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**ANNUAL ENVIRONMENTAL REPORT  
FOR STARRUS ECO HOLDINGS LTD.  
SARFIELD COURT, CORK  
LICENCE NO. W0136-03  
JANUARY 2014 – DECEMBER 2014**

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Client	Starrus Eco Holdings Ltd W0136-03			
Report No	Date	Status	Prepared By	Reviewed By
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# 1. INTRODUCTION

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This is the 2014 Annual Environmental Report (AER) for Starrus Eco Holdings Limited (Greenstar) Materials Recovery Facility (MRF) located at Sarsfieldcourt Industrial Estate, Glanmire, County Cork.

The report covers the period from the 1<sup>st</sup> January 2014 to the 31<sup>st</sup> December 2014. The content of the AER is based on Schedule H of the Waste Licence (W0136-03) and the report format follows guidelines set in the “Guidance Note for Annual Environmental Report” issued by the Environmental Protection Agency (Agency)<sup>1</sup>. Account is also taken of the AER Draft Guidance Document and AER Information Templates issued by the Agency in January 2013<sup>2</sup>.

Greenstar applied for a Waste Licence Review in July 2010 and a Proposed Decision was issued in October 2013. The PD allowed for an extension of the waste acceptance and operational hours to allow for 24 hour waste acceptance and operation, for the operation of a Civic Amenity Centre and to increase the waste acceptance limits pro-rata from 99,017 to 200,000 tonnes per annum. The waste types will remain the same as the previous licence (household, construction & demolition, commercial and industrial and biodegradable non-hazardous wastes). In addition Greenstar sought to remove the existing requirement to achieve a 50% recovery rate and to revise the compliance locations for noise emission limits from the site boundary to the nearest noise sensitive locations as is best practice. The revised licence (W0136-03) allowing for all of the above was issued in February 2014.

On 22<sup>nd</sup> November 2013 a significant fire destroyed the MRF building and waste acceptance activities ceased at the facility at this time. Greenstar managed the potential environmental impacts associated with the fire during and in the weeks following the fire event and has been in regular contact with the Agency since this time. There have been no long term significant environmental impacts associated with the fire. Firewater generated during the firefighting period was fully retained by the surface / foul drainage system on the site. Following analysis to determine its composition, the majority of the firewater was tankered to Eastgate Pumping Station for ultimate discharge to Carrigrennan Wastewater Treatment Plant for treatment with the agreement of Cork City and County Councils. The Agency has subsequently confirmed that it is satisfied that there was no risk of surface or groundwater pollution associated with the fire, so water quality in both local private wells and the nearby public supply were not subject to any risk of impact from the incident. Air quality modelling was also carried out and confirmed that the smoke plume had not impacted on nearest sensitive receptors.

The MRF building has since been rebuilt and waste has been accepted on site from the 24<sup>th</sup> November 2014.

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

<sup>2</sup> EPA (Environmental Protection Agency) 2012 Draft AER Guidance Document

## 2. SITE DESCRIPTION

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### 2.1 Site Location and Layout

The facility is situated within the Sarsfieldcourt Industrial Estate, approximately 8 km northeast of Cork City and 5 km north of Glanmire in the townland of Sarsfieldcourt. The site occupies 1.56 ha and comprises one MRF building, rebuilt in 2014 following a fire in late 2013, and ancillary infrastructure, including administration offices, yard and parking areas and a vehicle wash.

### 2.2 Waste Management Activities

During the reporting period the licence allowed Greenstar to accept and process up to 200,000 tonnes of waste per annum, comprising commercial/industrial non-hazardous waste, household waste, source separated biodegradable waste for composting and construction and demolition wastes. All waste processing takes place inside the waste transfer building, as specified in Condition 5.1 of the licence.

#### 2.2.1 Waste Types & Processes

During the reporting period, the facility was licensed to accept the following waste categories and maximum quantities<sup>3</sup>, as specified in Schedule A of the Licence: -

- Mixed Household Waste (90,000 tonnes)
- Commercial & Industrial Waste (52,500 tonnes)
- Construction & Demolition Waste (35,000 tonnes)
- Industrial Non-Hazardous Solids ( 47,490 tonnes)
- Household Hazardous Waste (10 tonnes)<sup>4</sup>

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<sup>3</sup> The maximum tonnage 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

<sup>4</sup> Hazardous household waste types, and similar waste from other sources, and quantities collected and stored at the civic amenity facility to be agreed in advance by the Agency.

The key processes carried out at the facility include: -

- Segregation of recyclable materials (wood, metals, glass)
- Segregation and bulking of C&D waste
- Transfer of recovered and residual materials to appropriately licensed recycling, recovery and disposal outlets
- Separation of organic fines from MSW waste by shredding and trommelling of the waste
- Bulking of material for transfer to appropriately licensed recycling, recovery and disposal outlets
- Production, baling and storage of refuse derived fuel (RDF)

#### *Household Waste*

Mixed household waste as delivered is processed to remove bulky items, food waste, metal and wood. The remaining material is baled and wrapped to produce RDF. All recyclable material is segregated, where possible, from the waste and transferred off-site to suitable licensed or permitted recycling facilities. The remaining non-recyclable and residual material not suitable for RDF production is sent to licensed landfills post processing.

#### *Commercial and Industrial Waste*

Greenstar provides skips of various sizes to a wide range of commercial and industrial premises in the Cork Region. Recyclable material is segregated, where possible, from the waste stream and transferred to suitable recycling facilities. The remaining non-recyclable and residual material is sent to licensed landfills or re-directed to the onsite baler for the production of RDF bales of waste material for export to approved recovery facilities.

