CUTHBERTENVIRONMENTAL

ANNUAL ENVIRONMENTAL REPORT

for

ASHGROVE PLANT LTD

Waste Licence – 147-01

2015

Vat No. IE 3334070 OH

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1. INTRODUCTION

Ashgrove Recycling operates a materials recovery facility / waste transfer station at Churchfield Industrial Estate, Cork.

The company began operations in July 2002. The facility is located in an industrial estate north of Cork City. The site prior to construction was a greenfield site in industrial zoned land.

The site occupies 1.1 hectares and consists of a materials recovery building with associated offices and impermeable concreted surfaces. The operations at Ashgrove have positively helped the environment in diverting materials away from unnecessary land filling.

1.1 Facility Details

Licence Registration Number: - W0147-01

Name: - Ashgrove Plant Ltd, t/a Ashgrove Recycling

Location: - John. F. Connolly Road, Churchfield Industrial Estate, Cork.

Reporting Period: - 1st January – 31st December 2015

1.2 Licenced Waste Activities

Disposal activities as per the Third Schedule of the Waste Management Act 1996	
D13	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned was produced.

Recovery activities as per the Fourth Schedule of the Waste Management Act 1996	
R2	Recycling or reclamation of organic substances which are not used in solvents (including composting and other biological transformation processes). This activity is limited to the recovery of cardboard, paper, wood and plastic.
R3	Recycling or reclamation of metals and metal compounds: This activity is limited to the recovery of steel and metals.
R4	Recycling or reclamation of other inorganic materials**:** This activity is limited to glass, construction and demolition waste and other inert wastes.
R13	Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)".

1.3 Waste Processing at the Facility

The waste streams that are processed at the facility are non-hazardous. The facility does not accept liquid wastes. The majority of waste accepted at the facility is derived from construction and demolition activities, along with a smaller quantity of commercial and industrial waste streams. There was an increase in municipal waste for 2014 only due the acceptance of waste after the Greenstar facility at Sarsfieldscourt, Glanmire, Co. Cork was burnt down.

Incoming waste is weighed on a Precia Molen weighbridge, and is then consigned to the material recovery building. The material is visually inspected to determine its compliance with waste acceptance criteria.

Large items of timber and metal are removed mechanically and placed in designated containers. Material that is not readily separated is fed into the Viper 123 city sizer and the action of the vibrating screen box separates out the soils and the fines. Larger material that does not fall through the screen mesh is deposited onto a conveyor belt and passes underneath a powerful overband magnet, which in turn removes the metal fraction. From here the remaining material moves through a Viper picking station where recoverable material is manually picked and deposited into hoppers, which convey the material into suitable containers. Plastic, glass, wood and non-ferrous metal are separated from the material; the remaining material consists of light fractions of paper and plastic, along with a mixture of rubble and stones. As this mixture falls from the end of the belt, a high velocity air stream blows the lighter material into a catch net. The heavier material falls into an awaiting receptacle. The recyclable material is brought to an appropriate outlet (according to the type of material) for use as a raw material for further processing.

All other waste types are bulked up and removed off site.

2. Quantity and Composition of Waste

2.1 Waste Processed 2014

Total Quantity of material handled 2014 Inclusive		
Material	Weight (t)	EWC Codes
Plastic Packaging	16.42	15 01 02
Wood Packaging	13.86	15 01 03
Glass Packaging	1,961.83	15 01 07
Tyres	11.50	16 01 03
Timber	561.60	17 02 01/20 01 38
Metal	14.56	17 04 07
Soil and Stone	22.94	17 05 04
Gypsum Plasterboard	134.46	17 08 02
Mixed C&D	10,492.51	17 09 04
Sanitary Waste	2.86	18 01 04
Paper & Cardboard	187.01	20 01 01
Plate Glass	123.62	20 01 02
Canteen Waste	2,990.26	20 01 08
WEEE 1	1.42	20 01 35
Hard Plastics	62.38	20 01 39
Green Waste	152.26	20 02 01
Mixed Municipal Waste	31,897.06	20 03 01
Bulky Waste	7,194.39	20 03 07
Total	55,840.94	

2.2 Waste Processed 2015

Total Quantity of material handled 2015 Inclusive			
Material	Weight (t)		EWC Codes
	In	Out	
Interceptor Waste	-	4.42	13 05 03
Paper & Cardboard Packaging	177.61	335.52	15 01 01
Plastic Packaging	14.14	0.60	15 01 02
Wooden Packaging	3.76	155.54	15 01 03
Glass Packaging	2,280.14	2,352.74	15 01 07
Tyres	-	7.66	16 01 03
Windscreens	50.04	29.10	16 01 20
Batteries	1.34	-	16 06 01
Mixed Concrete, Bricks and Tiles	4,580.78	10,645.83	17 01 07
Wood C&D	1,299.98	730.90	17 02 01
Bitumen	17.64	-	17 03 02
Aluminium	-	13.37	17 04 02
Metal	21.72	846.44	17 04 07
Contaminated Soil	-	2.16	17 05 03*
Soil and Stone	92.45	1,801.08	17 05 04
Gypsum	136.82	116.00	17 08 02
Mixed C&D	7,465.19	-	17 09 04
Sanitary Waste	2.24	0.00	18 01 04
Shredded Timber	-	1,392.67	19 12 07
Mechanically-treated waste	-	5,382.56	19 12 12
Paper & Cardboard	5.90	0.00	20 01 01
Plate Glass	75.28	67.46	20 01 02
Canteen Waste	520.84	590.81	20 01 08
Textiles	-	3.56	20 01 11
WEEE 1	0.08	-	20 01 35
WEEE 2	1.84	0.60	20 01 36
Hard Plastics	12.54	23.04	20 01 39
Green Waste	243.83	302.27	20 02 01
Mixed Municipal Waste	6,253.04	4,065.54	20 03 01
Bulky Waste	992.00	52.70	20 03 07
Dry Recyclables	440.30	396.48	20 03 01
Total	24,689.50	29,319.05	54,008.55

3. SUMMARY REPORT ON EMISSIONS

3.1 Emissions to Public Sewers

There are no discharges directly to waters from the facility. Emissions are made to foul and surface water sewers only. Both effluent and surface water discharge are sampled at the facility.

Both effluent types pass through a class 2 interceptor prior to being discharged to the public sewer north of the facility. Foul water is cleaned of petrochemical contamination by passing through a 4000-litre full-retention seperator.

3.2 Foul effluent

This consists of process effluent from waste handling activities within the MRF and of discharge (washings and surface water) from the bin washing area of the site. The effluent is monitored on a monthly basis as per conditions (Schedule D5) of licence W0147-01. However, due to site improvement works, monitoring during January, February and March was not completed. For the month of June, an error was made whereby the wrong sampling kit was used to submit the foul water for analysis – a surface water suite of analysis was conducted, which has different parameters. Thus, only some of the foul water parameters were analysed for June.

Table 3.2. Foul water analysis results for 2015. Grey-shaded figures represent above-limit values.

			2015								
	EPA Limits	Units	April	May	June	July	August	September	October	November	December
Test			Result								
Ammoniacal Nitrogen	20	mg/L	15.554	8.105	15	12.112	14	5.9	12	27.357	29.023
Sulphate	300	mg/L	300	80	-	170	100	110	170	240	460
BOD	1000	mg/L	333	64	91	190	224	50	84	13	12
COD	2000	mg/L	694	173	-	511	234	147	274	133	106
Detergents/Surfactants as MBAS	100	mg/L	0.56	0.4	-	0.63	0.51	0.38	0.33	0.4	34
Oils/Fats/Grease	100	mg/L	60.3	12.7	-	24	74	15	49	19.3	6.7
Suspended Solids	300	mg/L	130	72	85	24	61	6	43	<5	18
pH	5-10	pH units	8.0	7.6	7.3	7.3	7.1	7.3	7.6	7.6	8.1
Toxicity	20	Toxic Units	-	-	-	-	-	-	-	-	1

Note: Toxicity units (tu) = $100/EC_{50}$

3.3 Surface water effluent

Surface water originates from rainwater and washings coming from hard standing areas on the site and from rainwater roof discharge. Surface water flows to a surface water sewer running west-to-east along the northern boundary of the site. Runoff from the yard also enters this sewer; however it is passed through an interceptor prior to discharging to a public sewer. Table 3.3 below provides the bi-annual sampling results for 2015.

It should be noted that for the month of July, the surface water samples were mistakenly taken from the separator tank. As a result, the mineral oil readings are very high in comparison to December's results. No Emission Limit Values (ELVs) were exceeded.

Table 3.3. Foul water analysis results for 2015

			2015	
	EPA Limits	Units	July	December
Test			Result	
pH	-	pH Units	7.4	7.19
BOD	-	mg/L	<43	4
Suspended Solids	-	mg/L	1253	1427
Mineral Oils	100	mg/L	62.4	<0.01
Ammoniacal Nitrogen	-	mg/L	1.4	0.06

3.4 Noise Emissions

The only noise emissions emanating from site are due to the operation of the trommel system and the movements of plant/machinery. Trommeling occurs on average twice weekly for a couple of hours within the materials recovery building. Acoustic cladding within the recovery building reduces noise levels at sensitive receptors.

Noise monitoring is conducted onsite bi-annually and relevant reports are submitted to the Agency. Noise reports are attached (see Appendix I). The reports indicate that there was no significant noise production during the two monitoring periods in 2015.

3.5 Dust Emissions

Dust generation on site is mainly attributable to windblown dust as the site is quite elevated. Vehicular movements within the facility on impermeable surfaces also contribute to dust nuisance. In dry windy conditions and sunny spells the hard standing areas and any problematic areas are sprayed with water using water bowser.
The probe atomiser within the recovery building is designed to reduce dust nuisance and sprays are focused on main stockpiles within the recovery building. Furthermore, most doors are maintained in the closed position when possible.
Dust monitoring on site is conducted three times annually and respective reports are submitted to the Agency as part of the AER. Dust reports are attached.

3.6 Locations

Surface water sampling is carried out at manhole S01, near the facility entrance, and foul water monitoring is carried out at the monitoring chamber at the northern boundary of the site (see Appendix III).

Noise monitoring is carried out at four locations of the site. Refer to noise monitoring locations in Appendix III.

Dust monitoring is carried out at the four corners of the premises, named D1 to D4 (see Appendix III).

3.7 Methods

Foul water sampling is carried out by taking a grab sample from the V notch weir when there is adequate flow. Surface water sampling is also carried out by taking grab samples. Samples are generally transferred immediately to the laboratory, but if not, they are stored appropriately in a cool environment and transported within 24 hours to the laboratory for analysis. ELS Laboratories conducts the analysis.

The results have been compared to the ELVs contained in Schedule C and D of waste licence 147-01. Almost all surface and foul water results were in compliance with the emission limit values contained in the licence. During the months of November and December, ammoniacal nitrogen slightly exceeded the 20mg/L limit. Sulphate concentrations were above limits for December also.

4. SCHEDULE OF OBJECTIVES AND TARGETS 2016

Objectives	Targets
1. Eliminate odour complaints	To ensure no complaints relating to odour are generated as a result of site activities
2. Eliminate vermin complaints	To ensure no complaints relating to rodents or flies are generated as a result of site activities
3. Eliminate bird complaints	To ensure no complaints relating to birds are generated as a result of site activities
4. Eliminate dust complaints	To ensure no complaints relating to dust are generated as a result of site activities
5. Reduce litter within and around the site vicinity	Continue regular dust patrols and establish a sign-off system for litter picks.
6. Eliminate ELV exceedences	Continue monitoring and investigate emission parameter increases.
7. Establish and maintain suitable site infrastructure at the facility	Maintain integrity of bunds, pipelines and hardstand.

The above will be reviewed regularly and notes compiled regularly to identify needs, etc. At the end of the year these reviews will help the compilation of the progress report.

