South Dublin County Council

Ballymount Solid Waste
Recycling and Baling Centre and Civic Amenity

Waste Licence Reg. No.W0003-03

Annual Environmental Report
1st January 2012 – 31st December 2012

Comhairle Contae
Átha Cliath Theas
South Dublin County Council

Issued 31st March 2013

BALLYMOUNT SOLID WASTE

RECYCLING AND BALING CENTRE

ANNUAL ENVIRONMENTAL REPORT

1st January 2012 – 31st December 2012

Environmental Services Department,
South Dublin County Council,
PO Box 4122,
Town Centre,
Tallaght,
Dublin 24.

March 2013

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ANNUAL ENVIRONMENTAL REPORT

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REVISION CONTROL TABLE

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4	3rd Draft	P.G	DF		24/01/05	3
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7	1st Draft	G.M.	LM		02/04/08	5
8	1st Draft	E.B.	LM		23/03/09	5
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1. INTRODUCTION

South Dublin County Council (the Council) holds a Waste Licence (Reg. No. 0003-03) to operate Ballymount Solid Waste Recycling and Baling Centre and Civic Amenity Facility at Ballymount Avenue, Walkinstown, Dublin 12. In accordance with the requirements of Condition 11.5 of the Waste Licence, an Annual Environmental Report (AER) for the facility must be submitted to the Environmental Protection Agency (EPA).

This is the twelfth AER, covering the reporting period 1st January 2012 – 31st December 2012 as agreed with the Agency.

The facility is operated on the basis of a joint venture agreement between the Council and Greenstar Ltd. The facility is located at: -

Ballymount Solid Waste Recycling and Baling Centre,
Ballymount Avenue,
Walkinstown,
Dublin 12

Tel. (01) 4621251 Fax: (01) 4525145

National Grid co-ordinates for the location of the facility are: E 3103 N 2302.

1.1. South Dublin County Council/Greenstar Policy

The Council and Greenstar have developed an Environmental Policy for the facility, which is committed to conducting all activities such that they have a minimal effect on the environment.

All levels of management are committed to implementing and maintaining an environmental management programme in compliance with the requirements of the Environmental Protection Agency.

The key objectives of the Council and Greenstar's joint venture management committee are: -

1. A commitment to compliance with the Waste Licence and all pertinent environmental legislation and approved codes of practice. To this end, the joint venture management committee will co-operate fully with all regulatory authorities.

2. To continually develop and modify all procedures to reduce environmental impacts.

3. To train and educate all employees in the skills and understanding necessary to minimise any risk to the environment.

4. To ensure that all management and employees are familiar with the conditions of the Waste Licence and the content of the Environmental Management Plan (EMP).

2. DESCRIPTION OF THE SITE

The Recycling and Baling Centre is located at Ballymount Avenue, Walkinstown, Dublin 12, within an area zoned for industrial development. The site location plan is shown in Figure 1. The facility is surrounded in the industrial park by various warehouses and industrial buildings and is adjacent to the N81 (Greenhills Road) on its eastern boundary.

Waste handling activities at the facility consist of the compaction of municipal household waste for transfer to Ballnagran (Greenstar) and Drehid (Bord na Mona) Landfill in 2012, and the acceptance of certain recyclable waste types at the Civic Amenity Facility. The main activity is the Compaction/baling and transfer of waste to Ballnagran and Drehid Landfill.

In January 2012, Dublin City Council ceased its waste collection service. Ballymount Baling Station acted as the main waste transfer station for Dublin City Councils waste collection service. Thus as of from January 2012, no further waste was static compacted and sent to landfill from Ballymount Baling Station.

The licensed waste activities are listed below.

Licensed waste disposal activities, in accordance with the Third Schedule of the Waste Management Act 1996 (as amended) include: -

Class 12:	Repackaging prior to submission to any activity referred to in this Schedule.
Class 13:	Storage prior to submission to any activity referred to in this Schedule, other than temporary storage, pending collection, on the premises, where the waste concerned is produced.

Licensed waste recovery activities, in accordance with the Fourth Schedule of the Waste Management Act, 1996 (as amended) include: -

Class 3:	Recycling or reclamation of metals and metal compounds.
Class 4:	Recycling or reclamation of other inorganic materials.
Class 13:	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this schedule, other than the temporary storage, pending collection, on the premises where such waste is produced.

It is considered that the activities carried out at the waste transfer station do not have an adversely significant impact upon local environmental conditions due to the fully enclosed nature of the facility. While the Civic Amenity Facility is not enclosed, there are no activities carried out which affect local environmental conditions.
Local environmental conditions do not significantly influence the facility. Rainfall records for the area indicate an average rainfall of 850 mm in 2012 (Dublin Airport, Met Eireann). The surface water drainage system is designed with an adequate capacity for high rainfall events at the site. Average prevailing winds are from a south westerly direction.

There are approximately 8 people employed on a full-time basis at the facility.

Figure 2.1 Site Location Map

3. MONITORING AND EMISSIONS SUMMARY

Environmental monitoring results for the reporting period are outlined in the following sections. An interpretation of the results and impacts on the environment are also presented. A site plan showing the position of each monitoring location is included in the Appendix.

3.1. Monitoring of Surface Water

Condition 8.1 of Waste Management Licence W0003-03 requires that quarterly monitoring be undertaken at three points on the partially culverted stream to the Northwest of the facility. Two of the monitoring points (S1 and S2) are upstream (us) of the site, while the other point (S3) is downstream (ds) of the site. Surface water parameters are measured quarterly in accordance with Schedule D.4 of the Licence. The surface water monitoring results are summarised in Table 3.1, which can be found in the Appendix and in Figures 3.1 to 3.5. The results are compared where applicable to the limits for the A3 water quality class as set out in the EU Quality of Surface Water Intended for the Abstraction of Drinking Water Regulations (SI No. 294 of 1989).

The surface water monitoring results for grab samples taken at S1, S2 and S3 during the reporting period 1st January to 31st December 2012 are as follows;

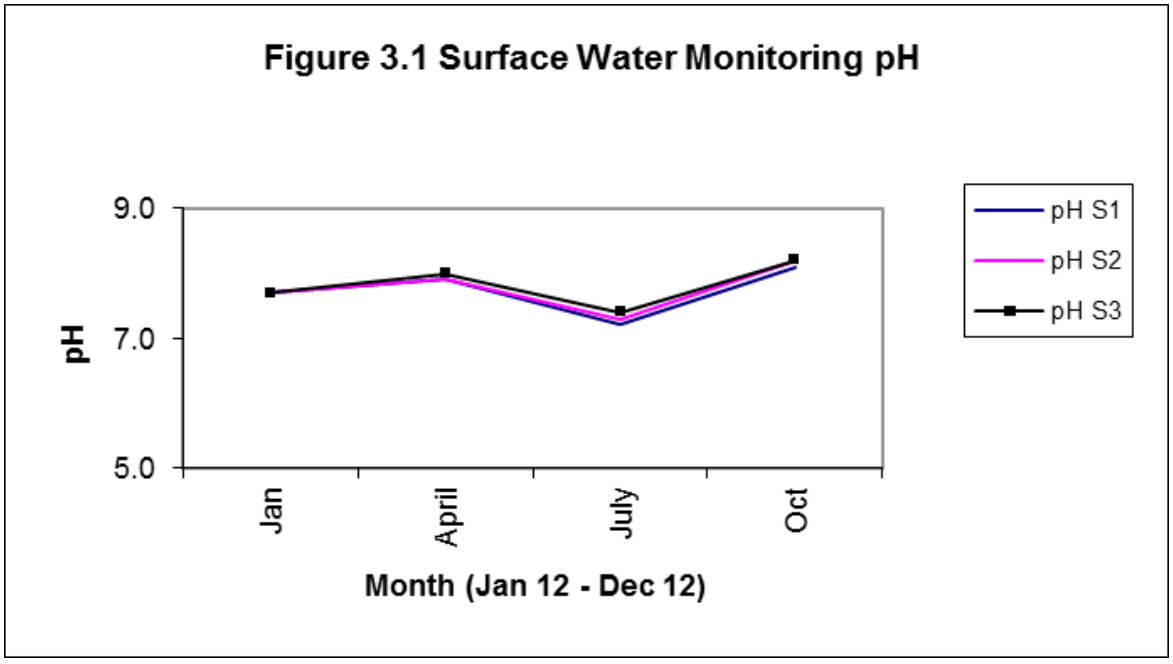

Figure 3.1 Surface Water Monitoring - pH

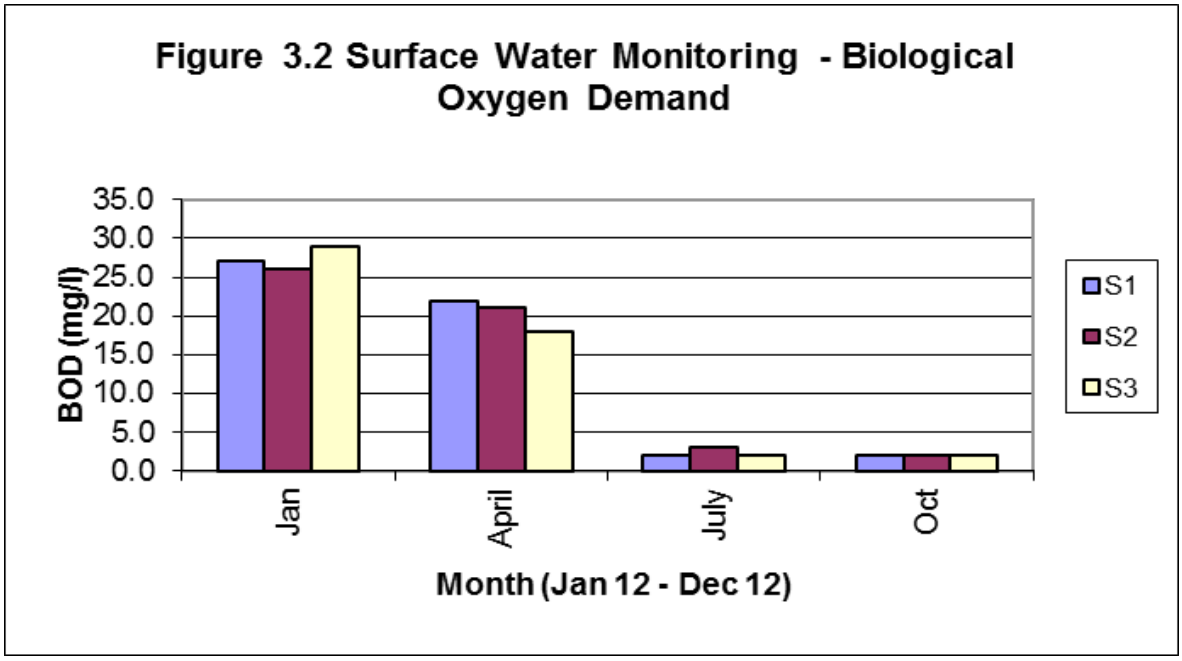

Figure 3.2 Surface Water Monitoring - Biological Oxygen Demand (ELV 25mg/l)

(BOD detectable limit: <2mg/l)