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

## *Construction and Demolition Waste*

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

### *2.2.2 Plant List*

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

**Table 2.1** Existing Plant

<b>No.</b>	<b>Plant</b>	<b>Model</b>	<b>Operational Capacity</b>	<b>Standby Capacity</b>
1	Trommel	Waltec	80 t/hr	0
10	Conveyor Lines	Generic	80 t/hr	0
1	Baler	Bollegraff	12 t/hr	0
1	Articulated Grab	Liebherr L924	100 t/hr	100 t/hr
1	Loading Shovel	Volvo L120	70 t/hr	0
1	Wheel Wash	Eurojet	168 hr/wk	0
1	Picking Line	7-bay sorting line	Not in Use	N/A
1	Weighbridge – 2 Scales	-	56 hr/wk	56 hr/wk
1	Fork Lift	Jungheinrich 3.0 tonnes	60 hr/wk	60 hr/wk
2	Fork Lift	Jungheinrich 2.5 tonnes	60 hr/wk	60 hr/wk
1	Fork Lift	Jungheinrich 3.5 tonnes	60 hr/wk	60 hr/wk
1	Shredder/Bag Opener	M&J 2000	80 t/hr	0
1	Bale wrapper	Crosswrap	12 t/hr	0
1	Articulated Grab	Fuchs ML340	100 t/hr	100 t/hr

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### 3. EMISSION MONITORING

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

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

#### 3.1 Surface Water Monitoring

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

Surface water monitoring was carried out in Q-1 despite the discharge point being blocked off to prevent firewater contaminated surface water from discharging from site. This was unblocked in April 2014 following a final clean-up of all surface water drains and interceptors after the firewater was transferred off site and surface water re-commenced discharging from site via SW-3.

The range of analysis in the routine monitoring programme includes pH, electrical conductivity, Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD), total organic carbon (TOC), ammoniacal nitrogen, dissolved oxygen, total suspended solids (TSS), mineral oils and oils, fats and greases. The parameter list also includes coliform bacteria. The results of the routine monitoring are presented in Tables 3.1 to 3.3.

The Emission Limit Value (ELV) and Trigger Levels apply solely to the discharge from the facility (SW-3). The ELV's and trigger levels were revised in the licence issued in February 2014. These revisions included the addition of a trigger level for ammonia (0.14mg/l as N) and a lowering of the BOD and Suspended Solids trigger levels from 25mg/l and 35mg/l to 5mg/l and 15mg/l respectively. This has resulted in exceedances on 1 or more occasions during the year for each of the parameters.

Prior to the revision of the licence for the site the routine quarterly monitoring was 100% compliant with the ELVs and Trigger Levels. Following the revision of the licence there have been the following exceedances:



- Ammoniacal Nitrogen has exceeded the trigger level in each quarter in 2014;
- TSS exceeded the trigger levels in two of the four quarters (Q-1 and Q-3).

In light of the above results, a submission was made to the Agency in October 2014 seeking agreement to amend trigger levels.

BOD did not exceed the trigger level and Mineral Oil did not exceed the ELV throughout the year.

The quality of the water in the stream is generally good and is not being impacted by facility activities.

**Table 3.1** Surface water Monitoring Results 2014: SW-1

<b>Parameter</b>	<b>Units</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
pH	pH units	7.5	7.74	7.37	7.05
Conductivity	mS/cm	311	454	300	219
BOD	mg/l	<1	<1	<1	2
COD	mg/l	<7	<7	<7	25
Ammoniacal Nitrogen	mg/l	0.02	0.25	0.04	0.04
Dissolved Oxygen	mg/l	10	-	-	-
TOC	mg/l	<2	-	-	-
TSS	mg/l	37	23	<10	<10
Oils, Fats & Greases	mg/l	<0.01	-	-	-
Nitrate as NO <sub>3</sub>	mg/l	21.2	22.6	22.6	18.6
Nitrite as NO <sub>2</sub>	mg/l	<0.02	0.02	0.02	<0.02
Mineral Oils	mg/l	<0.01	<0.01	<0.01	<0.01
Total Coliforms	cfu/100ml	460	24,000	4,600	2,400
Faecal Coliforms	cfu/100ml	93	24,000	4,600	1,100

**Table 3.2** Surface water Monitoring Results 2014: SW-2

Parameter	Units	Q1	Q2	Q3	Q4
pH	pH units	6.91	7.41	7.99	6.72
Conductivity	mS/cm	293	272	272	236
BOD	mg/l	<1	<1	<1	1
COD	mg/l	<7	<7	<7	28
Ammoniacal Nitrogen	mg/l	0.03	0.09	0.02	0.03
Dissolved Oxygen	mg/l	11	-	-	-
TOC	mg/l	<2	-	-	-
TSS	mg/l	11	<10	11	14
Oils, Fats & Greases	mg/l	<0.01	-	-	-
Nitrate as NO <sub>3</sub>	mg/l	20.3	20.9	20.9	23.1
Nitrite as NO <sub>2</sub>	mg/l	<0.02	<0.02	<0.02	<0.02
Mineral Oils	mg/l	<0.01	<0.01	<0.01	<0.01
Total Coliforms	cfu/100ml	460	43	11,000	4,600
Faecal Coliforms	cfu/100ml	43	43	11,000	2,400

**Table 3.3** Surface water Monitoring Results 2014: SW-3

Parameter	Units	Q1	Q2	Q3	Q4	Trigger Levels	Emission Limit
pH	pH units	7.54	7.38	7.62	6.71	N/A	N/A
Conductivity	mS/cm	2117	287	387	383	N/A	N/A
BOD	mg/l	2	4	1	2	5	N/A
COD	mg/l	12	17	<7	25	N/A	N/A
Ammoniacal Nitrogen	mg/l	0.22	0.25	1.27	1.16	0.14	N/A
Dissolved Oxygen	mg/l	9	-	-	-	N/A	N/A
TOC	mg/l	<2	-	-	-	N/A	N/A
TSS	mg/l	52	<10	29	11	25	N/A
Oils, Fats & Greases	mg/l	<0.01	-	-	-	N/A	N/A
Nitrate as NO <sub>3</sub>	mg/l	3.5	8	8	16.1	N/A	N/A
Nitrite as NO <sub>2</sub>	mg/l	<0.02	1.51	1.51	0.05	N/A	N/A
Mineral Oils	mg/l	<0.01	1.67	<0.01	<0.01	N/A	5
Total Coliforms	cfu/100ml	4600	1,100	110,000	46,000	N/A	N/A
Faecal Coliforms	cfu/100ml	460	460	46,000	46,000	N/A	N/A

### 3.2 Groundwater Monitoring

There are two groundwater monitoring wells on site. One is located up and the other down gradient of site activities. The licence specifies annual groundwater monitoring however, the Agency requested Greenstar to increase the monitoring frequency to biannually in a letter dated the 8<sup>th</sup> January 2007 (ref W0136-02/GC06SMcD). Groundwater monitoring was carried out biannually at two locations (W-1 and W-2) in Q2 and Q4 2014. The direction of groundwater flow is considered to be from west to east towards the stream, which flows along the eastern side of the Industrial Estate. W-2 is at the upgradient and W-1 is at the downgradient side of the site.