Objective 1:- To ensure no odour complaints are generated as a result of site activities

Advantages to implement objective:-	The success of the project will yield several benefits to the environmental performance of the facility. As well as that, the facility's public reputation will improve. In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets.
Target:-	At the end of the calendar year, to have no complaints relating to odour.
Programme for achieving Target	Ongoing monitoring, along with regular communication between the environmental manager and facility manager concerning the status of this objective. **Tasks** 1. Ensure the doors to the MRB are closed where possible. 2. Encourage fast turnover of odorous waste. 3. Continue regular odour assessments
Responsibility for Project:-	The facility manager and environmental manager are responsible for implementing this project.

All the above tasks will be carried out on an ongoing basis

Objective 2:- Eliminate vermin complaints

Advantages to implement objective:-	The success of the project will yield several benefits to the environmental performance of the facility, as well as to the health and wellbeing of the staff. In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets.
Target:-	At the end of the calendar year, to have no complaints relating to vermin (rats or flies).
Programme for achieving Target	Ongoing monitoring, along with regular communication between the environmental manager and facility manager concerning the status of this objective. **Tasks** 1. Encourage fast turnover of waste. 2. Continue using the regular services of Prevent-a-Pest 3. Continue vigilance during nuisance patrols
Responsibility for Project:-	The facility manager and environmental manager are responsible for implementing this project.

All the above tasks will be carried out on an ongoing basis

Objective 3:- Eliminate bird complaints

Advantages to implement objective:-	The success of the project will yield several benefits to the environmental performance of the facility. Bird activity contributes to the proliferation of odours from the facility, and their presence in the general vicinity can be troublesome for some local residents. Control of bird activity will therefore improve the facility's public image. In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets.
Target:-	At the end of the calendar year, to have no complaints relating to birds.
Programme for achieving Target	Ongoing monitoring, along with regular communication between the environmental manager and facility manager concerning the status of this objective. **Tasks** 1. Ensure the doors to the MRB are closed where possible. 2. Encourage fast turnover of waste, particularly food waste. 3. Continue using the services of Bird Control Ireland 4. Research best techniques for effective bird management and make relevant purchases a. Purchase new hawk kite
Responsibility for Project:-	The facility manager and environmental manager are responsible for implementing this project.

Table 4.1: Timeframe for auctioning Task 4. The timeframe for tasks 1-3 is ongoing.

2016	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Task 4												

Objective 4:- Eliminate dust complaints

Advantages to implement objective:-	The success of the project will yield benefits to the environmental performance of the facility. As well as that, the facility's public reputation will improve. In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets.
Target:-	At the end of the calendar year, to have no complaints relating to dust.
Programme for achieving Target	Ongoing monitoring, along with regular communication between the environmental manager and facility manager concerning the status of this objective. **Tasks** 1. Ensure the doors to the MRB are closed where possible. a. Particularly while trommel is in use, doors should be closed 2. Monitor dust reports and address any increases in dust that are found.
Responsibility for Project:-	The facility manager and environmental manager are responsible for implementing this project.

All the above tasks will be carried out on an ongoing basis.

Objective 5:- Reduce litter within and around the site vicinity

Advantages to implement objective:-	It's a stipulation of the waste licence under condition 7.4 that all loose litter not permitted by the licensee shall be removed from the vicinity of the facility as soon as possible. This type of litter is visually unacceptable and has the potential to create a nuisance. The accomplishment of this objective will abate these problems.
Target:-	In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets. To maintain a well maintained site, site boundary and access roads while removing extraneous material from causing visual intrusion, odours and possibly becoming an attraction for vermin and birds.
Programme for achieving Target	Task 1: Evaluate regularly the situation with respect to litter. It may be windblown or illegally-dumped. Task 2: Continue litter patrol and maintain litter observation log. Task 3: Establish a sign-off system whereby the waste controller is able to pick and sign off on sections of the site on a rotational basis. This sign-off sheet will then be kept on file by the environmental manager Task 4: Discuss abatement measures with other adjoining facilities that may be a source for some of the litter. Task 5: Check Integrity of fencing and organise maintenance if necessary
Responsibility for Project:-	The waste controller and environmental manager are responsible for the implementation of this programme.

Table 4.2. Timeframe for tasks 3-5. Tasks 1 and 2 will be implemented on an ongoing basis.

2016	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Task 3												
Task 4												
Task 5												

Objective 6:- Eliminate ELV exceedences

Advantages to implement objective:-	Condition 6.2 of the Waste Licence requires that all the activities shall be carried out in a manner such that emissions do not result in significant impairment of, or significant interference with the environment beyond the facility boundary.
Target:-	In keeping with the EPA Guidance note for Annual Environmental Report, Ashgrove have set targets, which are "demanding". It should be noted that the targets set in the EMP are just "targets". However, Ashgrove will endeavour to make every reasonable effort to achieve the set targets. To eliminate all occurrences of incidents where ELVs are exceeded.
Programme for achieving Target	Task 1: Evaluate and compare current monitoring results with licence limits and current monitoring results with licence limits and current handling figures of the facility. Task 2: Identify any problems areas that exist with adverse emissions to the environment. Task 3: Identify sources / processes that may lead to problematic results. Task 4: Evaluate the effectiveness of all emission abatement equipment currently installed. Task 5: Discuss any findings with the Agency
Responsibility for Project:-	The Environmental Manager will haver responsibility for this project. Any implementations will be overseen by the Facility Manager subsequent to being approved by the Agency.

All the above tasks will be carried out on an ongoing basis

Objective 7:- Establish and Maintain suitable site Infrastructure at the Facility

Advantages to implement objective:-	The proper implementation of this objective will yield various benefits to the Environmental Performance of the Facility. It will help to reduce foul/surface water emissions and prevent leaching to groundwater.
Target:-	Maintain integrity of bunds, pipelines and hardstand.
Programme for achieving Target	Task 1: Label and provide safe access to sampling and monitoring points. Task 2: Have a fuel bund and pipeline integrity test carried out Task 3: Monitor the integrity of hardstanding surfaces
Responsibility for Project:-	The Environmental Manager and Facility Manager are responsible for the implementation of this project.

Table 4.3. Timeframe for tasks 1 and 2. Task 3 will be implemented on an ongoing basis.

2016	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Task 1												
Task 2												

4.1 Progress Review on Targets & Objectives for 2015

2015 Objectives (*progress in italics*)

1. **To ensure no adverse odour or dust is generated as a result of site activities**
    a. *Rapid-roller doors have been installed on the MRB, which are all kept closed for as much time as is practicable.*
2. **To improve and maintain Emergency Response & Training at the Facility**
    a. *Safe Pass and fire safety training is currently being organised.*
3. **Reduce litter within and around the site vicinity**
    a. *A member of staff has been nominated to complete litter picks around and immediately outside the facility*
    b. *The cladding on the western side of the MRB has been repaired, ensuring no further material escapes through gaps in the building's walls.*
4. **Reduce emissions from the development**
    a. *ELVs were not breached until November/December, during heavy rainfall*
    b. *Regular monitoring continues to be undertaken*

5. **Reduce instances of hazardous waste coming to the facility**
    a. *There were no instances of hazardous waste being brought to the facility*
6. **To establish and maintain suitable site infrastructure at the facility**
    a. *The foul water inspection chamber was de-sludged.*

5. COMPLAINTS AND INCIDENTS 2015

- 1 incident relating to the discovery of contaminated soil in the facility
    - All of the soil in question was excavated, and quarantined while a sample was sent to a laboratory for analysis. The soil was removed and sent to Enva, an appropriate facility for the treatment of such waste. No further waste of this nature was discovered.
- 1 incident relating to the obstruction of the foul water monitoring point
    - The material was removed once the issue was raised and monitoring resumed immediately. No further obstructions of this type have since occurred.
- 3 complaints were made about the presence of foul odours
    - An odour assessment was completed immediately after each complaint was raised, and a site patrol was conducted to check for any unusual activities that may have led to the production of foul odours. No odours were found to be emanating from Ashgrove.
- 1 complaint relating to the presence of rodents, birds and flies in the vicinity.
    - Employees from Prevent-a-Pest visited the site within one day of the complaint being raised. Poisoned bait was reapplied to several bait traps around the facility and a site patrol was completed. Birds were dispersed from the site using a hawk kite and audio distress calls.

5.1 Review of Nuisance Controls

Nuisance controls are always being reviewed, and it seems the current nuisance controls employed at the facility are adequate. However, it is understood that available control measures are improving, and should Ashgrove's current measures become inefficient, new measures will be examined and put in place.

6. RESOURCE AND ENERGY CONSUMPTION

6.1 Energy Consumption 2015

Type	Consumption and Unit
Electricity	68,450 kW/h
Diesel Fuel - White	143.189 Litres

7. FINANCIAL PROVISION

Ashgrove Plant Ltd had traded successfully as a Limited Company for over two decades. The company has sufficient assets that would finance any environmental remediation works that may be required should an Environmental Incident arise.

The company has independently-audited accounts and when these are reviewed it can be concluded that the company is financially strong and any incidents that may arise will not hinder the financial solvency of the company.

In addition, the company has submitted to the Agency an ELRA and the company has provisions to cater for incidents that may inadvertently arise.
The Facility has a Financial Provision in the form of a Bond of €50,000.

8. MANAGEMENT AND STAFFING STRUCTURE

Director
Pauline Collins

Facility Manager
Mr. Jim Collins Jnr

HR Manager/Accounts Manager
Mrs. Susan Wallace

Part-time Accounts Manager
Mrs. Kay Conroy

Environmental Manager
Mr. Steven Tooher

Weighbridge/Dispatch/Transport Manager
Mr. Alan Meade

9. PROGROMME FOR PUBLIC INFORMATION

Ashgrove Recycling are fully-committed to providing the general public, neighbouring residences and businesses with information relating to the Environmental Performance of the facility if requested.

The facility has a designated meeting room which can be used for the public if they wish to review various reports, etc.

All information in respect to the operation of the facility is maintained onsite and can be viewed upon request. Furthermore, if an individual wishes to see the facility in operation, it operates an open-door policy and endeavour to provide information to the public in both a timely and accurate manner.

10.DEVELOPMENT/INFRASTRUCTURAL WORKS

10.1 Works in 2015

A portion of the palisade fencing along the western perimeter of the facility was replaced with a concrete wall. This was installed for the purposes of increased security and to mitigate against dust and noise emissions.

10.2 Procedures Developed in 2015

There were no new procedures developed in 2015.

10.3 Planned works for 2016

There are currently no planned developments for 2016.

APPENDIX I – NOISE REPORTS

Glenside Environmental Services
Environmental and Engineering Consultants

2015 BI-ANNUAL NOISE SURVEY REPORT

for

Mr. Toddy Cuthbert

Environmental Department
Ashgrove Recycling
Churchfield Industrial Estate
Cork.

EPA Waste Licence Reg. No. P0147-01

DATE OF SURVEY: 21st July 2015

CONTENTS

1.0 INTRODUCTION

This report presents the results of the first event of the bi-annual environmental noise survey and impact assessment for 2015 conducted at the Ashgrove waste facility at John F Connelly Road, Churchfield Industrial Estate, Cork.

The survey was carried out to evaluate and assess the noise impacts that the site activities have on the local receiving noise environment and to assess compliance with Schedule D - Noise of Waste Licence Reg. No. W0147-01.

The noise monitoring survey was conducted according to *ISO 1996-2 2007 Acoustics – Description, Measurement and Assessment of Environmental Noise Parts 1-3* and with reference to the 2012 EPA publication, *"Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4).*

1.1 Experience of Personnel

All aspects of the noise assessment including the measurement of noise levels and the preparation of this report was conducted by Patrick Power B.Sc. MIOA (Member of the Institute of Acoustics), who has over 15 years providing acoustic consultancy and management services, noise monitoring surveys, noise impact assessments and acoustic design services to the Public and Private sectors.

2.0 Regional environmental setting

The facility is located in an industrial zoned area with industrial premises situated along the access road. There are a number of industrial units across the road from the site entrance to the south, while to east there is a large waste processing facility. A glass processing premises is located to the south of the boundary.