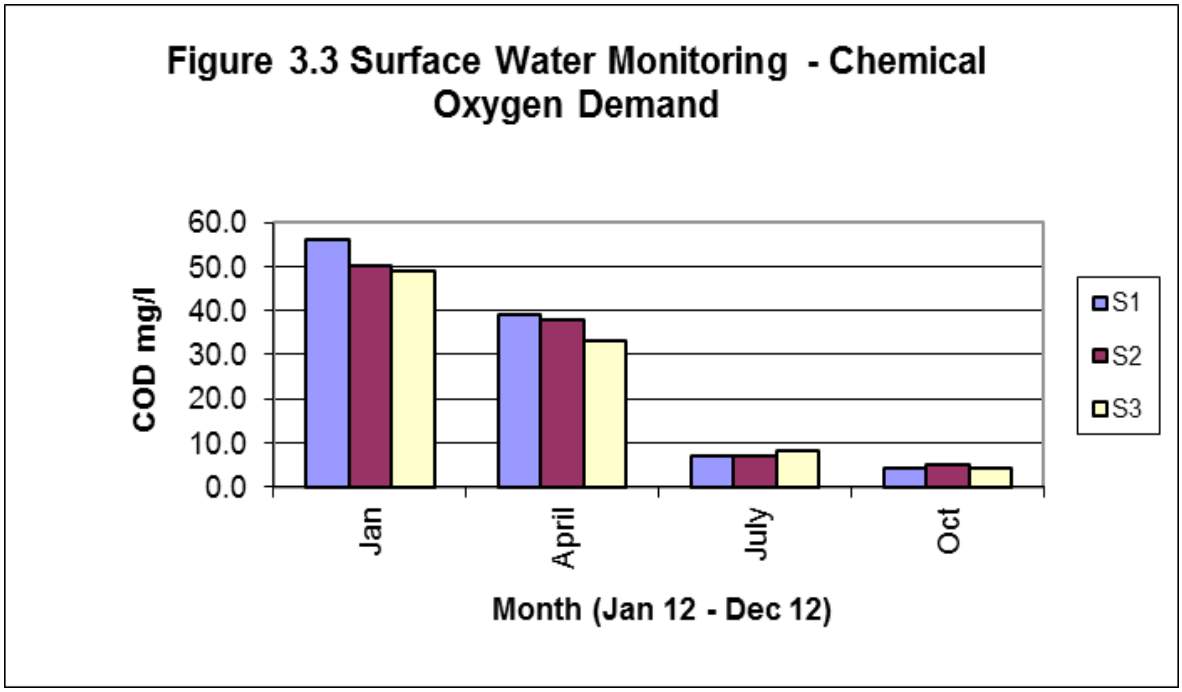

Figure 3.3 Surface Water Monitoring - Chemical Oxygen Demand (ELV 150mg/l)

(COD detectable limit: <4mg/l)

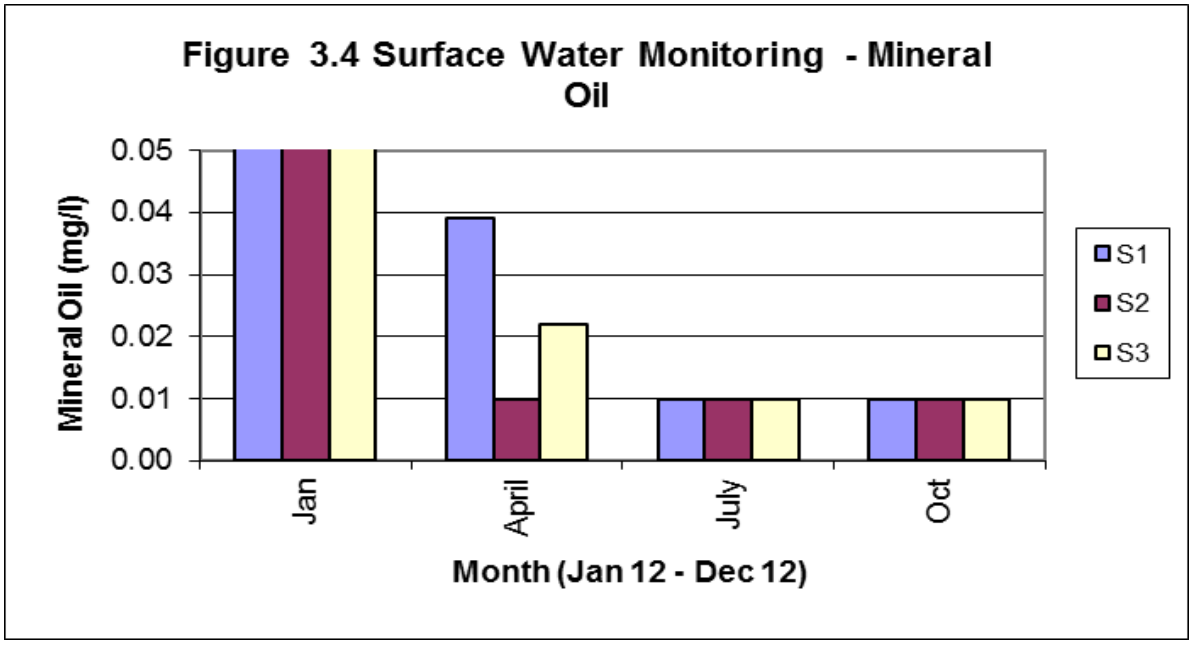

Figure 3.4 Surface Water Monitoring - Mineral Oil (ELV 10mg/l)

(Mineral Oil detectable limit: 0.04mg/l)

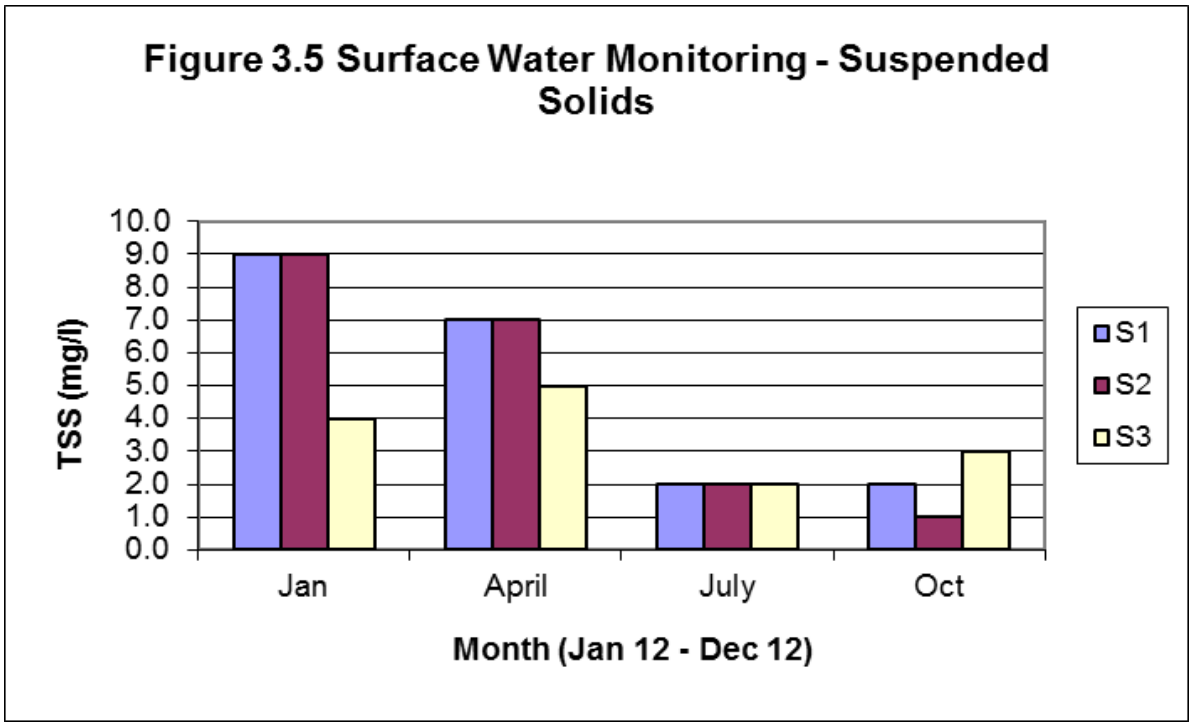

Figure 3.5 Surface Water Monitoring - Suspended Solids (ELV 35mg/l)

3.2. Emissions to Surface Water

The Licence requires that emissions to surface water be measured quarterly (subject to rainfall events) at SWE1A and SWE1B. Schedule C.3 sets out Emission Limit Values for Chemical Oxygen Demand (COD) and Oils, Fats, Greases (OFG). Condition 6.6.2 sets out the trigger levels for Biological Oxygen Demand (BOD) and Suspended Solids (SS).

Table 3.2 Due to insufficient sampling volumes at rainfall events no sample was obtained during the reporting period.

Monitoring Point	SWE1A				SWE1B			
	COD mg/l	OFG mg/l	BOD mg/l	SS mg/l	COD mg/l	OFG mg/l	BOD mg/l	SS mg/l
ELV*	**150**	**10**	**25**	**35**	**150**	**10**	**25**	**35**
January	No flow	No flow	No flow	No flow	No flow	No flow	No flow	No flow
April	No flow	No flow	No flow	No flow	No flow	No flow	No flow	No flow
July	No flow	No flow	No flow	No flow	No flow	No flow	No flow	No flow
November	No flow	No flow	No flow	No flow	No flow	No flow	No flow	No flow

Table 3-1 Emissions to Surface Waters

3.3. Emissions to Foul Sewer

Condition 8.1 requires that emissions to foul sewer (at F6) be monitored on a quarterly basis. Due to the cessation of the static compaction operations in January 2012 for the remainder of the reporting year, insufficient foul sampling volumes were available for quarters 2, 3 and 4 respectively. No exceedence of the Emission Limit Values as set out in Schedule C.4 of the Waste Licence was recorded to the sewer over the 1 sampling event. The results are illustrated in Figures 3.6 to 3.12. A table of monitoring results is included in the Appendix.

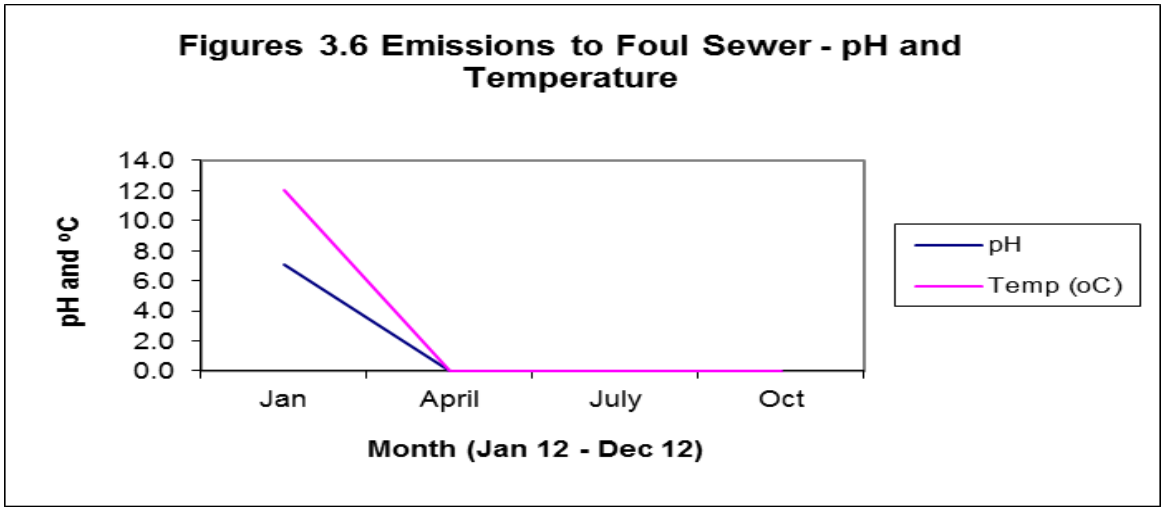

Figure 3.6 Emissions to Foul Sewer - pH and Temperature (ELV 5-10 & 42^{O}C)

(April-Dec; insufficient sampling volume)

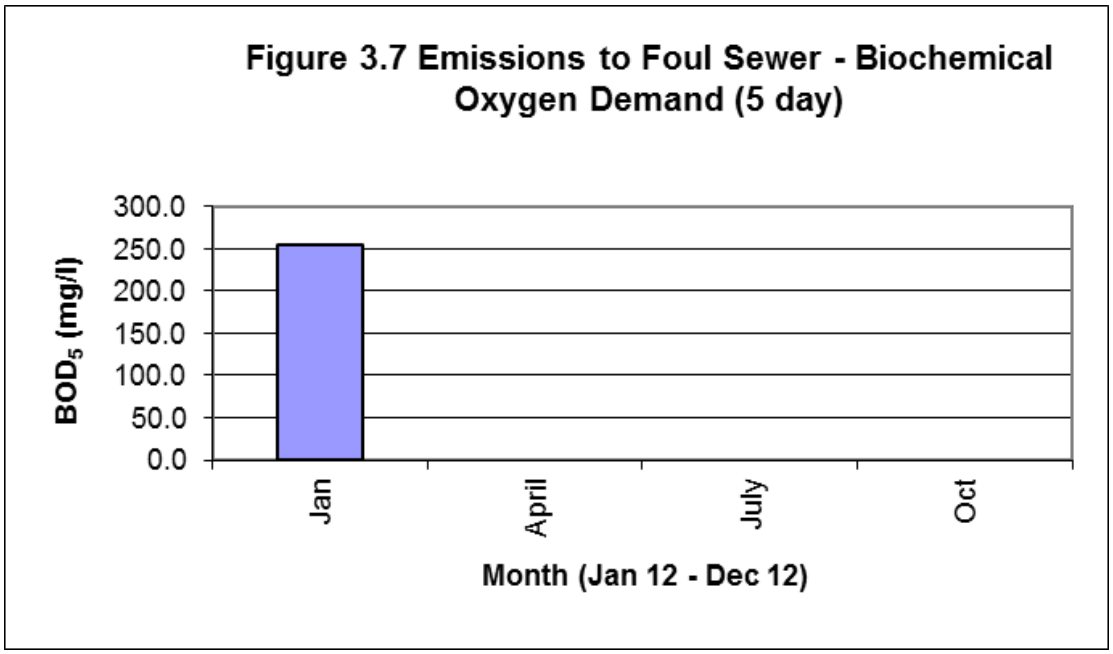

Figure 3.7 Emissions to Foul Sewer - Biochemical Oxygen Demand (5 day) (ELV 10,000mg/l)

