland	MRF Bray,W0053-03		..Fassaroe,Bray,Co. Wicklow,Ireland		
Within the Country	15 01 07	No	205.04	glass packaging	R5	M	Weighed	Offsite in Ireland	Clonmel Waste Disposal Ltd,W008-02		Lawlesstown,Clonmel,..Co Tipperary,Ireland		
Within the Country	16 06 01	Yes	0.14	lead batteries	R4	M	Weighed	Offsite in Ireland	KMK Metals ,W0113-03,....,Tullamore,Co. Offaly,Ireland		...Tullamore,Co Offaly,Ireland	KMK Metals ,W0113-03,....,Tullamore,Co. Offaly,Ireland	...Tullamore,Co Offaly,Ireland
Within the Country	17 01 07	No	690.26	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Mallow Contracts,CK(No)277/5		...Mourneabbey,Co Cork,Ireland		
Within the Country	17 01 07	No	1438.13	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Joseph Collins,COR-CE-14-0003-01		6 Rock Spring Gardens,Ennis Road,Limerick,..Ireland		
Within the Country	17 09 04	No	96.54	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	R5	M	Weighed	Offsite in Ireland	Joseph Collins,COR-CE-14-0003-01		6 Rock Spring Gardens,Ennis Road,Limerick,..Ireland		
To Other Countries	19 12 12	No	1202.68	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R13	M	Weighed	Abroad	Attero BV,670283		Vamweg 7 ,9418 TM Wijster , , ,Netherlands		
Within the Country	19 12 12	No	22.1	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R13	M	Weighed	Offsite in Ireland	MRF Bray,W0053-03		..Fassaroe,Bray,Co. Wicklow,Ireland		

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility	Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Non	Non Haz Waste: Address of Recover/Disposer				
Within the Country	20 01 01	No	46.9	paper and cardboard	R3	M	Weighed	Offsite in Ireland	Agnail Ltd,TFS Broker	IRE/AG117/11	Ballymacken Industrial Estate,Ballymacken,Portlaoise,Co. Laois,Ireland			
Within the Country	20 01 01	No	129.92	paper and cardboard	R3	M	Weighed	Offsite in Ireland	Shred It Ireland,Peute Recycling,TFS Broker	IRE/G006/11				
Within the Country	20 01 01	No	231.4	paper and cardboard	R3	M	Weighed	Offsite in Ireland						
To Other Countries	20 01 01	No	364.37	paper and cardboard	R3	M	Weighed	Abroad	Northwood Recycling Ltd,IRE/G282/15		Waterside Disley,Stockport,Cheshire,S K12 2HW,United Kingdom			
To Other Countries	20 01 01	No	26.66	paper and cardboard	R3	M	Weighed	Abroad	MLM ltd T/A ACN Europe UK,TFS Broker IRE/G022/11		Business Park,Wilmslow Road Didsbury,M20 2DX,United Kingdom			
Within the Country	20 01 02	No	151.8	glass	R5	M	Weighed	Offsite in Ireland	Clonmel Waste Disposal Ltd,WP-008-02		Lawlesstown,Clonmel,Co Tipperary,Ireland			
Within the Country	20 01 02	No	108.34	glass	R5	M	Weighed	Offsite in Ireland	Glassco Recycling Ltd,WFP-KE-08-0357-01		Osberstown Business Park,Carragh Road,Naas,Co Kildare,Ireland			
Within the Country	20 01 08	No	4279.582	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Clonmel Waste Disposal Ltd,WP-008-02		Lawlesstown,Clonmel,Co Tipperary,Ireland			
Within the Country	20 01 38	No	905.36	wood other than that mentioned in 20 01 37	R13	M	Weighed	Offsite in Ireland	Clonmel Waste Disposal Ltd,WP-008-02		Lawlesstown,Clonmel,Co Tipperary,Ireland			
Within the Country	20 01 40	No	486.62	metals	R4	M	Weighed	Offsite in Ireland	Clearcircle metals (Limerick),WFP-LKC-11-001-01		Ballysimon Road,Limerick,Co. Kerry,Ireland			
Within the Country	20 02 01	No	216.38	biodegradable waste	R3	M	Weighed	Offsite in Ireland	Clonmel Waste Disposal Ltd,WP-008-02		Lawlesstown,Clonmel,Co Tipperary,Ireland			
Within the Country	20 03 01	No	195.55	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Barna Waste,W0106-02		Carrowbrowne,Headford Road,Galway,Ireland			
Within the Country	20 03 01	No	81.6	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Bord na Mona,W0201-03					
Within the Country	20 03 01	No	10646.84	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Dillon Waste,WFP-KY-10-001		The kerries,Tralee,Kerry,Co. Kerry,Ireland			
Within the Country	20 03 01	No	764.6	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Wiser Bins Ltd,WFP-CC-01/2014		Centre Park Road,Cork,Co. Kerry,Ireland			
To Other Countries	20 03 01	No	2984.46	mixed municipal waste	R13	M	Weighed	Abroad	indaver AB Fortum,Indaver Avi					
To Other Countries	20 03 01	No	8141.176	mixed municipal waste	R13	M	Weighed	Abroad	Abfallverwertung,Indaver (EON Delfrizij),Indaver (Eon Swedeb),					
To Other Countries	20 03 01	No	2875.92	mixed municipal waste	R13	M	Weighed	Abroad						
To Other Countries	20 03 01	No	19882.41	mixed municipal waste	R13	M	Weighed	Abroad						
To Other Countries	20 03 01	No	1294.06	mixed municipal waste	R13	M	Weighed	Abroad	Attero BV,670283		Vamweg 7 ,9418 TM Wijster , , Netherlands			
Within the Country	20 03 01	No	454.28	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Knockharley Landfill Ltd,W0146-03		Kenstown ,Navan ,Co Meath , Ireland			
Within the Country	20 03 01	No	1853.34	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Greyhound Recycling & Recovery,W0205-01		Crag Avenue ,Clondalkin Industrial Est ,Clondalkin ,Co Dublin ,Ireland			
Within the Country	20 03 01	No	597.98	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	MRF Bray,W0053-03		Bray,Co. Wicklow,Ireland			
Within the Country	20 03 01	No	5255.82	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	MRF Bray,W0053-03		Bray,Co. Wicklow,Ireland			
Within the Country	20 03 01	No	94.32	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	MRF Bray,W0053-03		Bray,Co. Wicklow,Ireland			
Within the Country	20 03 01	No	4518.72	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Panda Waste Services Ltd,W0140-03		Rathdrinagh,Beauparc,Navan,Co. Meath,Ireland			
Within the Country	20 03 01	No	54.32	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	MRF Sarsfield Court,					
Within the Country	20 03 03	No	91.3	street-cleaning residues	D5	M	Weighed	Offsite in Ireland	Bord na Mona,W0201-03					