3.0 Existing site activities

The subject site is an established waste processing facility, with traffic movements increased in the early morning and evening period. Historically there have been no exceedances of Waste Licence at local sensitive areas. The main noise sources at the facility include traffic movements, compactors, compressors, and tipping of waste. Waste activities at the facility commence after 8am.

3.1 Noise Sensitive Receptors

There are a number of single dwelling located to the north of the facility along Nash's Boreen. Historically there has been no exceedances of noise limits at these locations with only low level site noise audible.

4.0 Noise Survey Protocol

4.1 Monitoring Locations

The noise monitoring equipment was located at each receptor with reference to the guidelines in *ISO 1996-2 2007 Acoustics – Description, Measurement and Assessment of Environmental Noise Parts 1-3* and the 2012 EPA publication, *"Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4).The monitoring locations are listed below in Table 4.1.*

Table 4.1 Monitoring Locations

Location	Description
M1 (E 166056 N 73491	On roadside close to FÁS training center, east of the Ashgrove recycling facility
M2 (E 165915 N 73549	At the "old roundabout" to the west of the facility perimeter
M3 (E 166283 N 73727)	Upper Fair Hill Road adjacent to Fair Green
M4 (E 165868 N 73758)	Outside houses on Nash's Boreen

4.2 Instrumentation and Methodology

Noise measurements were conducted according to the requirements of *ISO 1996-2 2007 Acoustics – Description, Measurement and Assessment of Environmental Noise Parts 1-3* and the 2003 EPA publication, *"Environmental Noise Survey, Guidance Document"*. The measurements were made using calibrated *Bruel and Kjaer 2250 integrating sound level meters* which were calibrated at 94 dB prior to and after use using a calibrated acoustical calibrator model *B&K 4230*. The sound level meters are Class 1 instruments which are in accordance with IEC 61672-1:2002 regulations. The sound level meters were fitted with a windshield during all measurements.

4.3 Survey Implementation

The free-field noise measurements were carried out on 21st July 2015 when all site activities were occurring normally. In accordance with the requirements of *NG4*, noise monitoring at each Noise Sensitive Receptor (M1 – M4) was carried out as follows:

Daytime Monitoring (07:00hrs – 19:00hrs)

3 x 30minute sampling periods at each Receptor (4 No) = 6 hour total sampling period

4.3 Meteorological Conditions during Surveys

The prevailing local weather conditions at the time of the surveys were as follows:

Daytime Surveys (07:00hrs – 19:00hrs)

21st July 2015

Clear, dry and warm 17°C with a light westerly breeze with a recorded maximum speed of <1 m/sec.

Windspeed and temperature were determined using a *Skywatch* handheld vane anemometer. Meteorological conditions were as observed during the monitoring intervals. Prevailing wind directions were obtained from Met Eireann.

The noise surveys were conducted the equivalent continuous A-Weighted Sound Pressure Level, $L_{Aeq,\ T}$, over 30-minute monitoring intervals with a Fast time weighting. The L_{Afmax} parameter was similarly recorded. A statistical analysis of the measurement results was also simultaneously completed so that the percentile levels, $L_{AN,\ T}$, for N = 90% and 10% over the specific measurement intervals were also recorded. A 1/3 octave band frequency analysis was also conducted simultaneously during each noise monitoring interval to determine the presence or not, of tonal components associated with site generated noise.

5.0 Survey Results

The environmental noise measurement results recorded at receptors M1 to M4 in the vicinity of the site on 21st July 2015 are presented in Tables 5.1 below.

The recorded 1/3 octave band spectra are presented below in Appendix I of this report and demonstrate that there were no tonal components associated with recorded noise measurements as determined according to *ISO 1996-2 2007 Acoustics – Description, Measurement and Assessment of Environmental Noise Part 2 – Annex D*. The presence of tonal components was assessed by determining if any 1/3 octave band exceeded the levels of adjacent bands as follows:

- 15dB in low frequency one-third octave bands (25Hz to 125Hz);
- 8dB in middle frequency bands (160Hz to 400Hz), and;
- 5dB in high frequency bands (500Hz to 10,000Hz)

Table 5.1 Daytime Noise Monitoring Survey Results

Monitoring Location	Date/Time 21/07/2015	$L_{Aeq, 30min}$ dB(A)	$L_{A90, 30min}$ dB(A)	$L_{A10, 30min}$ dB(A)
M1	10.11-11.41	62.6	54.6	67.8
		61.9	58.4	65.2
		63.8	57.1	67.3
M2	11.47-13:17	61.5	44.1	67.0
		61.8	48.1	63.0
		59.2	45.0	63.8
M3	13.28-14.58	60.3	51.8	64.7
		59.4	55.7	63.9
		58.1	47.6	65.0
M4	15.07-16.37	50.2	41.8	56.1
		49.8	40.2	49.9
		52.1	40.8	57.0

6.0 Evaluation of Results

Location M1

Measurements at location M1 were recorded on the location of the old roundabout outside entrance to the Ashgrove facility. Truck movements associated with the Ashgrove facility contributed to the ambient levels while regular movements to local industrial areas also influenced the noise levels. Distant traffic noise established the background noise level.

Operational noise from the Ashgrove facility was not considered significant with intermittent vehicle movement contributing. The L_{Aeq} was noted to be relatively steady over the 3 measurement periods and recorded at 61.9dB(A) to 63.8dB(A). The background noise was recorded at 54.6dB(A) to 58.4dB(A).

Location M2

Local traffic movements within the industrial estate close to the entrance of the Ashgrove facility, contributed to the ambient noise levels at M2. The noise associated with the Ashgrove activities were not considered significant at this location. The average noise level was recorded at 59.2 to 61.8dB(A) and the L_{90} was in the range 44.1dB(A) to 48.1dB(A). The background noise level indicates that the specific noise from the Ashgrove premises is within the 55dB(A) limit as specified in the Waste Licence.

Location M3

At location M3 the traffic on the Upper Fairhill Road was the dominant source of noise. The high L_{AF10} levels are an indication of traffic noise. There was no contribution from the Ashgrove facility at this location. The L_{Aeq} was recorded from 58.1dB(A) to 60.3dB(A).

Location M4

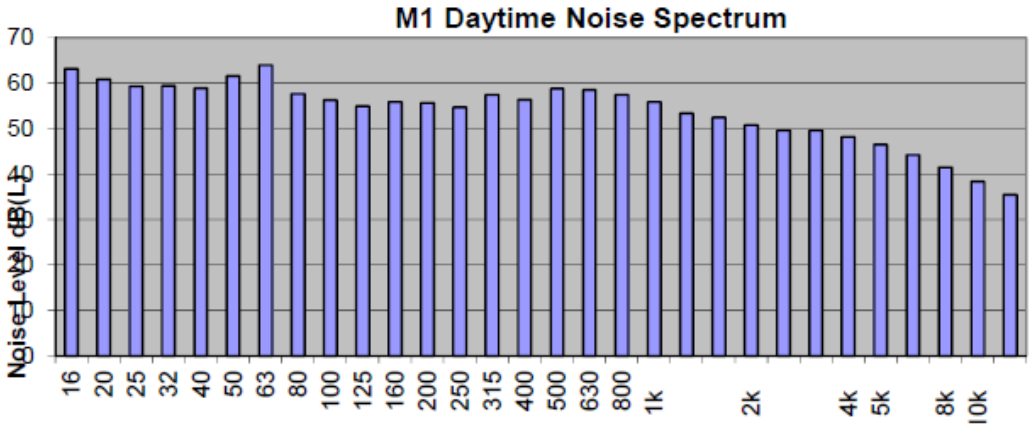
There was no noise audible from the Ashgrove facility at his location. The average noise levels were influenced by intermittent local passing traffic and the background levels were influenced by the distant traffic from the Mallow Road. The L_{Aeq} was recorded between 49.8dB(A) and 52.1dB(A) and the L_{90} was 40.2dB(A) to 41.8dB(A) over the 3 measurement intervals.

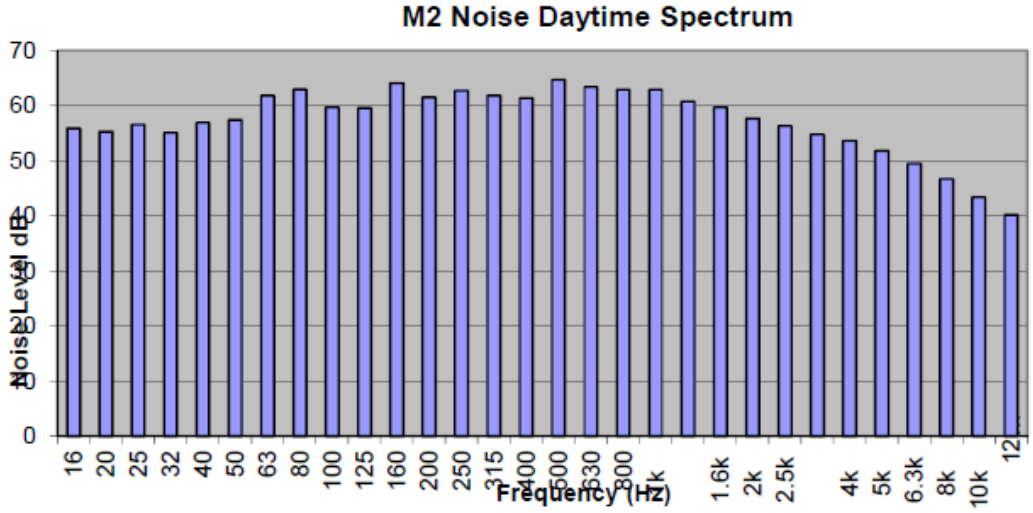
7.0 CONCLUSIONS

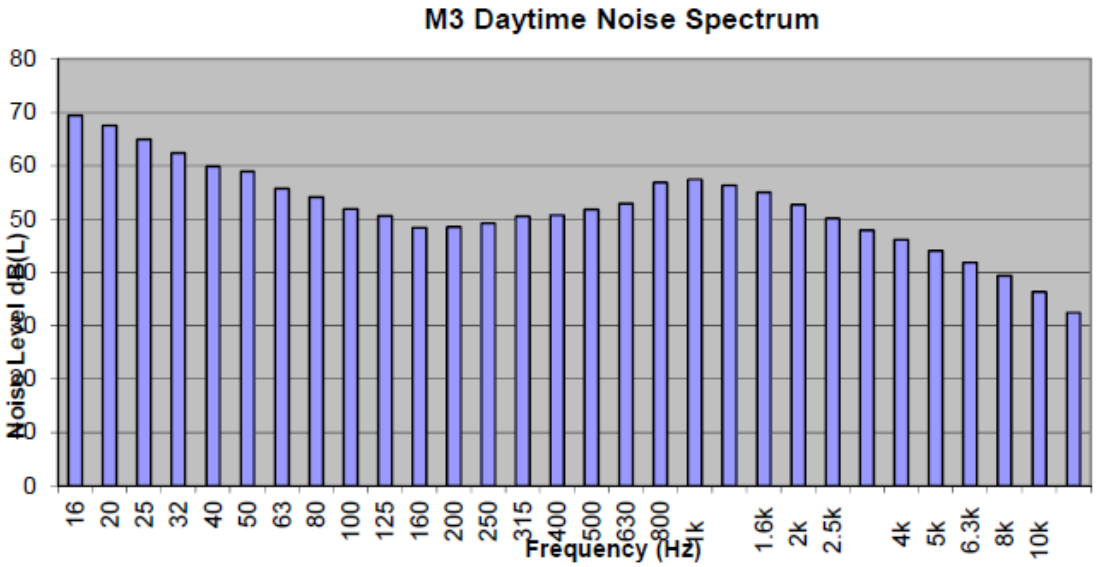
There was no audible noise from the facility at the monitoring. In conclusion the noise levels emanating from the Ashgrove facility are considered not to be impacting on local sensitive areas.