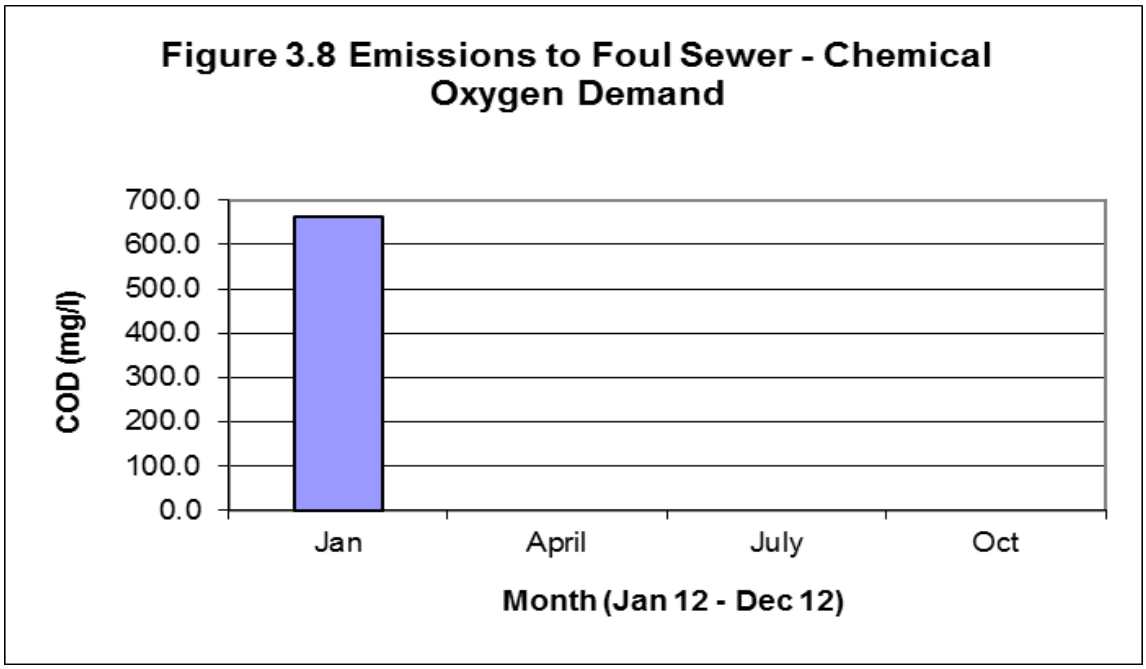

Figure 3.8 Emissions to Foul Sewer - Chemical Oxygen Demand (ELV 30,000mg/l)

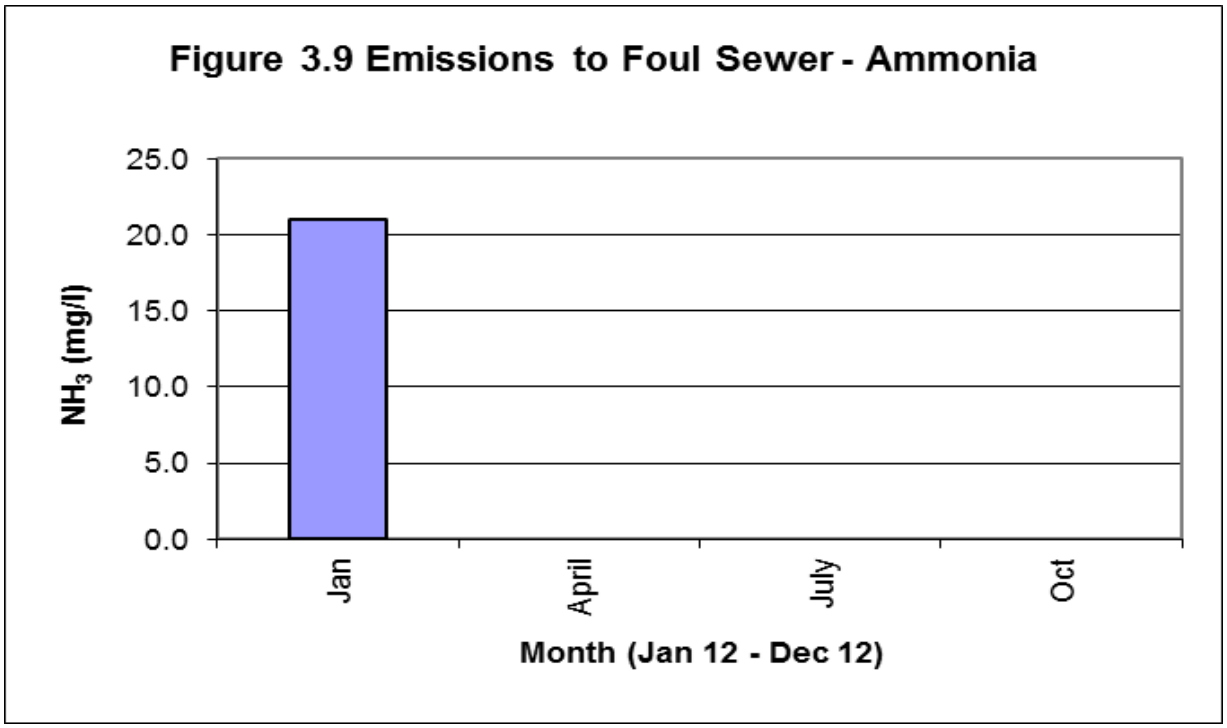

Figure 3.9 Emissions to Foul Sewer – Ammonia (ELV 50mg/l)

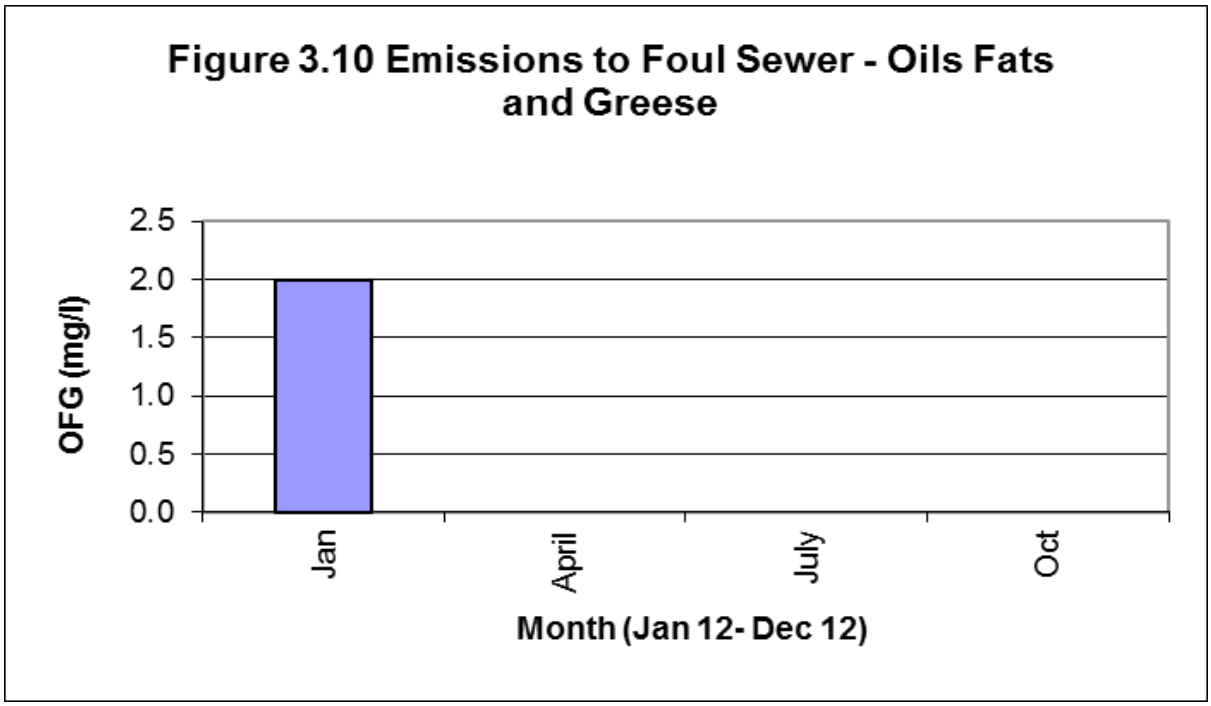

Figure 3.10 Emissions to Foul Sewer - Oils Fats and Grease (ELV 100mg/l)

(OFG detectable limit: <2mg/l)

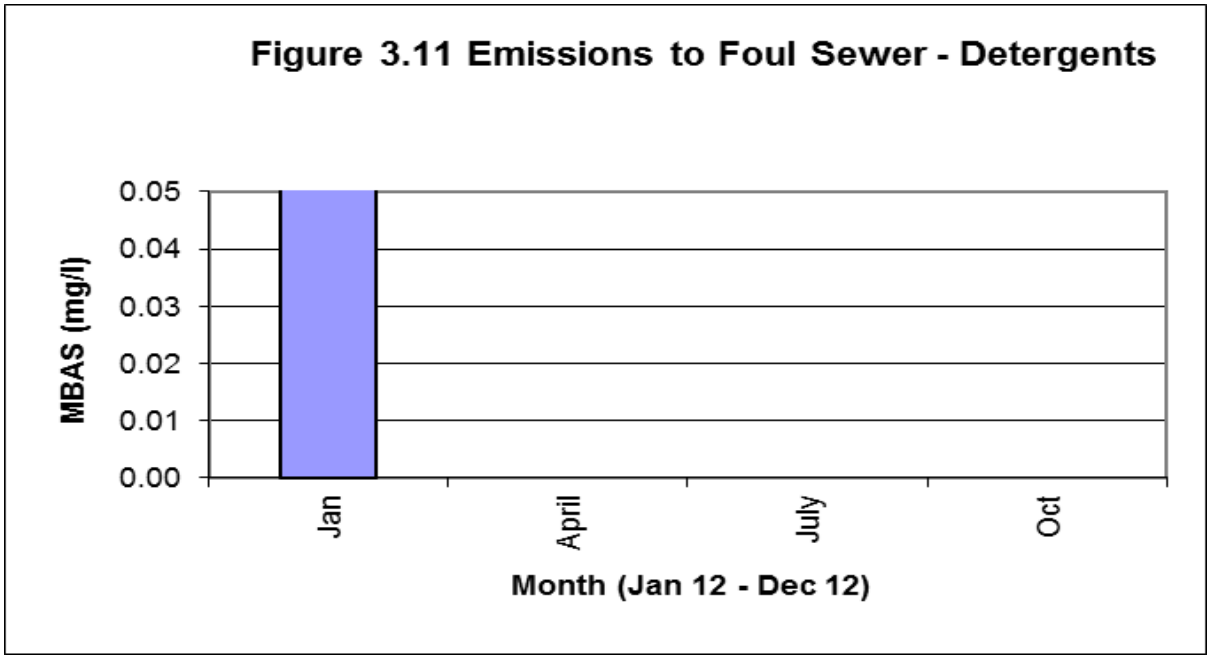

Figure 3.11 Emissions to Foul Sewer – Detergents (ELV 100mg/l)

(Detergents detectable limit: <0.05mg/l)