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility	Haz Waste : Address of Next Destination Facility	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used		Haz Waste: Name and Licence/Permit No of Recoverer/Disposer	Non Haz Waste: Address of Recoverer/Disposer		
Within the Country	20 03 03	No	249.72	street-cleaning residues	D5	M	Weighed	Offsite in Ireland	Knockharley Landfill Ltd,W0146-03	Kenstown ,Navan ,Co Meath , Ireland		
Within the Country	20 03 03	No	1373.56	street-cleaning residues	R13	M	Weighed	Offsite in Ireland	MRF Bray,W0053-03	,,Fassaroe,Bray,Co. Wicklow,Ireland		
Within the Country	20 03 07	No	6022.72	bulky waste	D5	M	Weighed	Offsite in Ireland	Bord na Mona,W0201-03	,,Fassaroe,Bray,Co. Wicklow,Ireland		
Within the Country	20 03 07	No	3590.81	bulky waste	R13	M	Weighed	Offsite in Ireland	MRF Bray,W0053-03	,,Fassaroe,Bray,Co. Wicklow,Ireland		
Within the Country	19 12 07	No	474.56	wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	Clonmel Waste Disposal Ltd,WP-008-02	Lawlesstown,Clonmel,..Co Tipperary,Ireland		
Within the Country	20 01 02	No	32.32	glass	R5	M	Weighed	Offsite in Ireland	Mr Binman,W0061-03	Luddenmore ,Grange Kilmallock ,Co Limerick,Ireland		
Within the Country	15 01 06	No	16.06	mixed packaging	R5	M	Weighed	Offsite in Ireland	Dillon Waste,WFP-KY-10-001	The kerries,Tralee,Kerry,..Ireland		
Within the Country	20 03 01	No	285.02	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Drehid Landfill,W0201-03	Carbury,..,Kildare,Ireland		