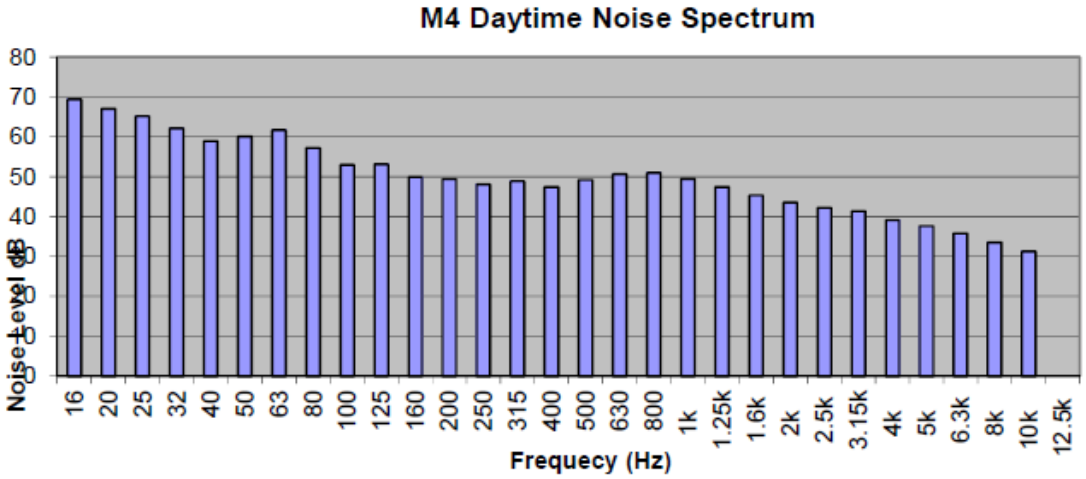
APPENDIX I

NOISE FREQUENCY SPECTRUM DATA


M1 Daytime Noise Spectrum
70
60
50
16
20
25
32
40
50
63
80
100
125
160
200
250
315
400
500
630
800
1k
2k
4k
5k
8k
10k


M2 Noise Daytime Spectrum
70
60
50
0
16
20
25
32
40
50
63
80
100
125
160
200
250
315
400
500
630
800
1k
1.6k
2k
2.5k
4k
5k
6.3k
8k
10k
Frequency (Hz)


M3 Daytime Noise Spectrum
Noise Level dB(L)
0
10
20
30
40
50
60
70
80
16
20
25
32
40
50
63
80
100
125
160
200
250
315
400
500
630
800
1k
1.6k
2k
2.5k
4k
5k
6.3k
8k
10k
Frequency (Hz)


M4 Daytime Noise Spectrum
Noise Level dB
0
10
20
30
40
50
60
70
80
16
20
25
32
40
50
63
80
100
125
160
200
250
315
400
500
630
800
1k
1.25k
1.6k
2k
2.5k
3.15k
4k
5k
6.3k
8k
10k
12.5k
Frequecy (Hz)

Glenside Environmental Services
Environmental and Engineering Consultants

2015 BI-ANNUAL NOISE SURVEY REPORT

for

Mr. Toddy Cuthbert

Environmental Department
Ashgrove Recycling
Churchfield Industrial Estate
Cork.

EPA Waste Licence Reg. No. P0147-01

DATE OF SURVEY: 24th November

CONTENTS

1.0 INTRODUCTION

This report presents the results of the second event of the bi-annual environmental noise survey and impact assessment for 2015 conducted at the Ashgrove waste facility at John F Connelly Road, Churchfield Industrial Estate, Cork.

The survey was carried out to evaluate and assess the noise impacts that the site activities have on the local receiving noise environment and to assess compliance with Schedule D - Noise of Waste Licence Reg. No. W0147-01.

The noise monitoring survey was conducted according to *ISO 1996-2 2007 Acoustics – Description, Measurement and Assessment of Environmental Noise Parts 1-3* and with reference to the 2012 EPA publication, *"Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4).*

1.1 Experience of Personnel

All aspects of the noise assessment including the measurement of noise levels and the preparation of this report was conducted by Patrick Power B.Sc. MIOA (Member of the Institute of Acoustics), who has over 15 years providing acoustic consultancy and management services, noise monitoring surveys, noise impact assessments and acoustic design services to the Public and Private sectors.

2.0 Regional environmental setting

The facility is located in an industrial zoned area with industrial premises situated along the access road. There are a number of industrial units across the road from the site entrance to the south, while to east there is a large waste processing facility. A glass processing premises is located to the south of the boundary.

3.0 Existing site activities

The subject site is an established waste processing facility, with traffic movements increased in the early morning and evening period. Historically there have been no exceedances of Waste Licence at local sensitive areas. The main noise sources at the facility include traffic movements, compactors, compressors, and tipping of waste. Waste activities at the facility commence after 8am.

3.1 Noise Sensitive Receptors

There are a number of single dwelling located to the north of the facility along Nash's Boreen. Historically there has been no exceedances of noise limits at these locations with only low level site noise audible.

4.0 Noise Survey Protocol

4.1 Monitoring Locations

The noise monitoring equipment was located at each receptor with reference to the guidelines in *ISO 1996-2 2007 Acoustics – Description, Measurement and Assessment of Environmental Noise Parts 1-3* and the 2012 EPA publication, *"Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4).The monitoring locations are listed below in Table 4.1.*

Table 4.1 Monitoring Locations

Location	Description
M1 (E 166056 N 73491	On roadside close to FÁS training center, east of the Ashgrove recycling facility
M2 (E 165915 N 73549	At the "old roundabout" to the west of the facility perimeter
M3 (E 166283 N 73727)	Upper Fair Hill Road adjacent to Fair Green
M4 (E 165868 N 73758)	Outside houses on Nash's Boreen

4.2 Instrumentation and Methodology

Noise measurements were conducted according to the requirements of *ISO 1996-2 2007 Acoustics – Description, Measurement and Assessment of Environmental Noise Parts 1-3* and the 2003 EPA publication, *"Environmental Noise Survey, Guidance Document"*. The measurements were made using calibrated *Bruel and Kjaer 2250 integrating sound level meters* which were calibrated at 94 dB prior to and after use using a calibrated acoustical calibrator model *B&K 4230*. The sound level meters are Class 1 instruments which are in accordance with IEC 61672-1:2002 regulations. The sound level meters were fitted with a windshield during all measurements.

4.3 Survey Implementation

The free-field noise measurements were carried out on 24th November 2015 when all site activities were occurring normally. In accordance with the requirements of *NG4*, noise monitoring at each Noise Sensitive Receptor (M1 – M4) was carried out as follows:

Daytime Monitoring (07:00hrs – 19:00hrs)

3 x 30minute sampling periods at each Receptor (4 No) = 6 hour total sampling period

4.3 Meteorological Conditions during Surveys

The prevailing local weather conditions at the time of the surveys were as follows:

Daytime Surveys (07:00hrs – 19:00hrs)

24th November

Dry and overcast, 12-13°C with a light westerly breeze.

Windspeed and temperature were determined using a *Skywatch* handheld vane anemometer. Meteorological conditions were as observed during the monitoring intervals. Prevailing wind directions were obtained from Met Eireann.

The noise surveys were conducted the equivalent continuous A-Weighted Sound Pressure Level, $L_{Aeq,\ T}$, over 30-minute monitoring intervals with a Fast time weighting. The L_{Afmax} parameter was similarly recorded. A statistical analysis of the measurement results was also simultaneously completed so that the percentile levels, $L_{AN,\ T}$, for N = 90% and 10% over the specific measurement intervals were also recorded. A 1/3 octave band frequency analysis was also conducted simultaneously during each noise monitoring interval to determine the presence or not, of tonal components associated with site generated noise.

5.0 Survey Results

The environmental noise measurement results recorded at receptors M1 to M4 in the vicinity of the site on 24th November are presented in Tables 5.1 below.

The recorded 1/3 octave band spectra are presented below in Appendix I of this report and demonstrate that there were no tonal components associated with recorded noise measurements as determined according to *ISO 1996-2 2007 Acoustics – Description, Measurement and Assessment of Environmental Noise Part 2 – Annex D*. The presence of tonal components was assessed by determining if any 1/3 octave band exceeded the levels of adjacent bands as follows:

- 15dB in low frequency one-third octave bands (25Hz to 125Hz);
- 8dB in middle frequency bands (160Hz to 400Hz), and;
- 5dB in high frequency bands (500Hz to 10,000Hz)

Table 5.1 Daytime Noise Monitoring Survey Results

Monitoring Location	Date/Time 24th Nov 2015	$L_{Aeq, 30min}$ dB(A)	$L_{A90, 30min}$ dB(A)	$L_{A10, 30min}$ dB(A)
M1	11.19-12.49	61.7	49.2	63.8
		61.3	48.4	62.1
		60.8	47.6	61.8
M2	13.04-14.34	61.5	44.9	57.0
		63.8	48.1	60.0
		64.2	45.0	67.1
M3	14.43-16.13	63.7	53.8	66.2
		65.0	51.7	67.3
		62.1	47.6	65.0
M4	16.19-17.49	51.7	43.8	54.1
		47.8	40.2	49.9
		54.9	41.4	57.1

6.0 Evaluation of Results

Location M1

Measurements at location M1 were recorded on the location of the old roundabout outside entrance to the Ashgrove facility. Truck movements associated with the Ashgrove facility contributed to the ambient levels while regular movements to local industrial areas also influenced the noise levels. Distant traffic noise established the background noise level.

Operational noise from the Ashgrove facility was not considered significant with intermittent vehicle movement contributing. The L_{Aeq} was noted to be relatively steady over the 3 measurement periods and recorded at 60.8dB(A) to 61.7dB(A). The background noise was recorded at 47.6dB(A) to 49.2dB(A).

Location M2

Local traffic movements within the industrial estate close to the entrance of the Ashgrove facility, contributed to the ambient noise levels at M2. The noise associated with the Ashgrove activities were not considered significant at this location. The average noise level was recorded at 61.5 to 64.2dB(A) and the L90 was in the range 44.9dB(A) to 48.1dB(A). The background noise level indicates that the specific noise from the Ashgrove premises is within the 55dB(A) limit as specified in the Waste Licence.

Location M3

At location M3 the traffic on the Upper Fairhill Road was the dominant source of noise. The high L_{AF10} levels are an indication of traffic noise. There was no contribution from the Ashgrove facility at this location. The L_{Aeq} was recorded from 62.1dB(A) to 65.0dB(A).

Location M4

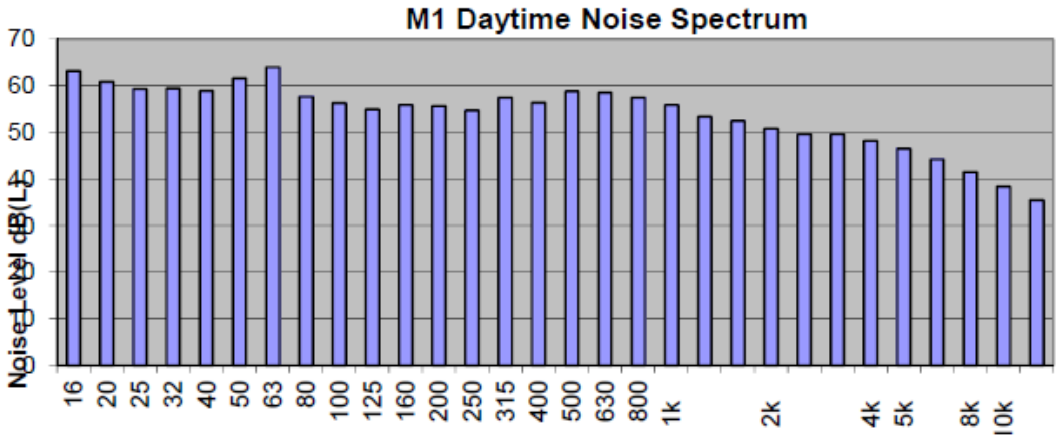
There was no noise audible from the Ashgrove facility at his location. The average noise levels were influenced by intermittent local passing traffic and the background levels were influenced by the distant traffic from the Mallow Road. The L_{Aeq} was recorded between 47.8dB(A) and 54.9dB(A) and the L_{90} was 40.2dB(A) to 43.8dB(A) over the 3 measurement intervals.