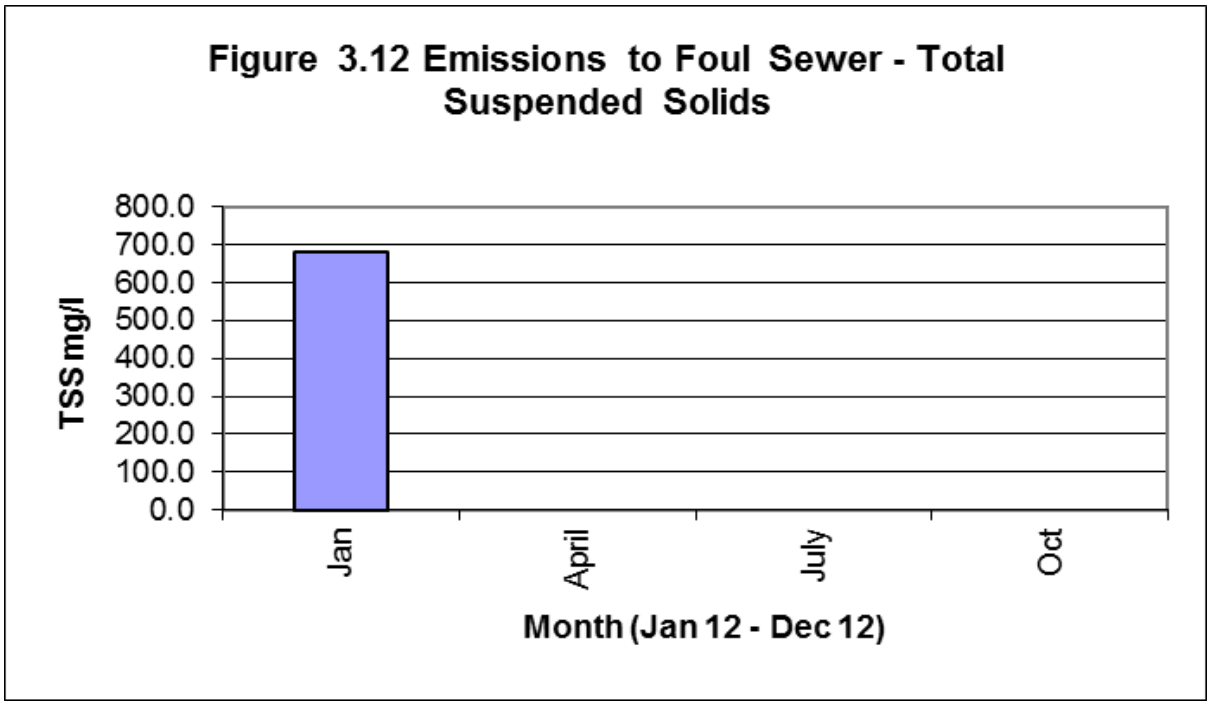

Figure 3.12 Emissions to Foul Sewer - Total Suspended Solids (ELV 2,000mg/l)

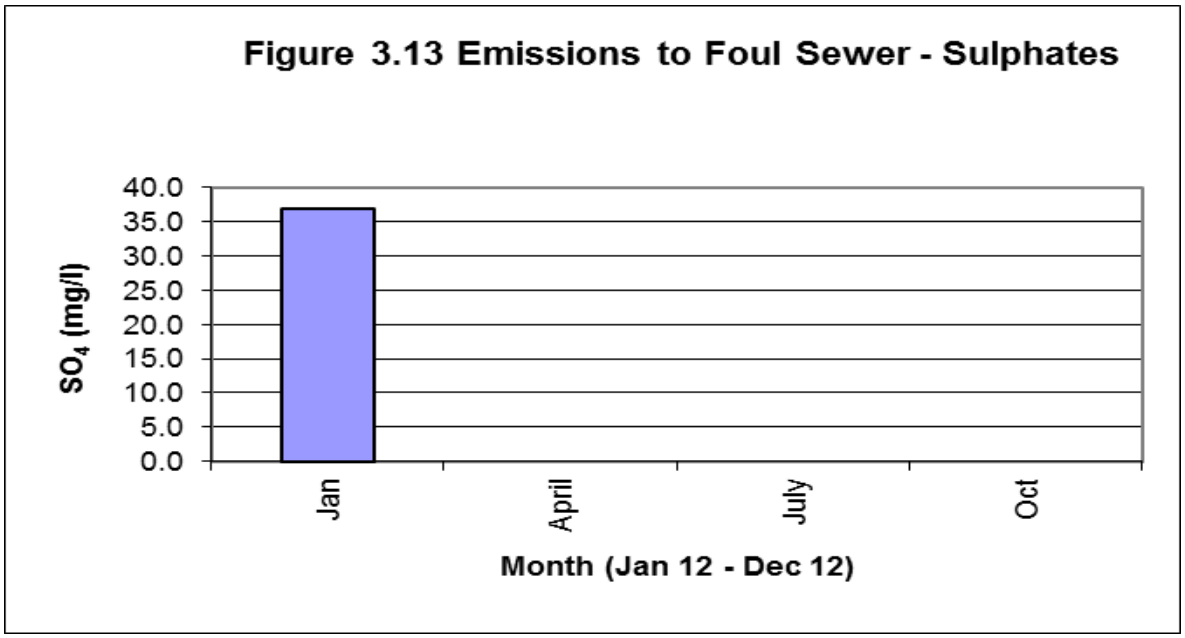

Figure 3.13 Emissions to Foul Sewer – Sulphates (ELV 500mg/l)

3.4. Noise

Noise Monitoring was carried out on 17th and 18th of July 2012. Monitoring was done for both night and day. Noise monitoring results are presented below in Table 3.2.

Location	Point Location NG Ref.	Sound Pressure dB(A) $L(A)_{EQ}$	$L(A)_{10}$	$L(A)_{90}$
Daytime				
N1	**Boundary**	**60**	**63**	**54**
N2	**Boundary**	**55**	**56**	**51**
N3	**Boundary**	**66**	**62**	**54**
N4	**Boundary**	**65**	**69**	**43**
N5	**Nearest NSL**	**63**	**66**	**59**
Night-time				
N1	**Boundary**	**49**	**50**	**47**
N2	**Boundary**	**46**	**47**	**42**
N3	**Boundary**	**51**	**52**	**46**
N4	**Boundary**	**53**	**51**	**42**
N5	**Boundary**	**53**	**56**	**47**

Table 3-2 Noise Monitoring Results Summary

NSL = Nearest Noise Sensitive Location.

The site boundary noise limits specified in the licence are that of 55dB(A) daytime and 45dB(A) night-time.
The results presented in Table 3.2 indicate that all monitoring locations were deemed to fall above the threshold limits as per Waste Licence limits; however it must be noted that the recorded levels

are not all attributable to noise generation from the site. The majority of noise arises as a result of the high volumes of passing traffic which is audible from the Greenhills and Ballymount Road which is a major contributing factor to elevated levels at N3, N4 and N5. The noise levels at all locations are elevated due to the close proximity of the site to the Greenhills and Ballymount Roads and as such should not be taken as a representation of noise levels at sensitive locations. Thus due to the relatively close proximity of monitoring locations to the Greenhills and Ballymount Roads the noise levels exceed the day-time 55dB(A) limit at all locations.
The night time limit of 45dB(A) was exceeded at location N1, N2, N3, N4 and N5. This suggests that the site does not exceed limits due to on-site activities but exceeds rather as a result of the existing noise climate that already exists at sensitive locations. It must also be noted that the site is located within a busy industrial estate and the existing ambient noise climate is already above the threshold limits.

3.5. Dust and Air Quality Monitoring (PM10)

Dust monitoring was carried out during March to August 2012. PM_{10} monitoring was carried out during October 2012. Monitoring occurred at three locations during the reporting period and was in full compliance with Condition 8.1. The monitoring established the impact of site operations on localised Air Quality. Results of this monitoring are presented in Table 3.5. The Dust results for D1, D2 and D3 are in compliance with guideline limits values (TA Luft Dust- 350 $mg/m^2/day$). PM_{10} results are also in compliance with guideline limits (EC/1999/30 PM_{10}- 50 ug/m^3).

Monitoring Location	Dust March (mg/m^2/ day)	Dust June. (mg/m^2/ day)	Dust Aug. (mg/m^2/ day)	PM10 (ug/m3) Oct 2012
D1	75	71	16	15
D2	68	142	48	12
D3	61	68	54	31

Table 3-3 Dust and PM10 Monitoring Results

3.6. Odour Monitoring

Table 3.4 sets out the results for odour concentrations from direct stack monitoring of the odour control system.
Direct monitoring of the odour abatement stack allows for the assessment of the performance of the odour control system. The system is monitored for mechanical performance, volumetric airflow rate (EN13248-1:2002), static pressures (ISO10780:1994), odour threshold concentration (EN13725:2003) and PID VOC's (USEPA TM21A) to assurances to that the odour control system is achieving adequate performance to prevent odours causing impact beyond the site boundary. The gathered odour is inputted into a dispersion model (AERMOD Prime 07026) with 10 years of meteorological data (Dublin 1997 to 2006 inclusive), which allows for the assessment of the odour control system in accordance with Irish and UK EPA requirements and guidelines (odour isopleths of less than or equal to 3.0 Ou_E/m^3 at the 98^{th} percentile of hourly averages for 10 years of meteorological data).

Outlet 1 & 2 Sample Average Period	Outlet Threshold Concentration $Ou_E m^{-3}$	Volumetric Air Flow Rate ($m^3 s^{-1}$)	Odour Emission Rate From Carbon Filtration System $Ou_E s^{-1}$
February	266	14.01	3,749
June	237	16.17	3,835
September	220	15.86	3,483
November	220	16.09	3,534

Table 3-4 Odour Concentrations.

3.6.1. Interpretation of Monitoring Results

3.7.1 Surface Water Background Monitoring and Emissions to Surface Water

The background surface water monitoring results indicate that the levels of analyses detected downstream of the facility did not exceed the values detected upstream in 2012. Quarter 1 analysis showed slightly elevated results for BOD upstream of the facility which was replicated downstream.

Sample collection and analysis of surface water emissions was not carried out during the reporting period due to a lack of rainfall events. Analysis of SWE1B was not undertaken for the period due to a lack of rainfall events. Future samples of surface water will be taken by council staff during adequate rainfall events to insure complete analysis.

3.7.2 Emissions to Foul Sewer

Only 1 sampling event occurred during 2012 due to insufficient sampling volumes at F6.There was no exceedence of the ELVs recorded in Schedule C.4 of the Waste Licence over 1 sampling events in 2012.

3.7.2.1 pH

pH results were typically neutral during the reporting period.

3.7.2.2 Temperature

Temperature was recorded on 1 occasion during the reported period. The temperature recorded were within the specified limits as set out in Schedule C.4 of the Waste Management Licence. The temperature recorded for this reporting period was 12.0^{o}C .

3.7.2.3 Biochemical Oxygen Demand

No exceedence occurred during the monitoring period. The BOD level recorded during the monitoring period was 255 mg/l respectively.

3.7.2.4 Chemical Oxygen Demand

The monitored level of 663mg/l measured during the reporting period were compliant with the Emission Limit Value as set out in the Waste Licence W0003-03.

3.7.2.5 Ammonia

No exceedence was reported during the previous reporting period. The Ammonia level recorded in quarter 1 was 21 mg/l.

3.7.2.6 Total Suspended Solids (TSS)

No exceedence was reported during the reporting period. A level of 680 mg/l was recorded during the period.

3.7.2.7 Oils Fats and Grease (OFG)

All recorded value during the reporting period was compliant with the Emission Limit Value as set out in the Waste Licence 0003-03. The recorded level was <2.0 mg/l.

3.7.2.8 Detergents

As with the previous reporting year, the sample recorded in quarter 1 for this period indicate compliance with the ELV for detergent emissions to foul sewer. The level recorded was 0.28 mg/l.

3.7.2.9 Sulphates

The sample recorded for this period indicates compliance with the ELV for sulphates emissions to foul sewer. The level recorded in quarter 1 for this reporting year was 37mg/l, which is down on last year which recorded an average of 42mg/l respectively.

3.7.3 Noise

The results presented in Table 3.2 indicate that daytime and night-time noise levels recorded limits that were exceeded at all 10 of the monitoring points during daytime and night-time monitoring.