The parameters analysed are those in the licence, including pH, Electrical Conductivity, Temperature, COD, BOD, Total Ammonia, Nitrates, Mineral Oil, Total and Faecal Coliforms. There are no Emission Limit Value (ELV) nor Trigger Levels. The tables also include the EPA Interim Guideline Values (IGVs) which were published in May 2003. The IGVs are not statutory guidelines but have been prepared by the EPA to assist in the assessment of impacts on groundwater quality in the context of the implementation of the Water Framework Directive. The Table also includes the Groundwater Regulations Threshold Value (GTV) which were introduced in 2010 (S.I. 9 of 2010) on foot of requirements from the Water Framework Directive and have evolved from the IGVs. The results are included on Tables 3.5 and 3.6.

The quality of the groundwater was good and generally consistent with the previous monitoring carried out. The results indicate that the facility had no impact on groundwater.

**Table 3.5** Groundwater Monitoring Results 2014: W-1

Parameter	Units	Q2	Q4	IGV	GTV
pH	pH units	6.77	7.30	6.5-9.5	-
Conductivity	mS/cm	0.360	0.306	-	0.800-1.875
Ammoniacal Nitrogen (N)	mg/l	0.11	0.02	-	0.065-0.175
Nitrate as NO <sub>3</sub>	mg/l	8.5	11.3	-	37.5
Nitrite as NO <sub>2</sub>	mg/l	<0.02	<0.02	-	0.375
Mineral Oils	mg/l	<0.01	<0.01	0.01	-
BOD	mg/l	1	<1	-	-
COD	mg/l	34	23	-	-
Total Coliforms	Counts / 100ml	<3	<3	0	-
Faecal Coliforms	Counts / 100ml	<3	<3	0	-

**Note**

Where a GTV exists this replaces the IGV value

**Table 3.6** Groundwater Monitoring Results 2014: W-2

Parameter	Units	Q2	Q4	IGV	GTV
pH	pH units	6.52	7.00	6.5-9.5	-
Conductivity	mS/cm	0.242	0.169	-	0.800-1.875
Ammoniacal Nitrogen (N)	mg/l	0.16	0.02	-	0.065-0.175
Nitrate as NO <sub>3</sub>	mg/l	8.5	12.3	-	37.5
Nitrite as NO <sub>2</sub>	mg/l	<0.02	<0.02	-	0.375
Mineral Oils	mg/l	<0.01	<0.01	0.01	-
BOD	mg/l	<1	<1	-	-
COD	mg/l	35	17	-	-
Total Coliforms	Counts / 100ml	<3	<3	0	-
Faecal Coliforms	Counts / 100ml	<3	<3	0	-

**Note**

Where a GTV exists this replaces the IGV value

**3.3 Wastewater Monitoring**

Wastewater generated on site is directed to a holding tank located to the east of the site security hut & weighbridge building. The accumulated liquid is removed off-site as required to an appropriate wastewater treatment plant (WWTP) for treatment.

At the time of the fire in November 2013, the surface water discharge from the site was blocked off and diverted to the wastewater holding tank. All firewater was therefore contained in the wastewater holding tank, process lines and surface water lines. A sample of the firewater was analysed in December 2013 and the results are outlined in Table 3.7 below.

Following the fire, as the site was no longer operational, no process wastewater was produced on site until the site began to accept waste in November 2014.

The wastewater was impacted significantly by the fire and the fire water generated in controlling the fire. Each of the parameters was significantly elevated compared to the pre-fire results in September 2013 and March 2013. A significant amount of sampling of retained water was completed and based on results of testing the waste water was considered suitable for treatment at the Carrigrennan and Athy WWTPs. Reports detailing the level of testing were forwarded to the Agency during 2014.

The volume of wastewater removed in 2014 was 3,095.58 tonnes, comprising mainly fire related wastewater.

In April 2014, following a final clean out of the fire related wastewater and subsequent cleaning of all process lines, surface water lines, holding tanks and interceptors, the surface water

discharge recommenced from site via SW-3. Laboratory analysis completed by the waste contractor in April 2014 is included in Table 3.7 below.

No wastewater sampling was completed in December 2014 as no wastewater was removed from site between November 2014 and December 2014.

Normal bi-annual sampling and analysis of the wastewater recommenced in Q-1 2015.

**Table 3.7** Wastewater Monitoring Results

Parameter	Units	December 2013*	April 2014**
pH	pH units	-	-
Conductivity	mS/cm	4,260	-
BOD	mg/l	5,950	2
COD	mg/l	70.97	26
Ammoniacal Nitrogen	mg/l	160	-
TSS	mg/l	5.590	13
Mineral Oils	mg/l	-	<

\* Firewater runoff

\*\* Post Cleanout of pipes / tanks etc.