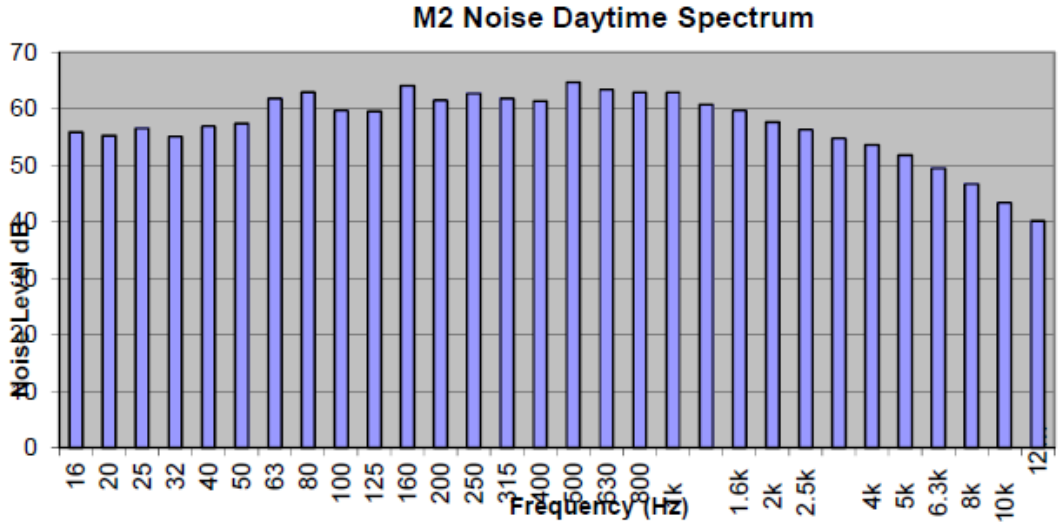
7.0 CONCLUSIONS

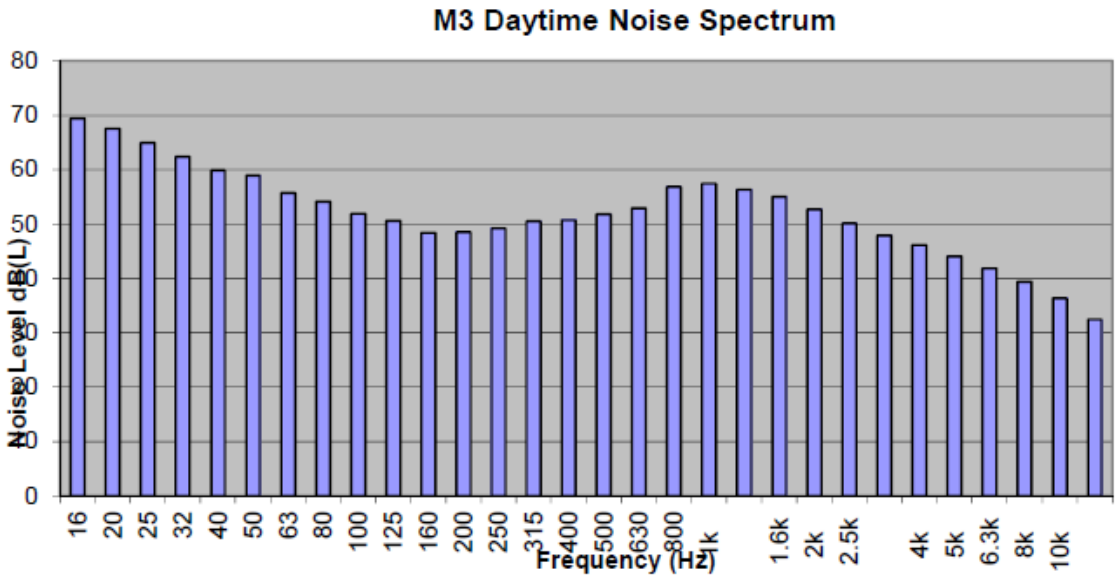
There was no audible noise from the facility at the monitoring. In conclusion the noise levels emanating from the Ashgrove facility are considered not to be impacting on local sensitive areas.

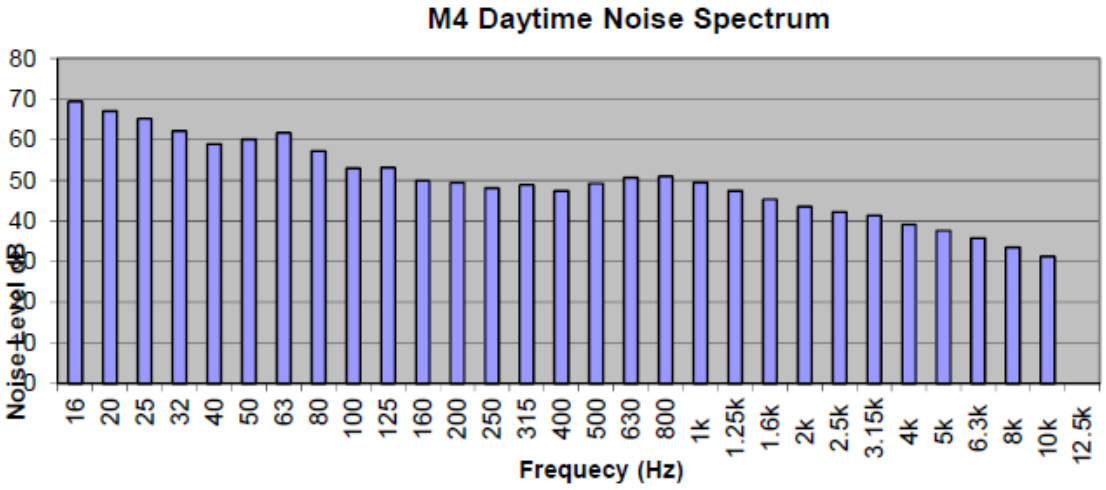
APPENDIX I

NOISE FREQUENCY SPECTRUM DATA


M1 Daytime Noise Spectrum
70
60
50
40
30
20
10
0
Noise Level dB(L
16
20
25
32
40
50
63
80
100
125
160
200
250
315
400
500
630
800
1k
2k
4k
5k
8k
10k


M2 Noise Daytime Spectrum
70
60
50
40
30
20
10
0
Noise Level dB
16
20
25
32
40
50
63
80
100
125
160
200
250
315
400
500
630
800
1k
1.6k
2k
2.5k
4k
5k
6.3k
8k
10k
Frequency (Hz)


M3 Daytime Noise Spectrum
Noise Level dB(L)
80
70
60
50
40
30
20
10
0
16
20
25
32
40
50
63
80
100
125
160
200
250
315
400
500
630
800
1k
1.6k
2k
2.5k
4k
5k
6.3k
8k
10k
Frequency (Hz)


M4 Daytime Noise Spectrum
Noise Level dB
80
70
60
50
40
30
20
10
0
16
20
25
32
40
50
63
80
100
125
160
200
250
315
400
500
630
800
1k
1.25k
1.6k
2k
2.5k
3.15k
4k
5k
6.3k
8k
10k
12.5k
Frequecy (Hz)

APPENDIX II: DUST REPORTS

ASHGROVE PLANT LTD
t/a ASHGROVE RECYCLING
CHURCHFIELD INDUSTRIAL ESTATE
CHURCHFIELD
CORK

WASTE LICENSE 147-1

DUST MONITORING
September 2015

1 INTRODUCTION

The Environmental Protection Agency (EPA) issued Ashgrove Recycling a waste licence (register number 147-1) at Churchfield Industrial Estate, Churchfield, Cork, on 28th March 2002.

Waste licence Number 147-1 obliges the licensee to facilitate the monitoring of all designated sampling locations at Ashgrove Recycling. In order to fulfil these environmental compliance commitments in 2015 Ashgrove Recycling delegated to Cuthbert Environmental staff to complete annual monitoring. ELS Ltd were awarded the contract to perform the laboratory analysis of the dust samples that were collected. Cuthbert Environmental will interpret the environmental monitoring data collected and compiled to produce environmental reports for submission to the EPA.

This report represents the dust monitoring for July/ August 2015 and it addresses dust levels in relation to EPA established trigger levels and other national and international standards. The report is divided into three sections:

- Section one is a brief introduction;
- Section two analyses and discusses the quality of the air at dust monitoring locations;
- Section three draws overall conclusions on the quality of the air and makes recommendations where necessary.

2 DUST MONITORING

Dust monitoring was carried out at four locations; D1, D2, D3 and D4 as described in Table 2.1 below.

Table 2.1: Dust Monitoring Locations

Site	Description
D1	South East
D2	North West
D3	South West
D4	North East

2.1 Monitoring Results

Dust monitoring results for each of the four sampling locations are presented in Table 2.1. The full analysis datasets issued by ELS Ltd are included in Appendix 1.

Dust deposition was measured in accordance with VDI 2119: Measurement of Dust Using a Bergerhoff Dust Deposition Gauge. The gauges consist of a collecting jar positioned at 1.5 meters above ground level with a bird guard around the collecting jar.

Dust monitoring was carried out during July/ August (23rd July to the 21st August 2015)

Total dust deposition was determined and expressed as mg/m^2/day.

TABLE 2.1.1: Monitoring Results

SAMPLE	TOTAL DUST mg/m2/day	LIMIT
D1	4	350 mg/m^2/day
D2	358	
D3	704	
D4	390	

3 CONCLUSIONS AND RECOMMENDATIONS

Schedule C2 of Waste Licence Number 142-1 sets a limit 350 mg/m^2/day for total dust deposited.

Dust deposition levels at all locations analysed during July/August 2015 were above the set limit in the licence and the EPA Best Practice limit for dust deposition of 350 mg/m^2/day except for location 1.

It should also be noted that Ashgrove Recycling has received no complaints in relation to dust deposition or air quality and there are no indications that the site is causing a dust nuisance.

APPENDIX 1

ELS Datasheets for 2015 – Ashgrove Recycling

ENVIRONMENTAL
LABORATORY SERVICES
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Mahon Industrial Park,
Blackrock,
Cork
Ireland
Tel: +353 21 453 6141
Fax: +353 21 453 6149
Web: www.irishwatertesting.com
email: info@elsltd.com

Contact Name	Toddy Cuthbert	**Report Number**	**88525 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number** **Date of Receipt** **Date Started**	88525/001 26/08/2015 26/08/2015
Tel No	021-4346072	**Received or Collected**	Hand
Fax No		**Condition on Receipt**	Good
Customer PO	Not Required	**Date of Report**	08/09/2015
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove Recycling D1		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		1.3	mg/jar		

Signed : _____ 08/09/2015

Brendan Murray-Deputy Technical Manager

NOTES
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2.SPEC= Allowable limit or parametric value
3.OOS=Result which is outside specification highlighted as OOS-A
4.LOQ=Limit of Quantification or lowest value that can be reported
5.ACCRED=Indicates matrix accreditation for the test,a blank field indicates not accredited
6."*" Indicates sub-contract test

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Fax: +353 21 453 6149
Web: www.irishwatertesting.com
email: info@elsltd.com

Contact Name	Toddy Cuthbert	**Report Number**	**88525 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	88525/002
		Date of Receipt	26/08/2015
		Date Started	26/08/2015
Tel No	021-4346072	**Received or Collected**	Hand
Fax No		**Condition on Receipt**	Good
Customer PO	Not Required	**Date of Report**	08/09/2015
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove Recycling D2		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		125.2	mg/jar		

Signed : _____ 08/09/2015

Brendan Murray-Deputy Technical Manager

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Fax: +353 21 453 6149
Web: www.irishwatertesting.com
email: info@elsltd.com

Contact Name	Toddy Cuthbert	**Report Number**	**88525 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	88525/003
		Date of Receipt	26/08/2015
		Date Started	26/08/2015
Tel No	021-4346072	**Received or Collected**	Hand
Fax No		**Condition on Receipt**	Good
Customer PO	Not Required	**Date of Report**	08/09/2015
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove Recycling D3		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		247.0	mg/jar		

Signed : _____ 08/09/2015

Brendan Murray-Deputy Technical Manager

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Tel: +353 21 453 6141
Fax: +353 21 453 6149
Web: www.irishwatertesting.com
email: info@elsltd.com

Contact Name	Toddy Cuthbert	**Report Number**	**88525 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	88525/004
		Date of Receipt	26/08/2015
		Date Started	26/08/2015
Tel No	021-4346072	**Received or Collected**	Hand
Fax No		**Condition on Receipt**	Good
Customer PO	Not Required	**Date of Report**	08/09/2015
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove Recycling D4		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		136.8	mg/jar		

Signed : _____ 08/09/2015

Brendan Murray-Deputy Technical Manager

NOTES
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6."*" Indicates sub-contract test

Page 4 of 4

ASHGROVE PLANT LTD
t/a ASHGROVE RECYCLING
CHURCHFIELD INDUSTRIAL ESTATE
CHURCHFIELD
CORK

WASTE LICENSE 147-1

DUST MONITORING
October 2015

1 INTRODUCTION

The Environmental Protection Agency (EPA) issued Ashgrove Recycling a waste licence (register number 147-1) at Churchfield Industrial Estate, Churchfield, Cork, on 28th March 2002.