Road traffic was the dominant source of noise ($L(A)_{10}$) at all of the locations, which primarily emanates from the very busy Greenhills Road which adjoins the site. It must also be noted that the site is located within a busy industrial estate and the existing ambient noise climate is already above the threshold limits.

These results indicate that the facility has no significant impact on the surrounding environment. There were no complaints received at the baling station for noise nuisance.

3.7.4 Dust and Air Quality Monitoring (PM_{10})

The results presented in Table 3.3 indicate that the TA Luft limit for dust deposition (350mg/m^2/d) was not exceeded during the reporting period at monitoring locations (D1-D3).

One set of monitoring results was obtained for PM_{10} levels at locations D1-D3. None of the results for PM_{10} exceeded the Emission Limit Value as set out in the Waste Licence 0003-03

3.7.5 Odour Monitoring

Direct Odour monitoring of the abatement stack was carried out on a quarterly basis during the reporting period.
To support daily odour inspections carried out by the Environmental Manager or suitably qualified person, quarterly odour monitoring was initiated. Independent monitoring consultants conduct monitoring at the facility. On completion of the monitoring, a report is issued assessing the impact of the operation on its environs. The assessments are presented in the form of odour concentration contours produced using US EPA approved dispersion modelling techniques.
All direct stack odour threshold concentrations had an average range between 220 OU_E/m^3 and 266 OU_E/m^3 for the reporting period 2012.

One complaint was received at the facility during the reporting period. No distinct odours were detected within the vicinity of the period throughout the year. All ambient air concentrations of TVOC represented characteristics of traffic based emissions.

4. SITE DEVELOPMENT WORKS

Works undertaken to, at a minimum, comply with the Licence conditions during the reporting period are summarised in Table 4.1.

Requirement	Time Scale
Erect storage facility for WEEE	December 2012
Expand acceptance of recyclables in the Civic Amenity	December 2012 .

Table 4-1 Site Development Works during Reporting Year

Requirement	Time Scale
Erect new signage at the Civic Amenity	April 2013
Expand acceptance of recyclables in the Civic Amenity	December 2013 .

Table 4-2 Site Development Works for the Forthcoming Year

5. WASTE RECEIVED BY AND CONSIGNED FROM THE FACILITY

5.1. Wastes Baled and Compacted

5.1.1 Waste Composition

Waste accepted at the Waste transfer station is Municipal Solid Waste (MSW) and cleansing waste from Dublin Corporation, South Dublin County Council, as well as non-recyclable waste from the Civic Amenity Facility. Dublin City Council ceased collecting MSW waste on 14th January 2012. The quantities of waste accepted at the Waste transfer station are summarised in Table 5.1.

Sources of MSW	Tonnes 12	Tonnes 11	Tonnes 10	Tonnes 09	Tonnes 08	Tonnes 07	Tonnes 06	Tonnes 05
Dublin Corporation (DCC)	3,560	62,172	89,340	103,236	119,988	135,605	139,629	141,582
South Dublin County Council (SDCC)	0	8,498	44,283	54,396	57,509	61,534	60,559	61,353
Civic Amenity	3,419	10,065	9,731	10,738	11,187	7,407	4,189	3,360
Other	0	2,199	4,685	5617	8,946	43,617	62,847	72,518
Total	6,979	82,934	148,039	173,987	197,632	249,986	267,225	278,814

Table 5-1 MSW Quantities into Facility

5.1.2 MSW Quantities

Monthly quantities of MSW waste sent to Landfill or for Thermal Treatment are shown in Figure 5.1.
3,560 tonnes in January 2012 was received from Dublin City Councils kerbside collection which was compacted and sent to landfill. The remainder of the tonnage for January to December inclusive was received at the civic amenity only and sent directly off site for disposal.

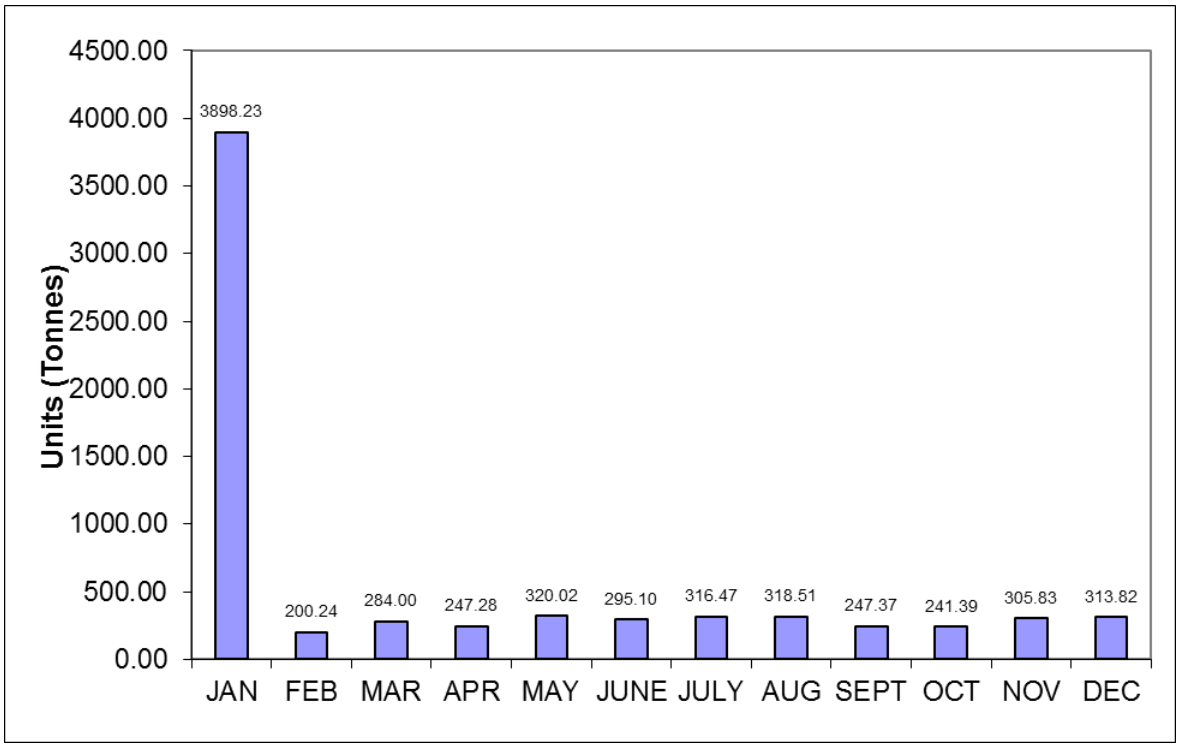

Figure 5.1 Monthly Waste Quantities to Landfill or Thermal Treatment 2011

(February to December – Civic Amenity MSW tonnage)

5.2. Civic Amenity

5.1.2 Waste Composition to Civic Amenity

The Civic Amenity Facility is a waste deposit facility for recyclable and non-recyclable waste delivered by members of the general public. Receptacles are provided for the deposit of glass, textiles, plasterboard, rubble, household hazardous, waste oil, paper, green waste, waste oil, batteries, beverage cans, plastics, scrap metal and white goods/ electrical items. Quantities of each of these wastes received are shown in Table 5.2 and Figure 5.2.

Bulky waste referred to in Table 5.2 consists of waste, which is of a bulky nature. This waste typically is consists of furniture, timber and mattresses, in general, materials that cannot be compacted to produce physically stable bales.

Bulky waste collected in bins at the Civic Amenity is sent off site for recovery to a treatment facility.

Description	Tonnes 2011	Tonnes 2011	Tonnes 2010	Tonnes 2009	Tonnes 2008	Tonnes 2007	Tonnes 2006	Tonnes 2005	Tonnes 2004
Glass	114.4	99.12	103.94	118.54	135.81	168.08	149.84	105.55	71.04
Paper	78.38	52.70	51.62	51.68	68.67	117.06	104.54	138.78	155.59
Textiles	29.81	25.63	29.62	40.18	37.73	41.66	52.45	25.32	21.85
WEEE	748.83	781.04	855.38	873.90	882.53	662.25	740.20	590.9	289.96
Plastic	31.33	11.30	18.04	9.64	33.66	80.31	46.00	48.62	23.73
Waste Oil	32.72	43.56	36.72	26.86	47.9	32.30	35.82	34.7	38.06
Green waste	2145.36	1,940.86	2,307.12	1850.06	1,454.58	1384.91	889.22	801.21	759.48
Batteries	13.14	14.14	21.06	23.72	27.36	57.02	66.16	36.46	25.04
Beverage cans	2.82	1.64	1.41	1.31	2.85	2.82	5.49	4.71	7.52
Metal	331.42	343.32	440.55	447.20	513.64	502.42	392.41	431.68	459.50
Black bag Waste (MSW)	3419.11	3582.3	3653.84	3238.16	3722.62	7407.09	4189.2	3,360.2	2,492.0
Bulky waste	5581.86	6483.12	6,077.04	7499.35	7464.49	1365.3	8310.6	5,549.2	3,016.0
Household Hazardous	33.73	33.66	24.9	29.32	45.2	85.00	43.66	28.57	N/A
Polystyrene						0.98			
Plasterboard		8.54	41.76	46.16	61.55	31.23			
Rubble	698.89	789.08	724.66	655.48	777.57	781.31			
Cardboard	277.84	206.78	230.2	232.49					
Waste Edible Oil	1.38	0.94	.60	0.74					
Wood	270.11	66.02	140.06	336.76					
Ink Cartridges	1.16	0.28	0.36	0.20					
Gas Cylinders	3.6	3.54	4.46	5.82					
Metal Packaging		.20	0.92						
Total Civic Amenity	13,816.15	14,487.57	14,764.08	15,487.57	15,276.1	12,719.7	14,973	11,156	7,359

Table 5-2 Composition of Waste Received at the Civic Amenity Facility

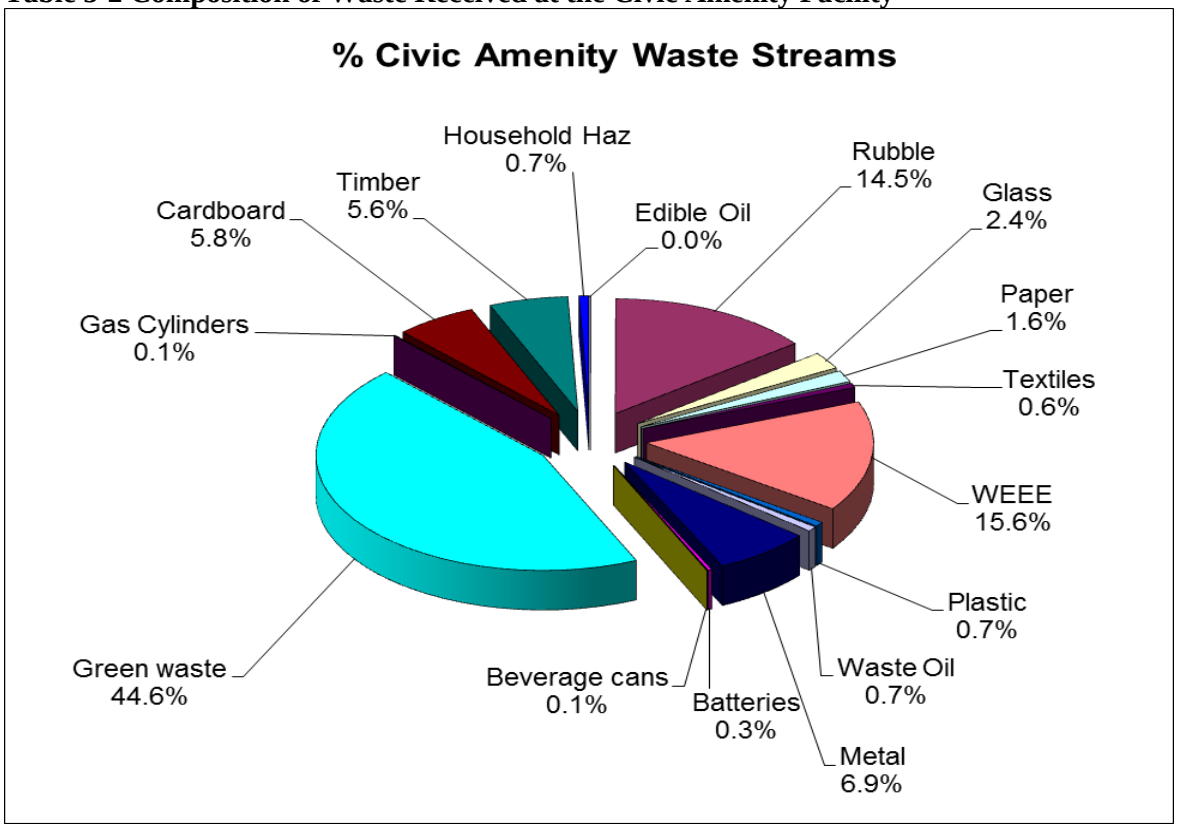

Figure 5.2 Recyclable Waste Types Received at the Civic Amenity Facility

5.3 Waste Received and handled

Waste received at the baling facility during the reporting period amounted to 3,560.09 tonnes, which is 320,919.91 tonnes below the Licence limit of 324,480 tonnes per annum

The following figure is a summary of the waste movements to and from the facility. Small differences in quantities entering and leaving the site are due to the 4% allowed tolerance error on the weighbridge (Class III accuracy: Source EN45501: 1992).