### 3.4 Noise Survey

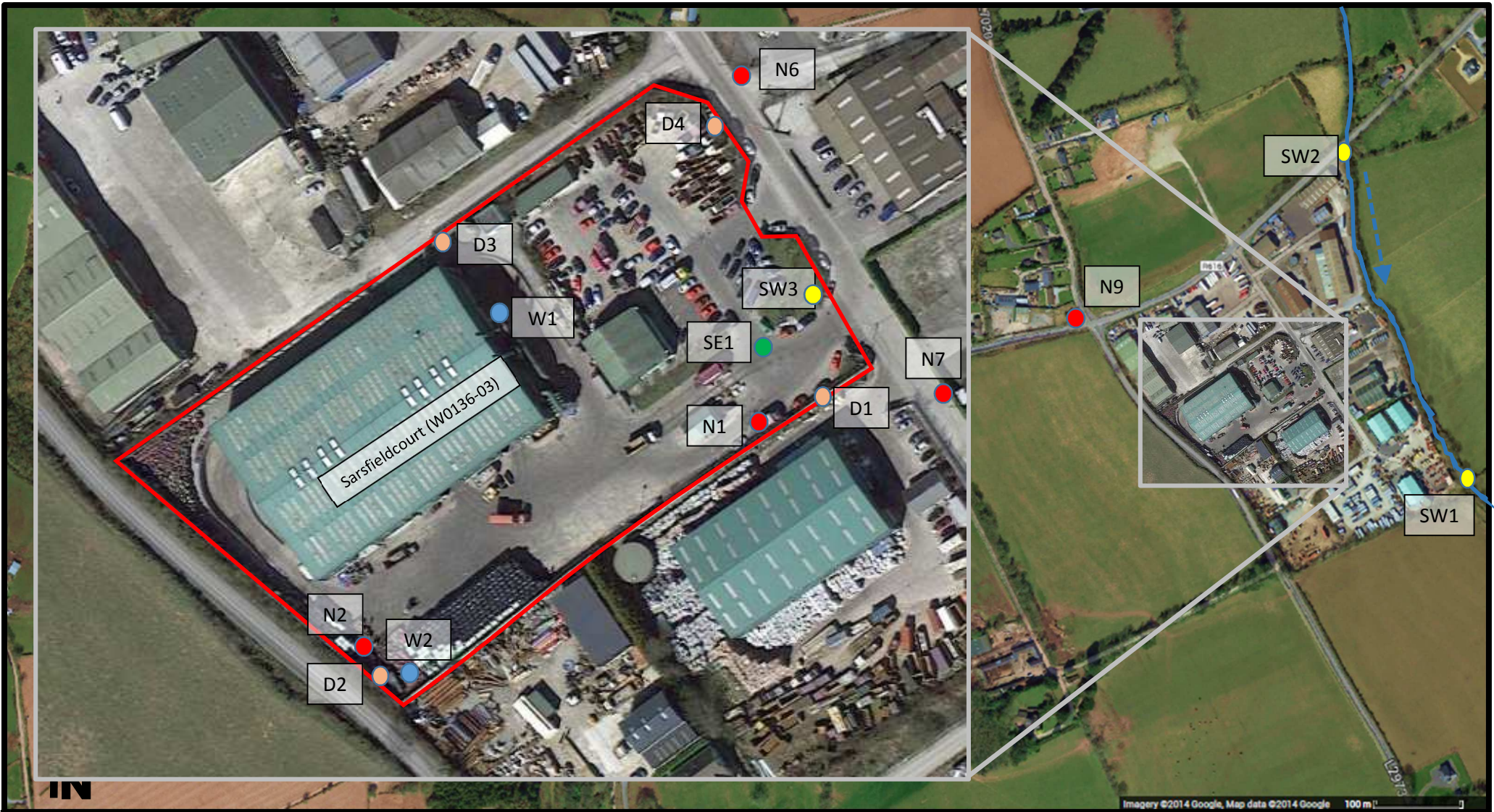
A noise survey is carried out annually at the facility. This was conducted in December 2014 following the recommencement of waste activities on site. Monitoring was carried out at five noise monitoring locations, N-1, N-2, N-5, N-6 and N-7 specified in the licence and one off-site noise sensitive location N-9. The survey concluded that the facility was fully compliant with its licence requirements. The results are included on Table 3.8.

The licence specifies a daytime noise emission limit of 55 dB daytime, 50dB evening time and 45 dB night time limits have been applied at the nearest noise sensitive location – N9. Noise emissions from the nearest industrial premises contributed to the noise environment at N9, however no emissions were audible from the Greenstar facility.

**Table 3.8** Noise Monitoring Results 3<sup>rd</sup> December 2014

Station	Time	L <sub>Aeq</sub> 30 min dB	L <sub>Af10</sub> 30 min dB	L <sub>Af90</sub> 30 min dB	Specific level* dB	Noise audible
N1	1233-1303	61	64	49	61	Facility emissions continuously dominant, chiefly trucks through gate and idling at weighbridge, but also air management system and slightly audible in-building operations. Offsite emissions audible from nearby premises, particularly adjacent site. No other noise audible apart from local crow calls and intermittent vehicle movements on estate roadway outside entrance.
N2	1354-1424	74	78	72	71	<b>&lt;3.5 m from wall for safety</b> Site generator emissions continuously dominant, and masking all other onsite sources other than forklift truck operating nearby occasionally, and power washer compressor operating intermittently at 5 m (washing itself not audible due to screening). No other noise audible.
N5	1051-1121	58	58	48	47	Starrus air handling system audible continuously at low level. No other site emissions audible apart from occasional truck movements through weighbridge area. Offsite, noise audible from intermittent vehicle movements through ind. est. roads, including occasional movements on adjacent road. Frequent noise audible from surrounding premises, particularly forklift truck in yard to W and activity including occasional hammering and dropping of steel in yard to N. Local bird song/calls. Distant road traffic to E during lulls in ind. est. noise. Aircraft.
N6	1124-1154	57	58	45	44	Starrus air handling system audible continuously at low level. No other site emissions audible apart from occasional truck movements through weighbridge area. Offsite, noise audible from intermittent vehicle movements through main ind. est. roadway, dominant when present. Noise frequently clearly audible from nearby premises from various activities and sources. Crow calls significant. Distant road traffic to E and SE audible at low level during lulls in ind. est. noise. Aircraft.
N7	1157-1227	61	63	52	<50	Starrus air handling system faintly audible continuously. Occasional truck movements through site entrance also clearly audible. Noise environment dominated by emissions from neighbouring waste management premises, chiefly truck and forklift movements on yard. Intermittent vehicle movements through main ind. est. roadway dominant when present. Noise frequently clearly audible from nearby premises, from various activities and sources. Crow calls significant.
N9	1431-1501	67	71	50	<<50	No site emissions audible. Mini excavator operating continuously on build project at 30 m dominant except when masked by frequent traffic movements through adjacent junction. Excavator and traffic also masking all industrial estate activity. Local birdsong. Van idling at 5 m significant 1438-1439. Occasional dog barking audible 100 m N.