Waste licence Number 147-1 obliges the licensee to facilitate the monitoring of all designated sampling locations at Ashgrove Recycling. In order to fulfil these environmental compliance commitments in 2015 Ashgrove Recycling delegated to Cuthbert Environmental staff to complete annual monitoring. ELS Ltd were awarded the contract to perform the laboratory analysis of the dust samples that were collected. Cuthbert Environmental will interpret the environmental monitoring data collected and compiled to produce environmental reports for submission to the EPA.

This report represents the dust monitoring for September/ October 2015 and it addresses dust levels in relation to EPA established trigger levels and other national and international standards. The report is divided into three sections:

- Section one is a brief introduction;
- Section two analyses and discusses the quality of the air at dust monitoring locations;
- Section three draws overall conclusions on the quality of the air and makes recommendations where necessary.

2 DUST MONITORING

Dust monitoring was carried out at four locations; D1, D2, D3 and D4 as described in Table 2.1 below.

Table 2.1: Dust Monitoring Locations

Site	Description
D1	South East
D2	North West
D3	South West
D4	North East

2.1 Monitoring Results

Dust monitoring results for each of the four sampling locations are presented in Table 2.1. The full analysis datasets issued by ELS Ltd are included in Appendix 1.

Dust deposition was measured in accordance with VDI 2119: Measurement of Dust Using a Bergerhoff Dust Deposition Gauge. The gauges consist of a collecting jar positioned at 1.5 meters above ground level with a bird guard around the collecting jar.

Dust monitoring was carried out during September/ October (3rd September to the 2nd October 2015)

Total dust deposition was determined and expressed as mg/m^2/day.

TABLE 2.1.1: Monitoring Results

SAMPLE	TOTAL DUST mg/m2/day	LIMIT
D1	189	350 mg/m^2/day
D2	Void	
D3	209	
D4	126	

3 CONCLUSIONS AND RECOMMENDATIONS

Schedule C2 of Waste Licence Number 142-1 sets a limit 350 mg/m^2/day for total dust deposited.

Dust deposition levels at all locations analysed during September/ October 2015 were within the set limit in the licence and the EPA Best Practice limit for dust deposition of 350 mg/m^2/day.

Ashgrove Recycling has received no complaints in relation to dust deposition or air quality and there are no indications that the site is causing a dust nuisance.

APPENDIX 1

ELS Datasheets for 2015 – Ashgrove Recycling

ENVIRONMENTAL LABORATORY SERVICES
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Contact Name	Toddy Cuthbert	**Report Number**	**89681 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	89681/001
		Date of Receipt	05/10/2015
		Date Started	05/10/2015
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	20/10/2015
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove recycling D1		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		66.5	mg/jar		

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Doroteja Repic-Technical Manager

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Contact Name	Toddy Cuthbert	**Report Number**	**89681 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	89681/002
		Date of Receipt	05/10/2015
		Date Started	05/10/2015
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	20/10/2015
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove recycling D2		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		1567.3	mg/jar		

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Contact Name	Toddy Cuthbert	**Report Number**	**89681 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	89681/003
		Date of Receipt	05/10/2015
		Date Started	05/10/2015
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	20/10/2015
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove recycling D3		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		73.5	mg/jar		

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Contact Name	Toddy Cuthbert	**Report Number**	**89681 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	89681/004
		Date of Receipt	05/10/2015
		Date Started	05/10/2015
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	20/10/2015
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove recycling D4		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		44.3	mg/jar		

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CHURCHFIELD INDUSTRIAL ESTATE
CHURCHFIELD
CORK

WASTE LICENSE 147-1

DUST MONITORING
December 2015

CUTHBERTENVIRONMENTAL

1 INTRODUCTION

The Environmental Protection Agency (EPA) issued Ashgrove Recycling a waste licence (register number 147-1) at Churchfield Industrial Estate, Churchfield, Cork, on 28th March 2002.

Waste licence Number 147-1 obliges the licensee to facilitate the monitoring of all designated sampling locations at Ashgrove Recycling. In order to fulfil these environmental compliance commitments in 2015 Ashgrove Recycling delegated to Cuthbert Environmental staff to complete annual monitoring. ELS Ltd were awarded the contract to perform the laboratory analysis of the dust samples that were collected. Cuthbert Environmental will interpret the environmental monitoring data collected and compiled to produce environmental reports for submission to the EPA.

This report represents the dust monitoring for December 2015 and it addresses dust levels in relation to EPA established trigger levels and other national and international standards. The report is divided into three sections:

- Section one is a brief introduction;
- Section two analyses and discusses the quality of the air at dust monitoring locations;
- Section three draws overall conclusions on the quality of the air and makes recommendations where necessary.

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Fax: 353 21 4348475
Mob: 353 86 3864518
toddy.cuthbert@gmail.com

CUTHBERTENVIRONMENTAL

2 DUST MONITORING

Dust monitoring was carried out at four locations; D1, D2, D3 and D4 as described in Table 2.1 below.

Table 2.1: Dust Monitoring Locations

Site	Description
D1	South East
D2	North West
D3	South West
D4	North East

2.1 Monitoring Results

Dust monitoring results for each of the four sampling locations are presented in Table 2.1. The full analysis datasets issued by ELS Ltd are included in Appendix 1.

Dust deposition was measured in accordance with VDI 2119: Measurement of Dust Using a Bergerhoff Dust Deposition Gauge. The gauges consist of a collecting jar positioned at 1.5 meters above ground level with a bird guard around the collecting jar.

Dust monitoring was carried out during December (4th December to the 4th January 2016)

Total dust deposition was determined and expressed as mg/m^2/day.

TABLE 2.1.1: Monitoring Results

SAMPLE	TOTAL DUST mg/m2/day	LIMIT
D1	207	350 mg/m^2/day
D2	116	
D3	1326	
D4	199	

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CUTHBERTENVIRONMENTAL

3 CONCLUSIONS AND RECOMMENDATIONS

Schedule C2 of Waste Licence Number 142-1 sets a limit 350 mg/m^2/day for total dust deposited.

Dust deposition levels at all locations analysed during December 2015 were within the set limit in the licence and the EPA Best Practice limit for dust deposition of 350 mg/m^2/day except for D3.

Ashgrove Recycling has received no complaints in relation to dust deposition or air quality and there are no indications that the site is causing a dust nuisance.

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CUTHBERTENVIRONMENTAL

APPENDIX 1

ELS Datasheets for 2015 – Ashgrove Recycling

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Contact Name	Toddy Cuthbert	**Report Number**	**92171 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	92171/001
		Date of Receipt	04/01/2016
		Date Started	04/01/2016
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	14/01/2016
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove Recycling D1		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		77.4	mg/jar		

Signed : _____ 14/01/2016

Doroteja Repic-Technical Manager

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Contact Name	Toddy Cuthbert	**Report Number**	**92171 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	92171/002
		Date of Receipt	04/01/2016
		Date Started	04/01/2016
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	14/01/2016
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove Recycling D2		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		43.6	mg/jar		

Signed : _____ 14/01/2016

Doroteja Repic-Technical Manager

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Contact Name	Toddy Cuthbert	**Report Number**	**92171 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	92171/003
		Date of Receipt	04/01/2016
		Date Started	04/01/2016
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	14/01/2016
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove Recycling D3		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		496.3	mg/jar		

Signed : _____ 14/01/2016

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email:info@elsltd.com

Contact Name	Toddy Cuthbert	**Report Number**	**92171 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number** **Date of Receipt** **Date Started**	92171/004 04/01/2016 04/01/2016
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	14/01/2016
Quotation No	QN003624	**Sample Type**	Other
Customer Ref	Ashgrove Recycling D4		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Bergerhoff (Total Solids mg/jar)									
	Bergerhoff (Total Solids)		EW131	1.0		74.4	mg/jar		