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

APPENDIX 2

Procedures List

Doc. No.: Control	Revision No.: As Shown	Issue Date: As Shown
Approved By:	Malcolm Dowling – Group Compliance Manager	Page 3 of 39

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 Compliance Manager</i>	Page 4 of 39

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 02, 06/05/15
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

Doc. No.: Control	Revision No.: As Shown	Issue Date: As Shown
Approved By:	Malcolm Dowling – Group Compliance Manager	Page 5 of 39

Amendment History

Date	Amendment No.	Procedure No:	Revision No:	Comment	Authorised By
05.07.10	01	All	01	Initial Issue	M.D & O.C
13.09.10	02	EP-03	02	Issue of Incident Reports	M.D
20.09.10	03	IP-10	02	Env issues not logged on WIMS Database	M.D
29.10.10	04	IP-13	02	Use of M&M equipment by contractors	M.D & O.C
29.10.10	05	IP-14	02	Use of M&M equipment by contractors	M.D & O.C
29.10.10	06	SP-02	02	Inclusion of Maintenance Schedule	M.D & O.C
05.11.10	07	IP-04	02	Inclusion of other requirements	S.B & O.C
01.02.11	08	SP-08	01	Inclusion of new procedure	O.C
01.02.11	09	IP-10	03	Inclusion of SP-08	O.C
01.02.11	10	IP-15	02	Removal of SF-022	O.C
01.02.11	11	Contents	As shown	EP-10 Site Specific	M.D & O.C
01.02.11	12	IP-06	02	Addressing Agency Staff needs	M.D & O.C
01.02.11	13	Circ List	02	Amendment to document control	M.D & O.C
04.04.11	14	SP-02	03	Inclusion of Site Specific Maintenance schedules	O.C
07.06.11	15	IP-11	02	Inclusion of H&S & Env Internal Audit Schedules	M.D & O.C
14/09/11	16	EP-02	02	Inclusion of decommissioning of plant/equipment	S.B
15/09/11	17	IP-09	02	Inclusion of Statutory Inspections	O.C
01/12/11	18	SP-09	01	Inclusion of new procedure for SCGT	O.C
01/12/11	19	SP-10	01	Inclusion of new procedure for SCGT	O.C
03/05/12	20	SP-01	02	Amendment to remove SF 028	O.C
05/05/12	21	SP-11	01	Inclusion of a new procedure for Greenogue	O.C
28/05/12	22	IP-11	03	General Amendments to internal audit procedure	M.D & O.C
08/06/12	23	IP-13	03	Grammatical amendment	M.D & O.C
15/04/13	24	IP-06	03	Agency staff – sign-off record sufficient proof of training. TMS optional	M.D & O.C

Doc. No.: Control	Revision No.: As Shown	Issue Date: As Shown
Approved By:	Malcolm Dowling – Group Compliance Manager	Page 6 of 39

Date	Amendment No.	Procedure No:	Revision No:	Comment	Authorised By
30/06/13	25	IP-16	01	Inclusion of new procedure	M.D.
09/09/13	26	IP-03	02	Use of Scannell Software Solutions (EnviroManager) instead of IF-03A	M.D & O.C
09/09/13	27	IP-04	30	Use of Scannell Software Solutions (EnviroManager) instead of IF-03A	M.D & O.C
09/09/13	28	IP-05	02	Use of Scannell Software Solutions (EnviroManager) instead of IF-03A	M.D & O.C
16/10/13	29	EP-03	03	Introduction of EPA ALDER Portal	K.B
28/04/14	30	All EP's & IP's	01	Change of Company name and review of all Integrated and Env procedures	M.D & O.C
28/04/14	31	SP's	01	Change of Company name and review of all safety procedures including re-numbering & deletion of Motor Claim Notification Procedure – SP 08	O.C
06/05/15	32	EP-09	02	Ref to new form EF-11 added	SS



Doc. No.: Control	Revision No.: 01	Issue Date: 28th April 2014
Approved By:	Malcolm Dowling – <i>Group Compliance Manager</i>	Page 7 of 39

Circulation List

The Integrated Procedures Manual is a controlled document. Copies of the Procedures Manual are available as follows;

Copy Number	Holder
1 (Master Copy)	Group H&S Manager
2	Greenstar EnviroManager
3	Greenstar Intranet – Electronic Copy