\*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.



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**Legend:**

- Noise Monitoring Location
- Permit Boundary
- Stream
- ➔ Stream Flow Direction
- Wastewater Monitoring Location
- Dust Monitoring Location
- Groundwater Monitoring Location
- Surface Water Monitoring Location

**Waste Reg.No.W0136-03**

**Figure:**  
**Figure 3.1**

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.

**Client:**  
**Starrus Eco Holdings Ltd**

**Title:**  
**Emissions Monitoring Locations**

**Scale:**  
**NOT TO SCALE**

### 3.5 Dust Monitoring

The facility conducts dust monitoring on four occasions annually. The results are included in Table 3.9.

There were no exceedances of the dust deposition limit (350 mg/m<sup>2</sup>/day) set in the Licence at any of the monitoring locations during any of the monitoring events in 2014.

**Table 3.9** Dust Monitoring Results 2014

	<b>July mg/m<sup>2</sup>/day</b>	<b>August mg/m<sup>2</sup>/day</b>	<b>November mg/m<sup>2</sup>/day</b>	<b>December mg/m<sup>2</sup>/day</b>	<b>Deposition Limit mg/m<sup>2</sup>/day</b>
D-1	9.9	13	10.9	5.6	350
D-2	3.9	7.3	33.3	4.2	350
D-3	3.6	5.3	8.8	6.1	350
D-4	8.5	11.6	17.1	9.9	350

### 3.6 Nuisance Control Review

Greenstar installed and commissioned an air emission abatement system in the MRF building in 2006. The system was working well prior to the fire in November 2013 when it was completely destroyed. The system was re-installed when the MRF building was rebuilt in 2014.

The system extracts air from the waste handling area and passes it through a series of filters to remove any dust. The active carbon within the annular vessels acts on the odorous air by binding the odour causing molecules to the carbon thus removing odours from the released air. This technique in conjunction with maintaining the integrity of the extraction area forms the premise for the effective operation of the system and ensures treatment.

Other controls include automatic fast acting doors installed on both the tunnel entrance and exit and the in and out doorway in the main transfer building. This acts in conjunction with a building management system (BMS) which activates an alarm if a door is opened for longer than a pre-defined period.

During the reporting period Greenstar implemented a detailed Odour Management Plan (OMP) for waste handling operations. The OMP is a core document detailing operational and control measures appropriate to management and control of odours. It provides sufficient detail to allow facility and maintenance staff to clearly understand the odour management operational procedures for both normal and abnormal conditions.

Routine inspections and litter patrols, cleaning of site roads and yard areas and vermin control (Quality Pest) are maintained. Greenstar has introduced an Integrated Management System (IMS) and as part of this has developed a list of environmental management procedures, details of which are outlined in Section 7 and include nuisance control measures. The facility is certified to ISO 14001 and OHSAS 18001 standards and a further re-certification of the facility is scheduled during 2015.



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## **4. SITE DEVELOPMENT WORKS**

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### **4.1 Engineering Works**

Following the fire in November 2013 the MRF building was initially made safe with loose/damaged wall and roof cladding removed prior to the commencement of the reconstruction works.

In line with Condition 3.3 of the Licence, an SEW describing the proposed re-build was submitted to the Agency in June 2014 and the construction works commenced soon thereafter.

Works included the following;

- Erection of secondary steelwork, bracing, etc which will be supported by the existing steel frame.
- Erection of new cladding system including cladding rails, purins, sheeting, flashing, trim, gutters, down pipes and windows
- Repair of existing concrete and block works walls where required.
- Installation of new pedestrian doors
- Installation of new fast acting doors
- Installation of new electrical services
- Installation of odour abatement equipment as prior.
- Building sealing
- Ancillary minor site repairs as required

The MRF building was reconstructed on schedule and site began accepting waste on the 24<sup>th</sup> November 2014.

### **4.2 Summary of Resource & Energy Consumption**

Table 4.1 presents an estimate of the resources used on-site during the reporting period.

**Table 4.1** Estimates of Resources Used On-Site in 2012 & 2013

<b>Resources</b>	<b>Quantities 2013</b>	<b>Quantities 2014</b>
Road Diesel	826,926 litres	926,899 litres
Gas Oil	212,962 litres	85,369 litres
Gear Oil	37 litres	12 litres
Ad Blue	5,500 litres	5,800 litres
Hydraulic, Transmission, Engine Oil	3,600 litres	600 litres
Anti-Freeze	20 litres	20 litres
Electricity	265,850 kwh	6332 kwh
Truck Wash Detergent	160 litres	145 litres
Carbon	30,000 kgs	0

### **4.3 Bund Integrity Test**

Bund testing is carried out every three years. The bunds and tanks were tested in June 2012 (Chemstore Unit in Quarantine Area) and September 2012 (underground foul water and process water storage tanks). Completion of bund testing of the covered diesel oil storage tank was completed in February 2013. All bunds were passed fit for purpose. The bunds and tanks will be tested again in 2015.

Integrity testing of all drainage systems (process, foul and surface) was conducted on site in April 2012. Further testing (CCTV) is scheduled for Q1 2015.

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## **5. WASTE RECEIVED AND CONSIGNED FROM THE FACILITY**

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Table 5.1 shows the total quantities of waste received and consigned from the facility in 2014. Table 5.2 shows the quantities of waste received and consigned in previous years. A breakdown of the waste types is provided in accordance with the European Waste Catalogue and Hazardous Waste (EWC/HWL) list. A more detailed description of the wastes accepted and consigned are provided in the PRTR submission in Appendix 1.

The total amount received in 2014 was 10,306.991 tonnes. The total amount consigned was 10,850.73 tonnes including 3,095.58 tonnes of firewater generated during the 2013 fire that was transferred off-site in Q1 and Q2 2014.

The difference in waste received into and consigned from the facility in 2014 is 2,551.85 tonnes. This is related to waste which was kept on site at the end of 2014. This remaining waste would have been consigned from the site in Q-1 2015.

All the wastes consigned from the site went to recovery and disposal facilities agreed with the Agency.