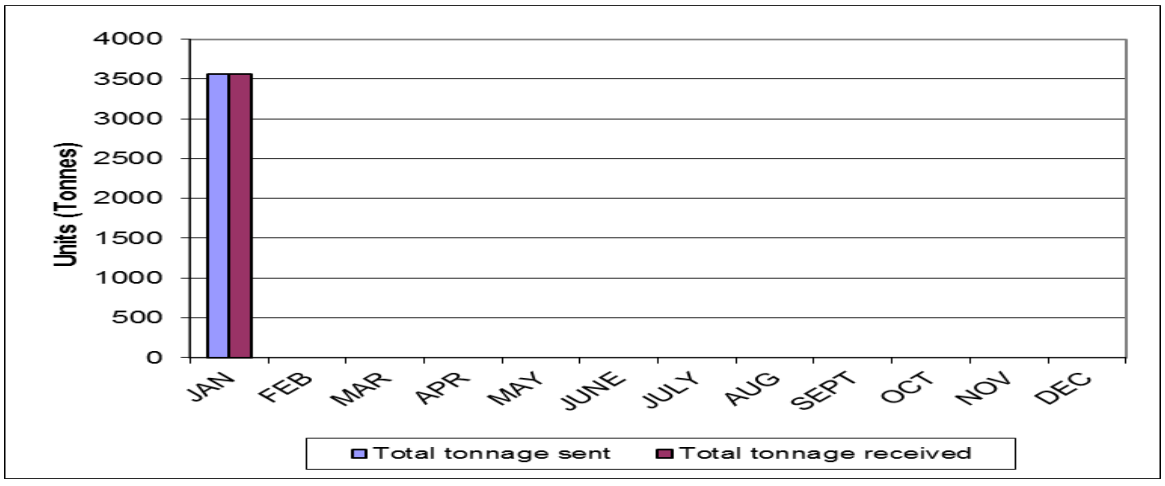

Figure 5.3 Tonnage Received and Sent in 2012 to the Baling Station and to Landfill

6. NUISANCE CONTROL

6.1. Odour Control

Historically odour was the largest source of nuisance for the facility resulting in 100% of all complaints received at the facility.

6.3 Daily Odour monitoring

In compliance with Condition 10.3 of the Waste Licence, a daily odour inspection of the facility environs is carried out and staff of the Council's Environmental Services Department keeps a written and electronic record.

6.3 Quarterly Odour Monitoring

In Compliance with Schedule D.6 of the Waste Licence, an independent contractor carries out quarterly odour monitoring.

6.3 Odour Emission control system

The in-situ odour emission control system is a dry dust filtration and annular bed carbon filtration system. The annular carbon filtration unit provides improved guaranteed odour removal efficiencies and also provide an increase in treatment capacity for the facility.

- Increased design treatment capacity of approximately 25,000 m3/hr and a maximum increased treatment capacity of up to 30,000 m3/hr.
- Increased odour threshold concentration performance to 300 OuE/m3.
- Continuous performance independent of cyclic odour loading.
- Elimination of dust and particulate plugging of the bed medium through the use of a regenerative self-cleaning dust filtration plant.

6.2. Litter Control

In compliance with Condition 7.4 of the Waste Licence, the licensee removes any litter in or around the facility immediately. An Iveco 130E15 watering/sweeping machine is present on site at all times. No complaints were received at the baling station for litter nuisance.

6.3. Dust Control

In compliance with Condition 7.6 of the Waste Licence, in dry weather the roads and hard standing areas are sprayed with water as and when required. No complaints were received at the baling station for dust nuisance.

6.3.1. Dust Monitoring

In Compliance with Schedule D.6 of the Waste Licence, an independent contractor carries out dust monitoring three times a year.

7. ENVIRONMENTAL INCIDENTS AND COMPLAINTS

7.1 Incidents Summary

Condition 11.2 of the Waste Licence requires that the licensee shall make written records of the environmental incidents. No incidents were recorded during the reporting period.

7.1. Complaints Summary

There was one complaint received from a local resident during the reporting period.

7.2. Corrective Action

7.2.1. Surface/Foul water emission non compliance

- All interceptors emptied and cleaned when required and at a minimum of every two weeks by licensed contractors. The surface water drainage system is cleaned every quarter.

7.1.1 Fast Acting Doors.

- All 6 doors into the baling shed and waste reception area comprise of fast acting roller shutter doors.
- All doors were serviced during the reporting period.
- Air curtains are installed to door at the waste reception to prevent odours escaping when doors are in operation.
- Door contractor is contracted to work on the door on the same day.
- Complete set of spares for both size doors on site.

7.3.3 Odour

- An activated carbon odour control unit is in place to treat malodorous air.
- Daily odour inspections conducted.
- Quarterly Odour monitoring conducted by independent consultants.
- The activated carbon was last replaced in May 2011.
- The dust filters were last replaced replaced in February

7.3. Non-Compliance Summary

No non-compliances were received at the facility during the Reporting period:

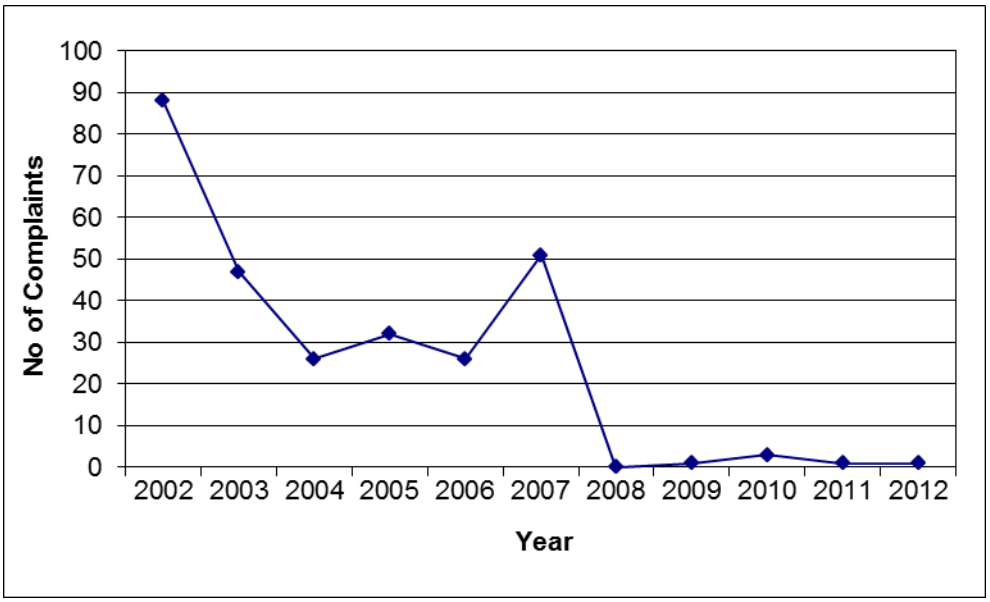

Figure 7.1 Number of Complaints

8. ENVIRONMENTAL MANAGEMENT PROGRAMME

8.1. Report

In compliance with Condition 2.3 of the Waste Licence, a review was carried out of the Environmental Management Plan (EMP); the reviewed EMP was submitted to the Agency for agreement on the 31st March 2012.
Site operational procedures are described in the EMP.
The schedule of Environmental Objectives and Targets for the reporting year, and a proposal for the forthcoming year, are summarised below.

8.1.1. Schedule of Environmental Objectives and Targets

A detailed Schedule of Environmental Objectives and Targets for the reporting period is presented in Table 8.1.

8.1.2. Achievement of Environment Objectives and Targets

In all cases the Council has made significant efforts to achieve all of the targets set by the individual objectives. Not all targets were achieved within the reporting period but corrective measures were put in place when difficulties were encountered. A summary of the targets achieved is presented in Table 8.1.

The overall responsibility for achieving these objectives and targets lies with the Senior Engineer of South Dublin County Council and Managing Director of Greenstar. Items referred to within these objectives are site specific and are the combined responsibility of the Council's Environmental Manager and Greenstar's Facility Manager

Objective/ Target	Description	Status
Objective 1	**To ensure continued implementation of the environmental Policy**	
Target 1.1	Continue to conduct Environmental Training refresher course for all Baling Station Staff.	Achieved- Ongoing.
Target 1.2	Forklift Training	Achieved
Target 1.3	Manual Handling Training	Achieved
Objective 2	**To promote public awareness of the facility and encourage use of the civic amenity/recycling facilities**	
Target 2.1	Further expansion of recycling facilities at the Civic Amenity Facility by increasing the number of waste types accepted for recycling.	Achieved
Target 2.2	To hold an open day for the facility where members of the local community will get a guided tour of the facility and its operations	Achieved

Target 2.3 Target 2.4 Target 2.5	Provide a specific web site for Ballymount detailing all services, costs & destination sites. Installation of a WEEE Shed/covered area New Civic Amenity Signage	Achieved Achieved Not Achieved
Objective 3	**To Continue site development/improvement**	
Target 3.1 Target 3.2	Develop Tetrapak recycling. Painting of Civic Amenity	Not Achieved Achieved
Objective 4	**To minimise the environmental impact arising from nuisance caused by the facility**	
Target 4.1 Target 4.2 Target 4.3 Target 4.4	Reduction of water consumption Decrease in the use of electricity Decease hydraulic oil use Installation of Rain Water Harvesting	Achieved Achieved Achieved Not Achieved
Objective 5	**To comply with Emission Limit Values in Schedule E of Waste Licence**	
Target 5.1 Target 5.2 Target 5.3 Target 5.4 Target 5.5	Reinstall Bio-Tubes to all interceptors to reduce OFG levels. To divert all facility surface water to foul drains through a flow attenuation tank. Install new Dust Filter Cartridges in odour control system Replace Activated Carbon in odour control system. Full service on WWTP.	Achieved Not achieved Not Required Not Required Not Achieved
Objective 6	**To successfully control emergencies at the facility**	
Target 6.1	Review and update of site health and safety plan and site risk assessments	Achieved
Target 6.2	Training of site Fire warden	Not Achieved

Table 8-1 Achievement of Environment Objectives & Target

8.2. Proposal

The Environmental Objectives and Targets proposed for the forthcoming year (listed in Table 8.2) are based on the requirements of the current Waste Licence. However, should the Agency grant a revised licence within this period, the proposed schedule would in turn require revision to reflect any new conditions.