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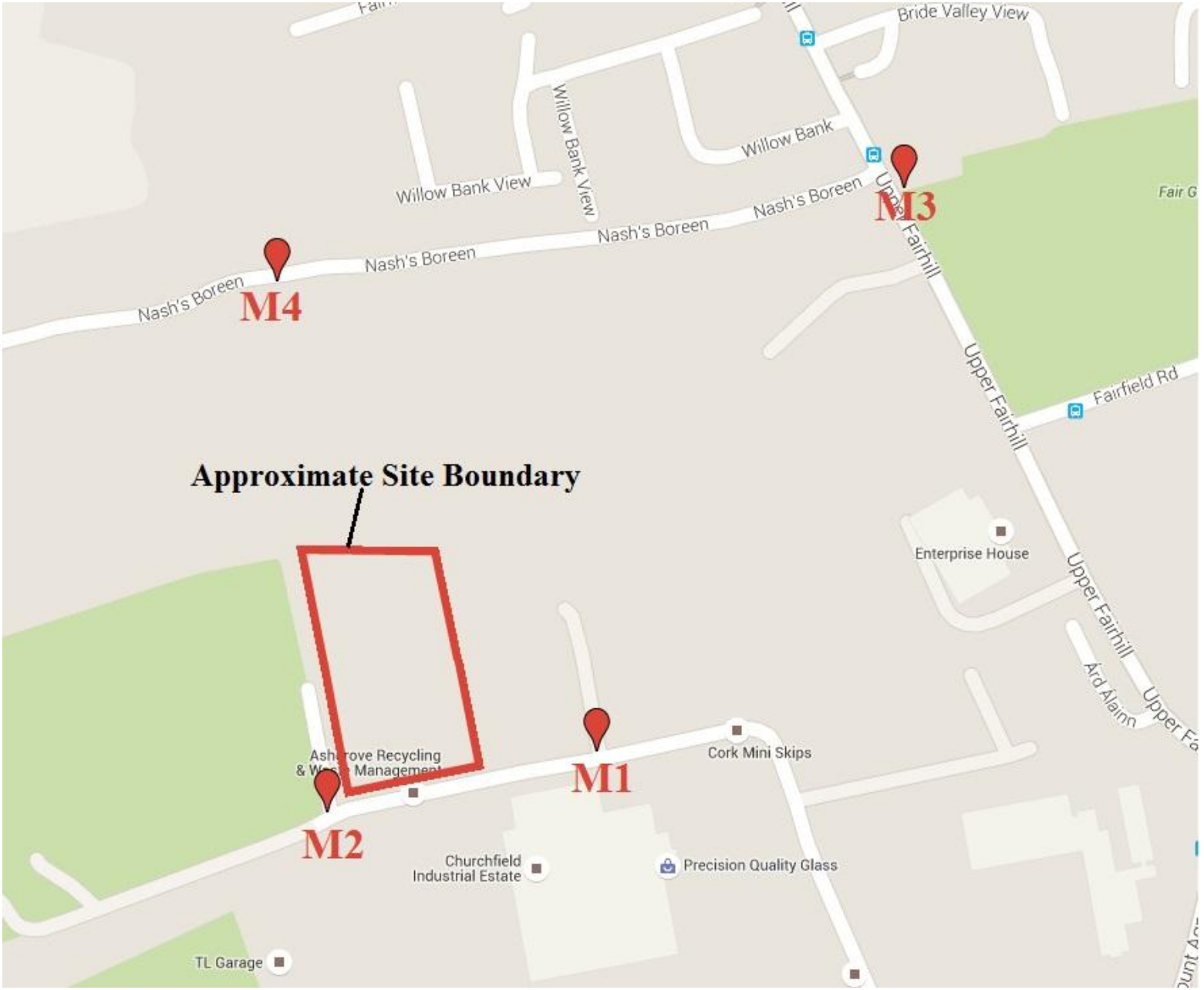
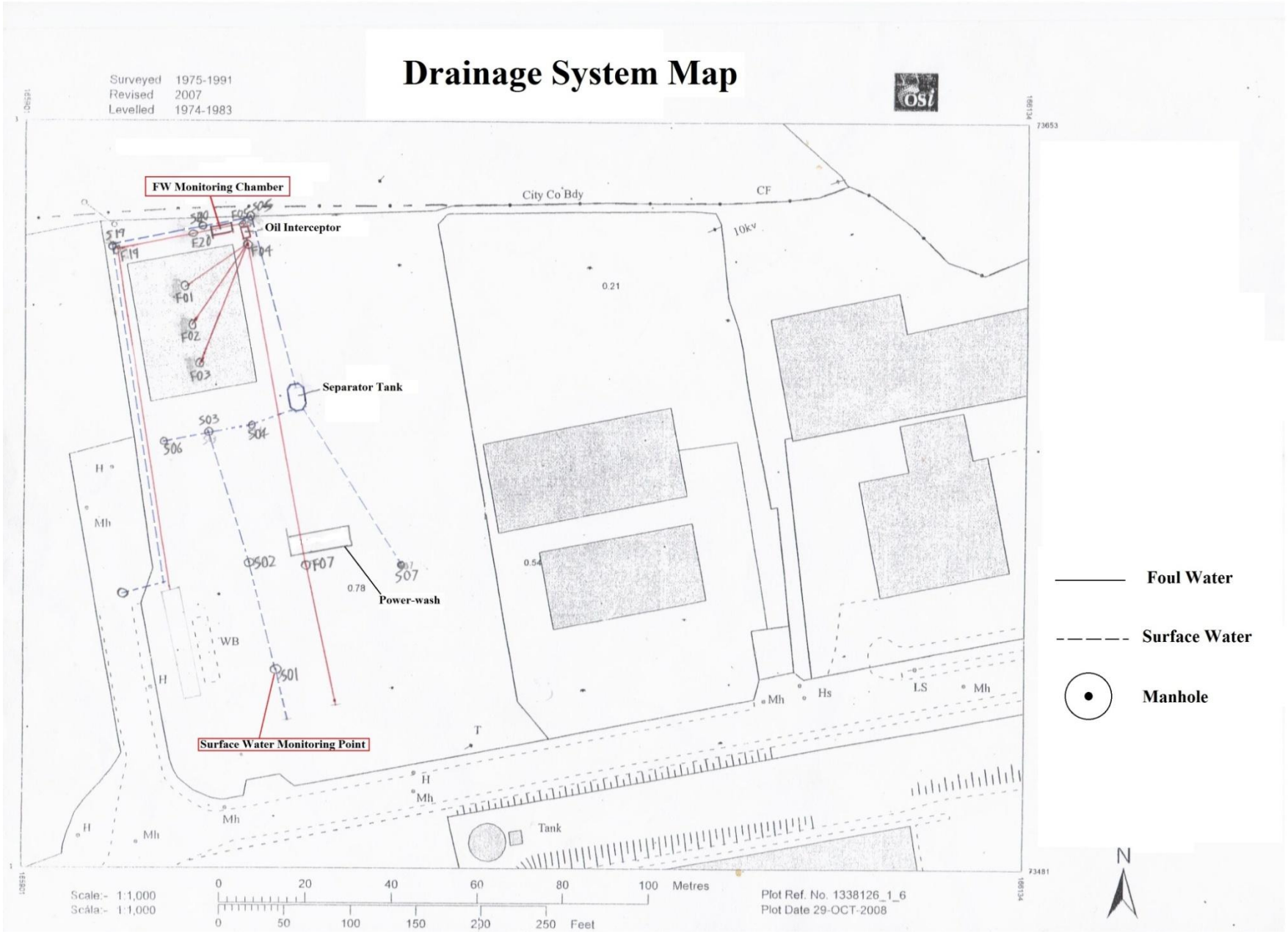
APPENDIX III: MONITORING LOCATIONS

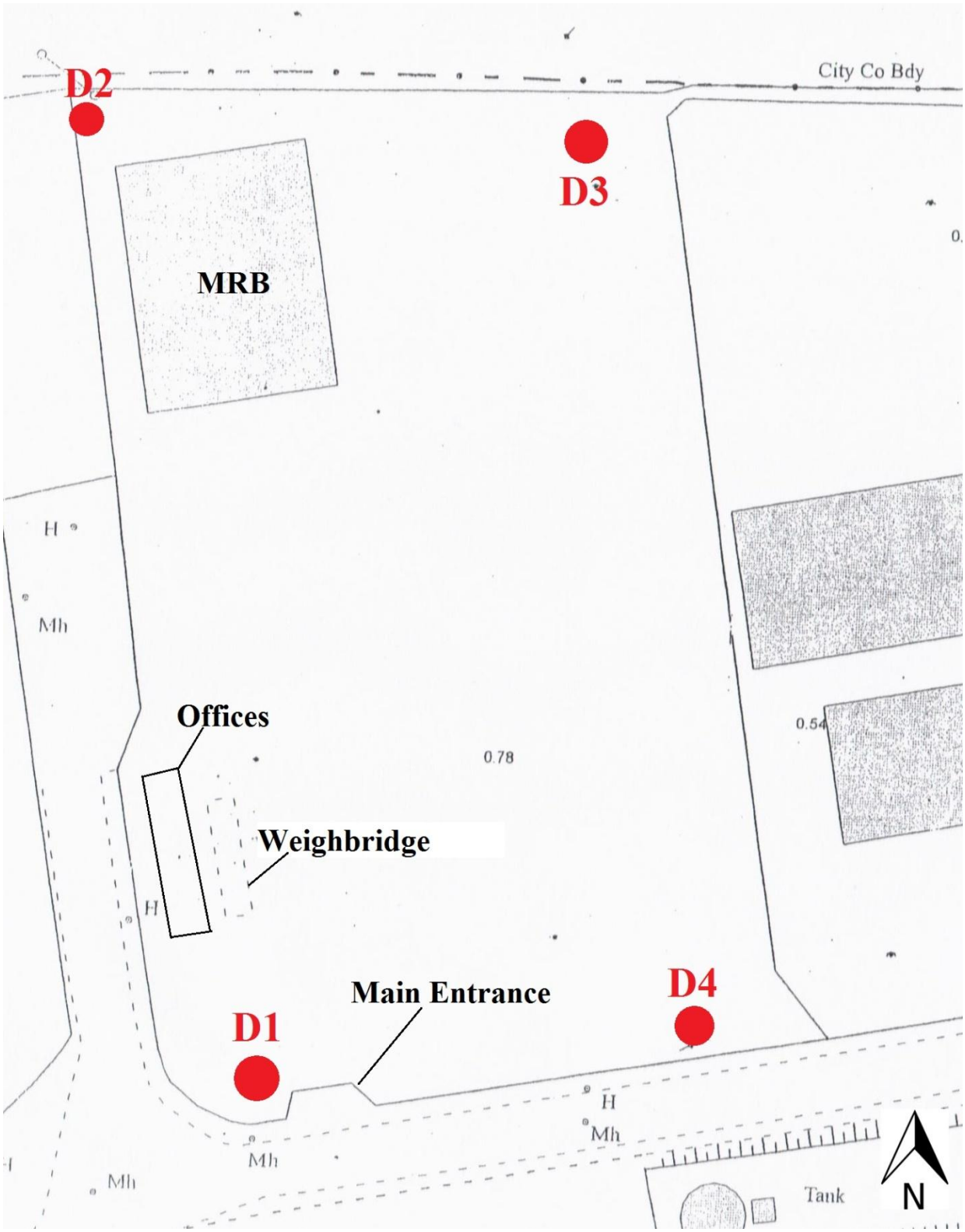
NOISE MONITORING LOCATIONS


Bride Valley View
Willow Bank View
Willow Bank
Willow Bank View
Nash's Boreen
Nash's Boreen
Nash's Boreen
Nash's Boreen
Upper Fairhill
Upper Fairhill
Fairfield Rd
Upper Fairhill
Ard Alainn
Upper Fa
M3
M4
Approximate Site Boundary
Enterprise House
Ashgrove Recycling
& Waste Management
M1
Cork Mini Skips
M2
Churchfield
Industrial Estate
Precision Quality Glass
TL Garage

EFFLUENT MONITORING LOCATIONS


Drainage System Map
Surveyed 1975-1991
Revised 2007
Levelled 1974-1983
FW Monitoring Chamber
Oil Interceptor
Separator Tank
Power-wash
Surface Water Monitoring Point
City Co Bdy
CF
10kv
0.21
0.54
0.78
Tank
WB
Foul Water
Surface Water
Manhole
N
Scale:- 1:1,000
Scala:- 1:1,000
0 20 40 60 80 100 Metres
0 50 100 150 200 250 Feet
Plot Ref. No. 1338126_1_6
Plot Date 29-OCT-2008

DUST MONITORING LOCATIONS


D2
City Co Bdy
D3
MRB
H
Mh
Offices
0.78
0.54
Weighbridge
H
Main Entrance
D4
D1
H
Mh
Mh
Mh
Tank
N

APPENDIX IV: EFFLUENT MONITORING RESULTS

FOUL WATER

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ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO. 111T

Contact Name	Toddy Cuthbert	**Report Number**	**84394 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	84394/001
		Date of Receipt	09/04/2015
		Date Started	09/04/2015
Tel No	021-4346072	**Received or Collected**	Hand
Fax No		**Condition on Receipt**	Good
Customer PO	Per Batch	**Date of Report**	17/07/2015
Quotation No	QN004047	**Sample Type**	Waste Water
Customer Ref	Ashgrove		

LRN		**Category**		**Entity**	
Station		**Template**			
Laboratory	**Analyst**	**SampleDate**		**SampleTime**	**SampleMethod**
SampleReason		**SampleNotes**			

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Ammonia									
	Ammonia as NH4		EW154M-1	0.045		15.554	mg/l NH4		
	Ammonia (as N)		EW154M-1	0.035		12	mg/l N		
AQ2-UP2									
	Sulphate		EW154M-1	5.0		300	mg/L		
BOD									
	BOD		EW001	1		333	mg/L	INAB	
COD									
	COD		EW094	8		694	mg/L	INAB	
Detergents as MBAS (Sub1)									
	Detergents/Surfactants as MBAS	*	Default	0.21		0.56	mg/L		
Oils Fats Grease (OFG)									
	Oils Fats Grease (OFG)		EW004	4.0		60.3	mg/L		
Suspended Solids									
	Suspended Solids		EW013	5		130	mg/L	INAB	
Titralab									
	pH		EW153			8.0	pH Units	INAB	