**Table 5.1** Waste Received & Consigned 2014

<b>EWC</b>	<b>Description</b>	<b>Waste In</b>	<b>Waste Out</b>
12 01 13	Solder Dross	1.015	
15 01 01	Cardboard & Paper Packaging	30.347	
15 01 02	Plastic Packaging	10.798	
15 01 03	Wooden Packaging	9.585	
15 01 04	Metal Packaging	3.06	
15 01 06	Mixed Packaging	1,146.508	1,120.48
15 01 07	Glass Packaging	152.23	220.58
15 02 03	Solder Tubes & Wipes	0.66	
16 06 01	Lead Batteries – Hazardous Waste		2.005
16 10 02	Aqueous Liquid Waste*		3095.58*
17 09 04	Mixed C&D	22.44	122.4
19 12 09	C&D Inert Mixed	7.06	18.86
19 12 10	Solid Recovered Fuel	4.54	714.7
19 12 12	Mixed Residual Waste from mechanical treatment	84.126	46.9
20 01 01	Paper & Cardboard	11.7	
20 01 02	Glass	46.76	6.28
20 01 08	Compost and Commercial Food Wastes	520.29	498.36
20 01 30	Circuit Board Cut Offs	1	
20 01 35	REC Electronics & Electrics	2.033	33.757
20 01 36	WEEE	126.538	
20 01 38	Wood from municipal sources	15.7	19.84
20 01 39	Plastic from municipal sources	57.339	
20 01 40	Metal from municipal sources	9.25	250.27
20 03 01	Mixed Residual Waste	6,791.39	3,135.38
20 03 07	Bulky Waste	1252.622	1,565.34
	<b>Total Received</b>	10,306.991	
	<b>Total Consigned (excluding firewater)</b>		7755.152
	<b>Recovered</b>		7,506
	<b>Disposed (excluding firewater)</b>		205.152
	<b>Recovery Rate (%)</b>		96.79%

\* Firewater generated on site during November 2013 Fire, transferred off site in Q1 and Q2 2014.

**Table 5.2** Waste Received & Consigned in recent years

	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>
<b>Total Received</b>	71,812	75,619	67,621	68,252	54,697
<b>Total Consigned</b>	76,478	74,035	69,848	69,988	46,394
<b>Total Recovered</b>	62,452	34,038	27,263	31,807	15,521
<b>Total Disposed</b>	14,026	39,996	42,585	38,181	40,872
<b>Recovery Rate</b>	81.66%	46%	39%	45.45%	27.52%

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## **6. ENVIRONMENTAL INCIDENTS AND COMPLAINTS**

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### **6.1 Incidents**

Throughout the year there were occasional exceedances of the performance standards in relation to surface water discharge for Ammoniacal Nitrogen (4 occasions) and TSS (2 occasions). In total, four incident reports were submitted in 2014.

All exceedances were treated as incidents and reported to the Agency, Cork County Council and Inland Fisheries Ireland.

### **6.2 Register of Complaints**

Greenstar maintains a register of complaints received in accordance with Condition 10.4 of the waste licence. The complaints register includes the details of all complaints and the actions carried out in response to each complaint. There were no complaints during the reporting period that related to activity at the licensed site.

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## 7. ENVIRONMENTAL DEVELOPMENT

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### 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 implement documented procedures and instructions in accordance with the requirements of both the OHSAS 18001:2007 and ISO 14001:2004. The facility passed an external IMS audit in July 2013. A further audit is scheduled for 2015.

The schedule of Objectives and Targets, including their status for 2014 (Table 7.1), as well as the proposed Objectives and Targets for 2015 (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

Details of the site management structure are given below.

**Name:** Louise Demir

**Responsibility:** Operations Manager.

**Experience:** 7 years waste management experience. BSc. Biochemistry (UCC). FÁS Waste Management Course.

**Name:** Michael Hannon

**Responsibility:** Support Service Manager / Deputy Operations Manager.

**Experience:** 13 years waste management experience. FÁS Waste Management Course.

**Name:** Donal Monahan

**Responsibility:** Director of Resource and Recovery

**Experience:** 20 years waste management experience. FÁS Waste Management Course.

### 7.1.2 *Staff Training*

Environmental training is carried out for any new staff employed at the facility as required.

## 7.2 Environmental Management Programme

### 7.2.1 *Schedule of Objectives 2014*

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

## 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 ensuring that the policy itself and records are available to the public and interested parties.

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

Records available for public inspection on site include:-

- Environmental 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 at 1890 600 900.

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



**Table 7.1** Schedule of Objective and Targets 2014

No	Objective	Target	Responsibility	Timescale	Status
1	<b>MRF Reconstruction</b>	Submit SEW proposal to the Agency for agreement and complete the reconstruction of the MRF Building	Site Management /EHS	Q3	Complete
2	<b>Development and adoption of Fire Prevention Procedure at the facility</b>	Reduce risk of fire and enable early detection	Site Management /EHS	Q-2	Complete
3	<b>Review of Emergency Response Plan to incorporate fire prevention procedure and new structure</b>	Revision of Plan and additional training for site personnel	Site Management /EHS	Q-2	Complete
4	<b>Achieve re-certification to ISO 14001 and OHSAS 18001 standard</b>	3 year certification period expires in 2014. The facility requires re-certification.	Site Management /EHS	Q-3/Q-4	Complete
5	<b>Develop and maintain traffic management plan at the facility</b>	Review of all on-site traffic management	Site Management /EHS	Q-2/Q-3	Complete
6	<b>Environmental Training of Facility Staff</b>	Update training presentation with regard to new Licence and ensure training of key managerial staff	Site Management /EHS	Q-2/Q-3	Complete
7	<b>Site Signage</b>	Facility Notice Boards to be replaced to reflect new ownership	Site Management /EHS	Q1	Complete