Table 8-2 Proposed Environment Objectives & Targets for 2012

Target Number	Description	Time Frame	Responsibility
Target 1.1	Continue to conduct Environmental Training refresher course for all Baling Station and Civic Amenity Staff.	Bi-annually in 2013	Env. Manager
Target 1.2	MEWP Training	1st August 2013	Panda Safety Manager
Target 1.3	Manual Handling Training	30th June 2013	Panda Safety Manager
Target 2.1	Further expansion of recycling facilities at the Civic Amenity Facility by increasing the number of waste types accepted for recycling.	31st December 2013	Env. Manager
Target 2.2	To hold an open day for the local community/Schools for a guided tour of the facility and its operations	30th June 2013 31st December 2013	Env. Manager
Target 2.3	Expand on the web site for Ballymount detailing all services, costs & destination sites.	31st March 2013	Env. Manager
Target 2.4	New Civic Amenity Signage		Env. Manager
Target 3.1	Develop Tetrapak recycling.	31st June 2013	Env. Manager
Target 3.2	Develop Mattress and Carpet recycling	31st March 2013	Env. Manager
Target 4.1	Installation of Rain Water Harvesting	31st Dec 13	Facil Manager
Target 4.2	Reduction of water consumption	31st Dec 13	Env. Manager
Target 4.3	Decrease in the use of electricity	31st Dec 13	Facil Manager
Target 5.1	Reinstall Bio-Tubes to all interceptors to reduce OFG levels. Install new Dust Filter Cartridges in odour control system Replace Activated Carbon in odour control system. .	30th Apr 2013. 31st Nov 2013. 30th May 2013.	Env. Manager. Env. Manager Env. Manager
Target 6.1	Install a new advanced Fire detection system	31st March 2013	Panda Safety Manager
Target 6.2	Review and update of site health and safety plan and site risk assessments	31st May 2013	Panda Safety Manager
Target 6.3	Review of emergency response procedures	31st April 2013	Panda Safety Manager

Operational and Environmental Procedure

Documented operating procedures for the Waste transfer station, which are described in detail in the Environmental Management Plan are sub-divided as follows: -

- Standard Operating Procedures
- Environmental Procedures
- Emergency Response Procedures

A brief summary of these is provided below.

8.1.3. Standard Operating Procedures

Standard Operating Procedures have been developed for each of the routine operations conducted at the facility. The purpose of these is to ensure that routine tasks are carried out in the same manner each time they are undertaken, even if different operators perform them. Their implementation will encourage quality as well as safe work practices. Regard is also had for the site specific Safety Statement when carrying out any operations at the facility.

The routine operations identified are as follows:

- SOP 001- Weighbridge operation
- SOP 002- Waste Acceptance at the Waste transfer and Civic Amenity Facility
- SOP 003- Compaction of waste
- SOP 004- Loading and shunting of containers
- SOP 005- Environmental Monitoring;
- SOP 006- Housekeeping;
- SOP 007- Operation Of Odour Control System
- SOP 008- Operation/Maintenance Of Wastewater Treatment Works
- SOP 009- Opening/Closing Of Waste Reception Shutters
- SOP 010- Weekly Drainage Inspection
- SOP 011- Fuel Storage and Pollution Control Inspection
- SOP 012- Weekly Interceptor Inspection
- SOP 013- Monthly Over ground Inspection Form
- SOP 014- Emergency Generator Operation/Maintenance
- SOP 015- Nuisance Inspection

8.3.2. Environmental Procedures

Environmental procedures have been developed in order to maintain the Environmental Management System and to ensure continued improvement in the operation and management of the facility. Environmental Procedures are subject to change on evaluation.
The Environmental Procedures are as follows:

- EPROC 001- Corrective Action Procedures
- EPROC 002- Awareness and Training Procedures
- EPROC 003- Incident Response and Reporting Procedures
- EPROC 004- Complaints Procedures

8.3.3. Emergency Response Procedures

Condition 10.1 of the Waste Licence requires that a written Emergency Response Procedures (ERP) be submitted. An updated document describing these procedures was submitted to the Agency September 2002 as part of the Environmental Management Plan annual submission. Emergencies have been defined as unexpected events, which prohibit the waste processing operation or reduce waste processing capacity, or any occurrence resulting in non-compliance with the conditions of the Waste Licence. Potential emergencies at the facility can be grouped under the following headings: -

- Inability to process waste.
- Inability to transport waste to Landfill.
- Threats to staff health and safety.
- Threats to the environment.

The ERP document, which is maintained in the facility office, contains detailed procedures and a list of emergency contact numbers to be used in the event of an emergency. A copy of the Council's "Major Emergency Plan" is also maintained in the facility office.

8.3. Management and Staffing Structure

The Council, as the licensee, operates the facility under the terms of a joint venture agreement with Greenstar, a waste management company. The organisational structure for the facility is shown in Figure 8.1.

Operations at the facility are carried out in two distinct areas, namely the Waste transfer station and the Civic Amenity Facility. The Joint Venture Management Committee, the Environmental Manager, the Facility Manager and the Operations Supervisor have delegated responsibilities for operations management and supervision in both areas. Greenstar ceased any operational duties of the Baling Station in February 2012.

Each of the positions identified in Figure 8.1 are discussed in detail in Section 6 of the Environmental Management Plan for the reporting year. Details of the relevant experience and qualifications for each person named, as well as arrangements for absence in the case of annual leave, illness and other absences, are maintained in the facility office and have also been forwarded to the Agency as required by Condition 2.2.

A file consisting of training records for each employee is also maintained in the facility office.

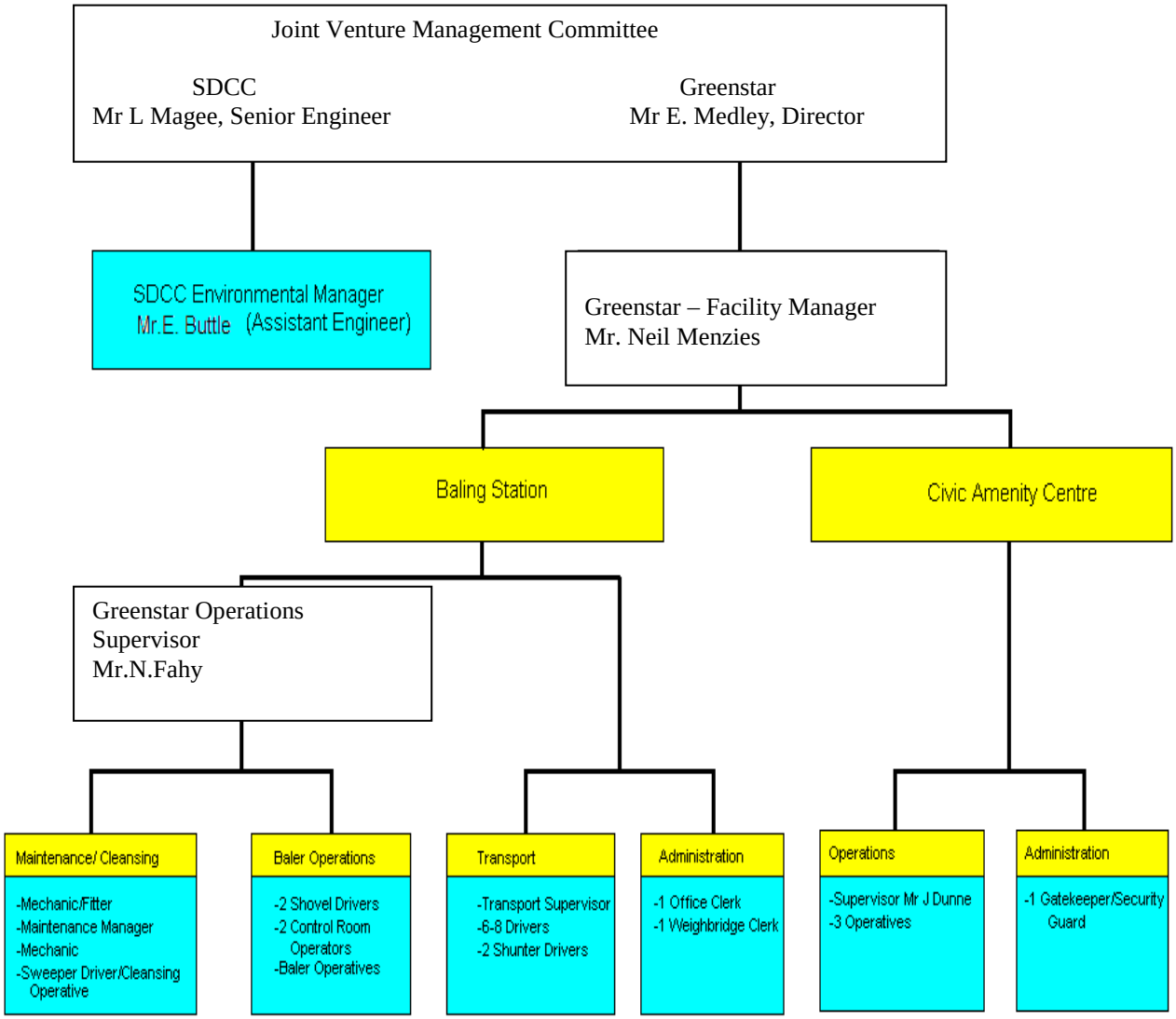

Figure 8.1 Management and Staffing Structure

9. TANK AND BUND TESTING

Condition 3.13.5 of the Waste Licence requires that tank and bund testing be carried out once every three years. All Bunds on-site were tested to BS8007: 1987, in November 2012. 18 bunds were inspected, with one bund failing the test. This bund has been taken out of service.

10.RESOURCE CONSUMPTION SUMMARY

Resources consumed at the facility include electricity, water, diesel fuel, steel wire, cleaning products, odour products and hydraulic oil. The principle consumers of energy at the facility are summarised in Table 10.1. Resource consumption is also presented in table 10.2 and figures 10.1 - 10.3.

Plant Item	Resource Used
Baling/ Ancillary Equipment Odour Control System Mobile Plant Road Transfer Fleet	Electricity and Hydraulic Oil Electricity and Water Green Diesel and Hydraulic Oil White Diesel

Table 10-1 Principle Resource Consumers

Resource	Quantity Used
Diesel Fuel	19,478 litres
Hydraulic Oil	75 litres
Electricity	246,829 kWh
Water	922 m3
Cleaning Agents Grime Away Caustic Soda Clean Air	 1,000 kg 90 kg 50 kg
Steel Wire	0 kg

Table 10-2 Energy and Resources (January 12 – December 12)