<b>8</b>	<b>Surface Water Drainage Assessment</b>	To resolve ongoing elevated levels of coliforms within surface water drainage system.	Site Management /EHS	Q2	Complete
<b>9</b>	<b>Review and Assess the Effectiveness of Nuisance Control Procedures</b>	Continually review and assess all nuisance control procedures to ensure minimal impact on the surrounding area.	Site Management /EHS	Ongoing	Ongoing
<b>10</b>	<b>Pollution Prevention</b>	Strive to ensure that monitoring results comply with the licence limits and investigate any exceedances of emission limit values.	Site Management /EHS	Ongoing	Ongoing
<b>11</b>	<b>Energy &amp; Resource Consumption</b>	Summarise energy and resource usage on a quarterly basis with a view to reducing consumption	Site Management /EHS	Q2	Ongoing
		Review and implement findings of Energy Audit			Ongoing
		Upgrade on site generator to ESB substation			Not complete

**Table 7.2** Schedule of Objective and Targets 2015

No	Objective	Target	Responsibility	Timescale
1	<b>RDF Line Install</b>	Install upgraded RDF processing capability	Site Management / EHS	Q2
2	<b>Integrity Testing of all drainage systems (process, foul and surface).</b>	As per licence requirements. Submit to EPA	Site Management / EHS	Q1
3	<b>Bund and Tank Integrity Testing</b>	As per licence requirements. Submit to EPA	Site Management / EHS	Q1
4	<b>Review and Assess the Effectiveness of Nuisance Control Procedures</b>	Continually review and assess all nuisance control procedures to ensure minimal impact on the surrounding area.	Site Management / EHS	Ongoing
5	<b>Pollution Prevention</b>	Strive to ensure that monitoring results comply with the licence limits and investigate any exceedances of emission limit values.	Site Management / EHS	Ongoing
6	<b>Track Energy &amp; Resource Consumption</b>	Summarise energy and resource usage on a quarterly basis with a view to reducing consumption	Site Management / EHS	Ongoing
		Review and implement findings of Energy Audit		Ongoing
		Upgrade on site generator to ESB substation		Q4
7	<b>Review of Emergency Response Plan to incorporate fire prevention system</b>	ERP to be updated and appropriate training provided	Site Management / EHS	Q2
8	<b>Review of Odour Management Plan in line with Condition 2.3 of the Licence</b>	Review existing OMP and revise	Site Management / EHS	Q2

<b>9</b>	<b>Building Integrity Testing</b>	Further Smoke Test to be completed	Site Management / EHS	Q2
<b>10</b>	<b>Document a Preventative Maintenance (PM) plan for inspection and cleaning of plant and equipment wrt fire</b>	Incorporate into existing Site Inspection Database (EF-10A) and site specific PM plans	Site Management / EHS	Q2
<b>11</b>	<b>Document a Preventative Maintenance (PM) plan for inspection of hardstand and drainage infrastructure on site</b>	Incorporate into existing Site Inspection Database (EF-10A)	Site Management / EHS	Q2
<b>12</b>	<b>Review EWC codes in active use group wide and implement recommendations at each site</b>	Review EWC codes with Finance/WIMS & advise changes to site management through additional training	EHS / Finance / WIMS	Q2 / Q3

#### **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 prior to completion of the Licence transfer in 2014.

#### **7.5 Nuisance Controls**

Greenstar has contracted a vermin control company Quality Pest to carry out nuisance control at the facility.

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## **8. OTHER REPORTS**

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### **8.1 European Pollutant Release and Transfer Register**

Under the European Pollutant Release and Transfer Register Regulation (EC) No. 166/2006 Greenstar are required to submit information annually to the Agency. A copy of the information submitted to the Agency via the web-based data reporting system is included in Appendix 1.

# **APPENDIX 1**

European Pollutant Release and Transfer Register



Environmental Protection Agency

| PRTR# : W0136 | Facility Name : Starrus Eco Holdings Limited (Munster) | Filename : W0136\_2014.xls | Return Year : 2014 |

[Guidance to completing the PRTR workbook](#)

# AER Returns Workbook

Version 1.1.18

<b>REFERENCE YEAR</b>	2014
-----------------------	------

## 1. FACILITY IDENTIFICATION

Parent Company Name	Starrus Eco Holdings Limited
Facility Name	Starrus Eco Holdings Limited (Munster)
PRTR Identification Number	W0136
Licence Number	W0136-02

### Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Sarsfieldcourt Industrial Estate
Address 2	Sarsfieldcourt
Address 3	Glanmire
Address 4	
	Cork
Country	Ireland
Coordinates of Location	-8.40596 51.9631
River Basin District	IESW
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
<b>AER Returns Contact Name</b>	Malcolm Dowling
<b>AER Returns Contact Email Address</b>	malcolm.dowling@greenstar.ie
<b>AER Returns Contact Position</b>	Environmental Executive
<b>AER Returns Contact Telephone Number</b>	01-2947949
<b>AER Returns Contact Mobile Phone Number</b>	
<b>AER Returns Contact Fax Number</b>	
<b>Production Volume</b>	0.0
<b>Production Volume Units</b>	
<b>Number of Installations</b>	0
<b>Number of Operating Hours in Year</b>	0
<b>Number of Employees</b>	10
<b>User Feedback/Comments</b>	
<b>Web Address</b>	

## 2. PRTR CLASS ACTIVITIES

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

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

Is it applicable?	No
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
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) ?	Yes
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4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : W0136 | Facility Name : Starrus Eco Holdings Limited (Munster) | Filename : W0136\_2014.xls | Return Year : 2014 |

31/03/2015 10:44

**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 (Munster)

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# : W0136 | Facility Name : Starrus Eco Holdings Limited (Munster) | Filename : W0136\_2014.xls | Return Year : 2014 |

31/03/2015 10:44

**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# : W0136 | Facility Name : Starrus Eco Holdings Limited (Munster) | Filename : W0136\_201

31/03/2015 10:45

**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# : W0136 | Facility Name : Starrus Eco Holdings Limited (Munster) | Filename : W0136\_2014.xls | Return Year : 2014 |

31/03/2015 10:45

**SECTION A : PRTR POLLUTANTS**

POLLUTANT		RELEASURES TO LAND			Please enter all quantities in this section in KGs		
No. Annex II	Name	M/C/E	METHOD		QUANTITY		
			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		RELEASURES TO LAND			Please enter all quantities in this section in KGs		
Pollutant No.	Name	M/C/E	METHOD		QUANTITY		
			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# : W0136 | Facility Name : Starrus Eco Holdings Limited (Munster) | Filename : W0136\_2014.xls | Return Year : 2014 |

31/03/2015 10:46

Please enter all quantities on this sheet in Tonnes

25

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					
Within the Country	15 01 06	No	1120.48	mixed packaging	R3	M	Weighed	Offsite in Ireland	Killarney Waste Disposal Limited,W0217-01	Aughacurreen,,Killarney,Co. Kerry,Ireland		
Within the Country	15 01 07	No	9.72	glass packaging	R5	M	Weighed	Offsite in Ireland	Ashgrove Plant . t/a as Ashgrove Recycling,W0147-01	Churchfield Industrial Estate,Churchfield,Cork,,Ireland		
Within the Country	15 01 07	No	210.86	glass packaging	R5	M	Weighed	Offsite in Ireland	Clonmel Waste Disposal Ltd,W0147-02	Lawlesstown,Clonmel,,Co Tipperary,Ireland		
Within the Country	16 06 01	Yes	2.005	lead batteries	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	17 09 04	No	3.44	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	R13	M	Weighed	Offsite in Ireland	Ashgrove Plant . t/a as Ashgrove Recycling,W0147-01	Churchfield Industrial Estate,Churchfield,Cork,,Ireland		
Within the Country	17 09 04	No	118.96	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	R13	M	Weighed	Offsite in Ireland	Mallow Contracts,CK(N)277/5	...,Mournabbey,Co Cork,Ireland		
Within the Country	19 12 09	No	18.86	minerals (for example sand, stones)	R5	M	Weighed	Offsite in Ireland	Mallow Contracts,CK(N)277/5	...,Mournabbey,Co Cork,Ireland		
Within the Country	19 12 10	No	714.7	combustible waste (refuse derived fuel) other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 09 02 and 17 09 03	R13	M	Weighed	Offsite in Ireland	Wiser Bins,WCP-CK-10-0738-01	Unit 6 Rosehill Industrial Estate,Ballinacurra,Midleton,Co. Cork,Ireland		
Within the Country	19 12 12	No	46.9	11	R13	M	Weighed	Offsite in Ireland	MRF Greenstar Bray,W0053-03	.,Fassaroe,Bray ,Co Wicklow ,Ireland		
Within the Country	20 01 02	No	6.28	glass	R5	M	Weighed	Offsite in Ireland	Ashgrove Plant . t/a as Ashgrove Recycling,W0147-01	Churchfield Industrial Estate,Churchfield,Cork,,Ireland		
Within the Country	20 01 08	No	498.36	biodegradable kitchen and canteen waste discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing	R3	M	Weighed	Offsite in Ireland	Acorn Recycling Ltd,W0249-01	...,Littleton,Co Tipperary,Ireland		
Within the Country	20 01 35	Yes	33.757	hazardous 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	19.84	wood other than that mentioned in 20 01 37	R13	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork,,Ireland		
Within the Country	20 01 40	No	81.42	metals	R4	M	Weighed	Offsite in Ireland	Cork Metal Company,WFP-CK-10-0067-01	Dublin Hill,Cork,,.,Ireland		
Within the Country	20 01 40	No	168.85	metals	R4	M	Weighed	Offsite in Ireland	Clearcircle Metals (Limerick),WFP-LKC-11-001-01	Ballysimon Road ,Limerick,,.,Ireland		
Within the Country	20 03 01	No	3114.12	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Advanced Skip Hire/Wiser,WCP-CK-09-0620-01	Unit 6 Rosehill Commercial Park,Ballinacurra,Midleton,Co Cork,Ireland		
Within the Country	20 03 07	No	73.2	bulky waste	R13	M	Weighed	Offsite in Ireland	Ashgrove Plant . t/a as Ashgrove Recycling,W0147-01	Churchfield Industrial Estate,Churchfield,Cork,,Ireland		
Within the Country	20 03 07	No	117.04	bulky waste	D5	M	Weighed	Offsite in Ireland	Bord na Mona. ,W0201-03	.,.,.,Ireland		
Within the Country	20 03 07	No	3.86	bulky waste	R13	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork,,Ireland		
Within the Country	20 03 07	No	110.1	bulky waste	D5	M	Weighed	Offsite in Ireland	Gortadroma Landfill,W0017-03	Ballynahill,Co. Limerick,,.,Ireland		
Within the Country	20 03 07	No	1261.14	bulky waste	R13	M	Weighed	Offsite in Ireland	MRF Greenstar Bray,W0053-03	.,Fassaroe,Bray ,Co Wicklow ,Ireland		
Within the Country	16 10 02	No	2422.0	aqueous liquid wastes other than those mentioned in 16 10 01	D9	M	Volume Calculation	Offsite in Ireland	Irish Water,D0033-01	Carrigrennan WWTP,,Little Island,Co. Cork,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		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	Haz Waste - Name and Licence/Permit No of Recover/Disposer		
Within the Country	16 10 02	No	575.0	aqueous liquid wastes other than those mentioned in 16 10 01	D9	M	Volume Calculation	Offsite in Ireland	Irish Water Ltd,D0003-01	Athy Wastewater Treatment Plant,Athy,Co. Kildare,Co. Kildare,Ireland		
Within the Country	16 10 02	No	22.0	aqueous liquid wastes other than those mentioned in 16 10 01	R3	M	Volume Calculation	Offsite in Ireland	Cremin Farm Compost Ltd,WFP/LK/2014/23A	Coolaleen,Broadford,Co. Limerick,..,Ireland		
Within the Country	16 10 02	No	76.58	aqueous liquid wastes other than those mentioned in 16 10 01	D9	M	Volume Calculation	Offsite in Ireland	Rilta Environmental Ltd,W0192-03	Grants Drive,Greenogue Business Park,Rathcoole,Co. Dublin,Ireland		
Within the Country	20 03 01	No	21.26	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	MRF Greenstar Bray,W0053-03	..,Fassaroe,Bray ,Co Wicklow ,Ireland		

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

# **APPENDIX 2**

Procedures List





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

**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



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

**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