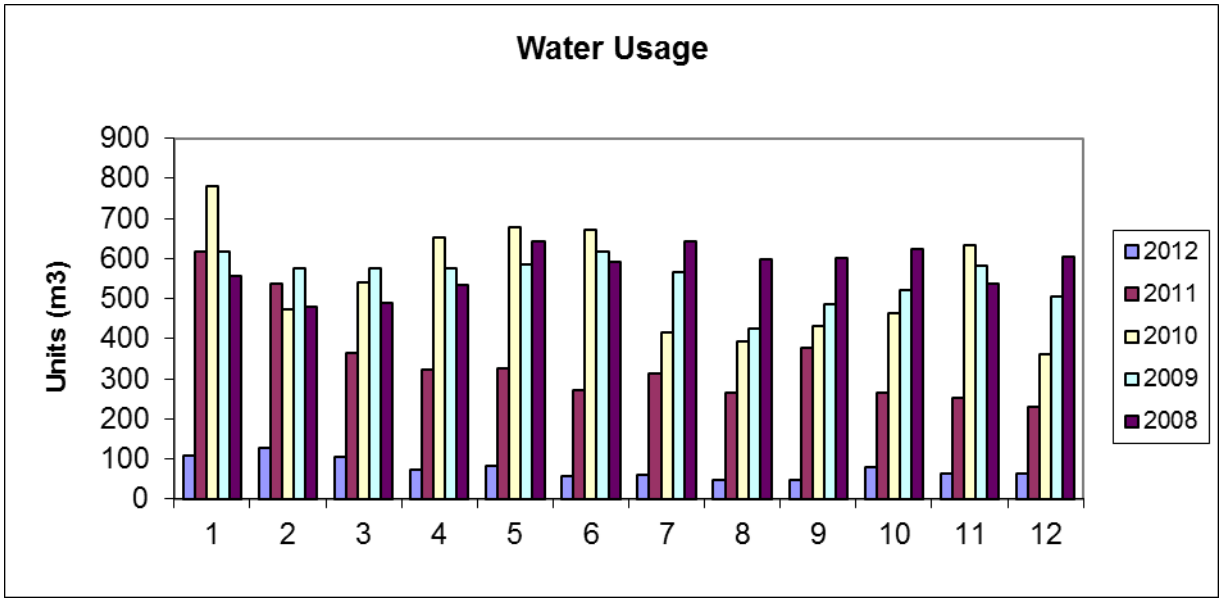

Figure 10.1 Water Use

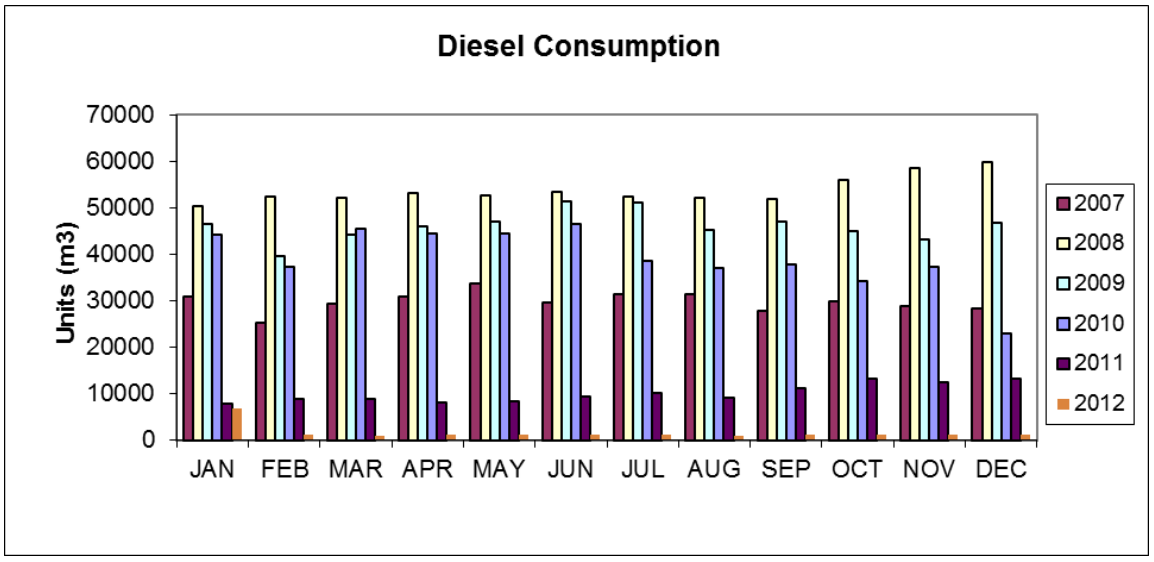

Figure 10.2 Diesel Consumption

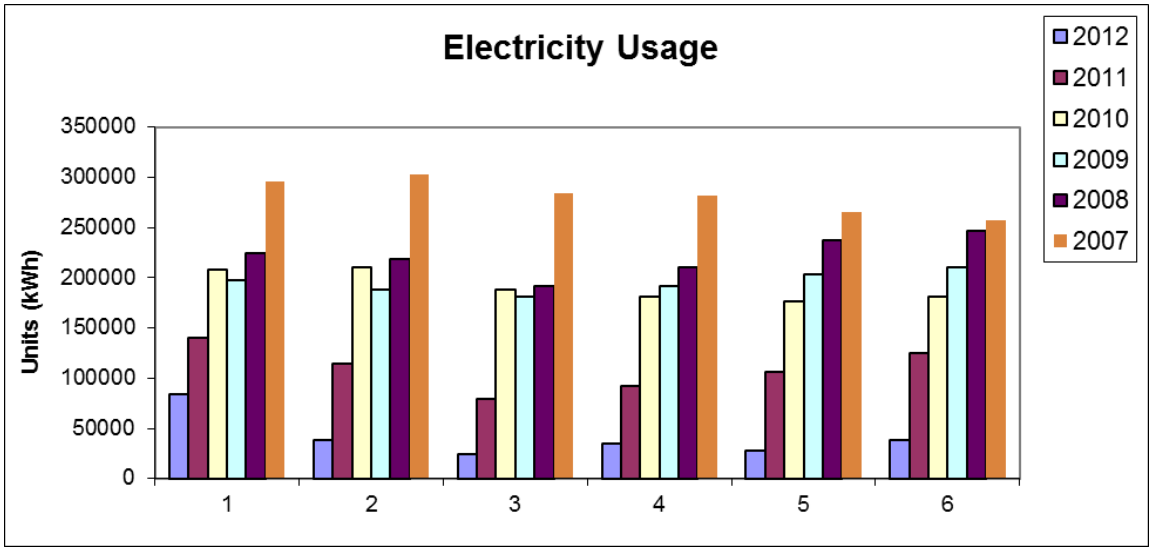

Figure 10.3 Electricity Consumption

11.REPORT ON PUBLIC INFORMATION FILE

During the 2012 reporting period there was no application received to see the public inspection file.

Pertinent documentation available for public inspection include:

1. Environmental Record File
2. Environmental Monitoring Reports File (Volumes 1-4)
3. Complaints Register
4. Waste Licence
5. Environmental Management Plan
6. Emergency Response Procedures

Members of the public, who wish to view information describing environmental performance of the facility in 2012, can do so by phoning the facility. The facility contact numbers are posted on the main facility entrance sign. The names of the appropriate personnel are as follows:

Mr. David Jervis
Panda Waste
Facility Manager

Mr. Eoin Buttle
South Dublin County Council
Environmental Manager

12. SITE OPERATIONS

12.1. Duty and Standby Capacity of Waste Handling Plant

With the introduction of licence W0003-03 the maximum quantity of municipal waste to be accepted at the facility has decreased to 324,480 tonnes. In compliance with condition 1.7 of the waste licence the hours of operation has been increased 6:30a.m. to 9:00 p.m. Monday to Saturday inclusive.

The compaction process capacity of the machines is 90 tonnes/hr each, which suggests an annual 100% uptime capacity of 555, 672 tonnes. During this reporting period the facility ceased its operation of Baling/compacting waste on the 14th of January 2012 and did not process bale/compact waste for the remainder of the reporting period 2012. The quantity of municipal waste baled/compacted for landfilling at the facility for the reporting period was 3,560 tonnes.

This suggests the Duty Capacity(available operational hours) of the waste handling equipment was 555, 672 tonnes and the Standby Capacity was 552, 112 tonnes (99.36 %) for this reporting period.

12.2. Ventilation plant capacity and Spares

The Odour emissions control system was installed 10th December 2007 on the receiving and waste areas of the facility. The unit was installed to the following performance design:

- Volume Flow Rate *100,000 m^3/hr*
- Inlet Odour Capacity *5,000 OU_E/m3*
- Outlet Odour Concentration *150 OU_E/m3*
- Temperature *Ambient*
- Relative Humidity *50-100 %*
- Stack Height *12m*
- Stack Diameter *1.6m*

Spares for the odour and emissions control system are kept on site in the western storage area, these include:

Fan Spares:

Component	No. off
Bearing set for fans	2 No.

Dustfilter Spares:

Filter Cartridge	6 No.
Diaphragms	15 No.
Solonoids	15No.

Carbon Spares: 3 Tonnes

APPENDIX

Parameter	Sample Point	SI294: 1989	Jan	April	July	Oct
pH	1(us)	5.5 - 9.0	7.7	7.9	7.2	8.1
	2(us)		7.7	7.9	7.3	8.2
	3(ds)		7.7	8.0	7.4	8.2
BOD	1(us)	7.0	27.0	22.0	2.0	<2
(mg/l)	2(us)		26.0	21.0	3.0	<2
	3(ds)		29.0	18.0	2.0	<2
COD	1(us)	40.0	56.0	39.0	7.0	<4
(mg/l)	2(us)		50.0	38.0	7.0	5.0
	3(ds)		49.0	33.0	8.0	<4
Suspended Solids	1(us)	50.0	9.0	7.0	2.0	2.0
(mg/l)	2(us)		9.0	7.0	2.0	1.0
	3(ds)		4.0	5.0	2.0	3.0
Mineral Oil	1(us)	0.01	0.16	0.04	<0.01	<0.01
(mg/l)	2(us)		0.13	0.01	<0.01	<0.01
	3(ds)		0.15	0.02	<0.01	<0.01

Table 12-1 Surface Water Monitoring Results

*us – upstream of baling centre
ds – downstream of baling centre

Parameter	ELV	Jan	April	July	Oct
pH	5 - 10	7.1	No Flow	No Flow	No Flow
Temp (^{o}C)	<42oC	12.0	No Flow	No Flow	No Flow
BOD5 (mg/l)	10,000	255.0	No Flow	No Flow	No Flow
COD (mg/l)	30,000	663.0	No Flow	No Flow	No Flow
Ammonia-NH4 (mg/l)	50	21.0	No Flow	No Flow	No Flow
TSS* (mg/l)	2,000	680.0	No Flow	No Flow	No Flow
OFG **(mg/l)	100	<2	No Flow	No Flow	No Flow
Detergents (MBAS)(mg/l)	100	0.3	No Flow	No Flow	No Flow
Sulphates (SO4) (mg/l)	500	37.0	No Flow	No Flow	No Flow

Table 12-2 Emissions to Foul Sewer

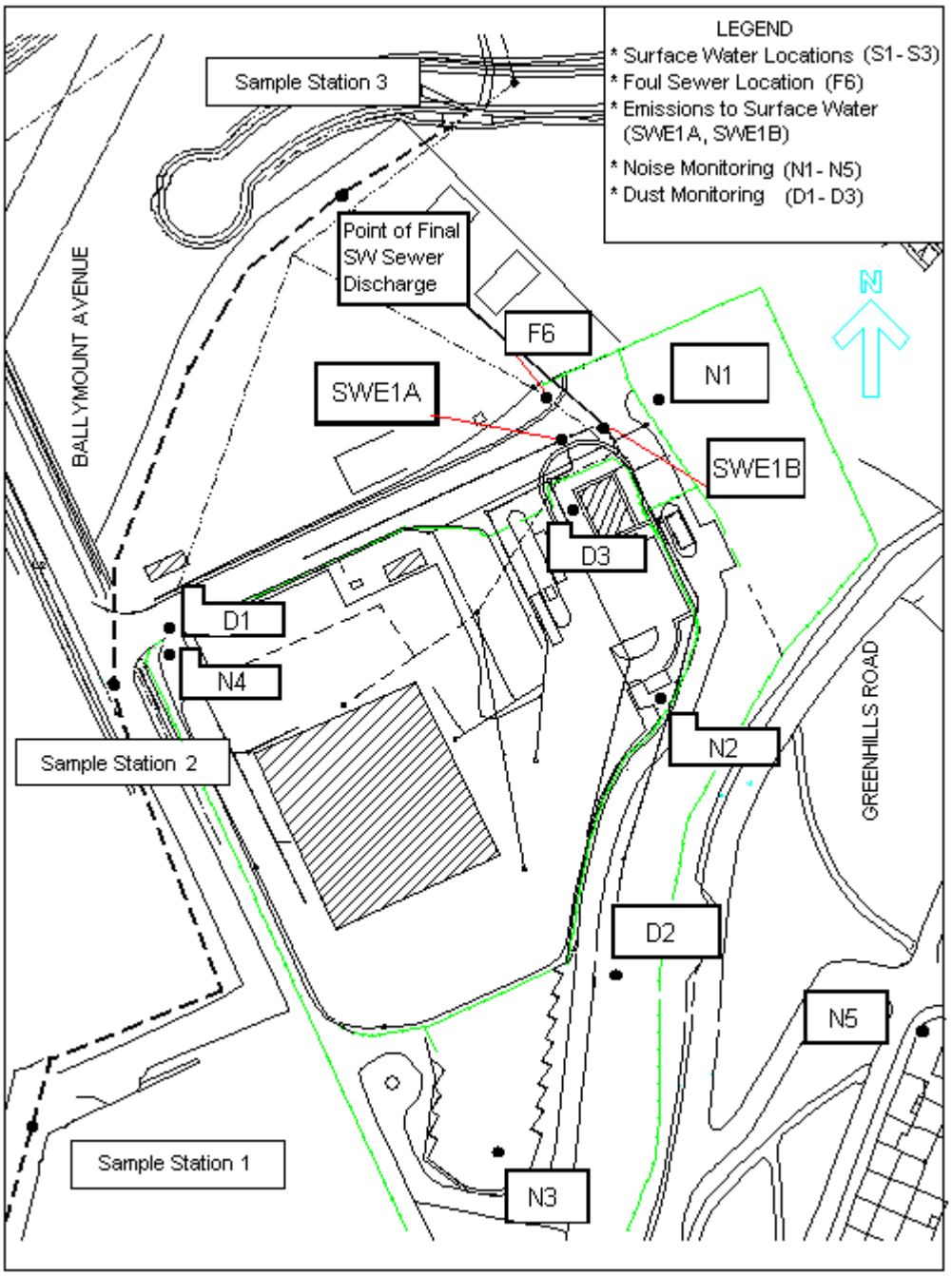

Figure 12.1 Monitoring Location Map