Signed : _____ 17/07/2015

Dr. Ruairí OConcubhair-Technical Manager

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ISO 17025 IVNAB ACCREDITED TESTING DETAILED IN SCOPE REG NO. 111T

Contact Name	Toddy Cuthbert	**Report Number**	**85385 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number** **Date of Receipt** **Date Started**	85385/001 12/05/2015 13/05/2015
Tel No	021-4346072	**Received or Collected**	Hand
Fax No		**Condition on Receipt**	Good
Customer PO	Per Batch	**Date of Report**	17/07/2015
Quotation No	QN004047	**Sample Type**	Waste Water
Customer Ref	Ashgrove		

LRN		**Category**	**Entity**	
Station		**Template**		
Laboratory	**Analyst**	**SampleDate**	**SampleTime**	**SampleMethod**
SampleReason		**SampleNotes**		

CERTIFICATE OF ANALYSIS

TEST / ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Ammonia								
Ammonia as NH4		EW154M-1	0.045		8.105	mg/l NH4		
Ammonia (as N)		EW154M-1	0.035		6.3	mg/l N		
AQ2-UP2								
Sulphate		EW154M-1	5.0		80	mg/L		
BOD								
BOD		EW001	1		64	mg/L	INAB	
COD								
COD		EW094	8		173	mg/L	INAB	
Detergents as MBAS (Sub1)								
Detergents/Surfactants as MBAS	*	Default	0.21		0.40	mg/L		
Oils Fats Grease (OFG)								
Oils Fats Grease (OFG)		EW004	4.0		12.7	mg/L		
Suspended Solids								
Suspended Solids		EW013	5		72	mg/L	INAB	
Titralab								
pH		EW153			7.6	pH Units	INAB	

Signed : _____ 17/07/2015

Dr. Ruairí OConcubhair-Technical Manager

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Cork
Ireland
Tel: +353 21 453 6141
Fax: +353 21 453 6149
Web: www.irishwatertesting.com
email: info@elsltd.com

Contact Name	Toddy Cuthbert	**Report Number**	
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number** **Date of Receipt** **Date Started**	86825/001 30/06/2015 30/06/2015
Tel No	021-4346072	**Received or Collected**	Courier
Fax No		**Condition on Receipt**	Good
Customer PO	Per Batch	**Date of Report**	17/07/2015
Quotation No	QN004047	**Sample Type**	Surface Waters
Customer Ref	Surface water testing. 29/06/15		

LRN		**Category**		**Entity**	
Station		**Template**			
Laboratory	**Analyst**	**SampleDate**		**SampleTime**	**SampleMethod**
SampleReason		**SampleNotes**			

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Ammonia									
	Ammonia (as N)		EW154M-1	0.0070		15	mg/l N		
	Ammonium (as NH4)(Calc)		EW154M-1	0.009		19.317	mg/l NH4		
BOD									
	BOD		EW001	1.0		91	mg/L	INAB	
GCFID TPH Split									
	TPH >C20 - C40 (MO)		EO063	10		48711	ug/L		
	Analyst QC Comment QC:Due to high surrogate recovery result given is indicative								
Suspended Solids									
	Suspended Solids		EW013	5		85	mg/L	INAB	
Titralab									
	pH		EW153			7.3	pH Units	INAB	

Signed : _____ 17/07/2015

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ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO. 111T

Contact Name	Toddy Cuthbert	**Report Number**	
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	87250/001
		Date of Receipt	14/07/2015
		Date Started	14/07/2015
Tel No	021-4346072	**Received or Collected**	Hand
Fax No		**Condition on Receipt**	Good
Customer PO	Not Required	**Date of Report**	17/07/2015
Quotation No	QN004047	**Sample Type**	Waste Water
Customer Ref	Ashgrove Recycling		

LRN		**Category**		**Entity**	
Station		**Template**			
Laboratory	**Analyst**	**SampleDate**		**SampleTime**	**SampleMethod**
SampleReason		**SampleNotes**			

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Ammonia									
	Ammonia as NH4		EW154M-1	0.045			mg/l NH4		
	Ammonia (as N)		EW154M-1	0.035			mg/l N		
AQ2-UP2									
	Sulphate		EW154M-1	5.0		170	mg/L		
BOD									
	BOD		EW001	1			mg/L		
COD									
	COD		EW094	8			mg/L		
Detergents as MBAS (Sub1)									
	Detergents/Surfactants as MBAS	*	Default	0.21			mg/L		
Oils Fats Grease (OFG)									
	Oils Fats Grease (OFG)		EW004	4.0			mg/L		
Suspended Solids									
	Suspended Solids		EW013	5		24	mg/L	INAB	
Titralab									
	pH		EW153			7.3	pH Units	INAB	

Signed : _____ 17/07/2015

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ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO. 111T

Contact Name	Toddy Cuthbert	**Report Number**	**88526 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	88526/001
		Date of Receipt	26/08/2015
		Date Started	26/08/2015
Tel No	021-4346072	**Received or Collected**	Hand
Fax No		**Condition on Receipt**	Good
Customer PO	Not Required	**Date of Report**	22/09/2015
Quotation No	QN004047	**Sample Type**	Waste Water
Customer Ref	Ashgrove recycling Foulwater sample		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Ammonia									
	Ammonia as NH4		EW154M-1	0.045		17.481	mg/l NH4		
	Ammonia (as N)		EW154M-1	0.035		14	mg/l N		
AQ2-UP2									
	Sulphate		EW154M-1	5.0		100	mg/L		
BOD									
	BOD		EW001	1		<224	mg/L	INAB	
	Analyst BOD Comment: Result was outside range for the dilutions used								
COD									
	COD		EW094	8		234	mg/L	INAB	
Detergents as MBAS (Sub1)									
	Detergents/Surfactants as MBAS	*	Default	0.21		0.51	mg/L		
Oils Fats Grease (OFG)									
	Oils Fats Grease (OFG)		EW004	4.0		74.0	mg/L		
Suspended Solids									
	Suspended Solids		EW013	5		61	mg/L	INAB	
Titralab									
	pH		EW153			7.1	pH Units	INAB	

Signed : _____ 22/09/2015

Brendan Murray-Deputy Technical Manager

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ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO. 111T

Contact Name	Toddy Cuthbert	**Report Number**	**89294 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	89294/001
		Date of Receipt	21/09/2015
		Date Started	21/09/2015
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	01/10/2015
Quotation No	QN004047	**Sample Type**	Waste Water
Customer Ref	Ashgrove Recycling		

CERTIFICATE OF ANALYSIS

TEST / ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Ammonia								
Ammonia as NH4		EW154M-1	0.045		7.595	mg/l NH4		
Ammonia (as N)		EW154M-1	0.035		5.9	mg/l N		
AQ2-UP2								
Sulphate		EW154M-1	5.0		110	mg/L		
BOD								
BOD		EW001	1		50	mg/L	INAB	
Analyst BOD Comment: Result was outside range for the dilutions used								
COD								
COD		EW094	8		147	mg/L	INAB	
Detergents as MBAS (Sub1)								
Detergents/Surfactants as MBAS	*	Default	0.21		0.38	mg/L		
Oils Fats Grease (OFG)								
Oils Fats Grease (OFG)		EW004	4.0		15.0	mg/L		
Suspended Solids								
Suspended Solids		EW013	5		6	mg/L	INAB	
Titralab								
pH		EW153			7.3	pH Units	INAB	

Signed : 01/10/2015

Doroteja Repic-Technical Manager

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Contact Name	Toddy Cuthbert	**Report Number**	**89674 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	89674/001
		Date of Receipt	05/10/2015
		Date Started	05/10/2015
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	20/10/2015
Quotation No	QN004047	**Sample Type**	Waste Water
Customer Ref	Ashgrove recycling		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Ammonia									
	Ammonia as NH4		EW154M-1	0.045		15.979	mg/l NH4		
	Ammonia (as N)		EW154M-1	0.035		12	mg/l N		
AQ2-UP2									
	Sulphate		EW154M-1	5.0		170	mg/L		
BOD									
	BOD		EW001	1		84	mg/L	INAB	
COD									
	COD		EW094	8		274	mg/L	INAB	
Detergents as MBAS (Sub1)									
	Detergents/Surfactants as MBAS	*	Default	0.21		0.33	mg/L		
Oils Fats Grease (OFG)									
	Oils Fats Grease (OFG)		EW004	4.0		49.0	mg/L		
Suspended Solids									
	Suspended Solids		EW013	5		43	mg/L	INAB	
Titralab									
	pH		EW153			7.6	pH Units	INAB	

Signed : _____ 20/10/2015

Doroteja Repic-Technical Manager

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Contact Name	Toddy Cuthbert	**Report Number**	**90733 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	90733/001
		Date of Receipt	09/11/2015
		Date Started	09/11/2015
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	27/11/2015
Quotation No	QN004047	**Sample Type**	Waste Water
Customer Ref	Ashgrove		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Ammonia									
	Ammonia as NH4		EW154M-1	0.045		27.357	mg/l NH4		
	Ammonia (as N)		EW154M-1	0.035		21	mg/l N		
AQ2-UP2									
	Sulphate		EW154M-1	5.0		240	mg/L		
BOD									
	BOD		EW001	1		13	mg/L	INAB	
COD									
	COD		EW094	8		133	mg/L	INAB	
Detergents as MBAS (Sub1)									
	Detergents/Surfactants as MBAS	*	Default	0.21		0.40	mg/L		
Oils Fats Grease (OFG)									
	Oils Fats Grease (OFG)		EW004	4.0		19.3	mg/L		
Suspended Solids									
	Suspended Solids		EW013	5		<5	mg/L	INAB	
Titralab									
	pH		EW153			7.6	pH Units	INAB	

Signed : 27/11/2015

Doroteja Repic-Technical Manager

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ISO 17025 IVNAB ACCREDITED TESTING DETAILED IN SCOPE REG NO. 1117

Contact Name	Toddy Cuthbert	**Report Number**	**91546 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	91546/001
		Date of Receipt	03/12/2015
		Date Started	03/12/2015
Tel No	021-4346072	**Received or Collected**	Hand
Customer PO	Not Required	**Date of Report**	22/12/2015
Quotation No	QN004047	**Sample Type**	Waste Water
Customer Ref	Ashgrove Foul Water		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Ammonia									
	Ammonia as NH4		EW154M-1	0.045		29.023	mg/l NH4		
	Ammonia (as N)		EW154M-1	0.035		23	mg/l N		
AQ2-UP2									
	Sulphate		EW154M-1	5.0		460	mg/L		
BOD									
	BOD		EW001	1		12	mg/L	INAB	
COD									
	COD		EW094	8		106	mg/L	INAB	
Detergents as MBAS (Sub1)									
	Detergents/Surfactants as MBAS	*	Default	0.21		0.34	mg/L		
Oils Fats Grease (OFG)									
	Oils Fats Grease (OFG)		EW004	4.0		6.7	mg/L		
Suspended Solids									
	Suspended Solids		EW013	5		18	mg/L	INAB	
Titralab									
	pH		EW153			8.1	pH Units	INAB	

Signed : 22/12/2015

Doroteja Repic-Technical Manager

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FOUL WATER TOXICITY

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Ringsend,
Dublin 4.

Tel: (01) 613 6003
Fax: (01) 613 6008

Email:
reports@cityanalysts.ie

www.cityanalysts.ie

Customer

Steven Tooher

Steven Tooher
14 Allendale Avenue
Melbourn
Bishopstown
Cork

Certificate Of Analysis

Job Number: 15-12887
Issue Number: 1
Report Date: 5 January 2016

Site: Not Applicable
PO Number: STEVEN TOOHER
Date Samples Received: 17/12/2015

Please find attached the results for the samples received at our laboratory on 17/12/2015.

Should you have any queries regarding the report or require any further services, we would be happy to discuss your requirements. For additional information about the company please log-on to our website at the above address.

Thank you for choosing City Analysts Limited. We look forward to assisting you again.

Authorised By: Shane Wilmoth
Chemistry Technical Manager

Authorised Date: 5 January 2016

Notes:

Results relate only to the items tested.
Information on methods of analysis and performance characteristics is available on request.
Any opinions or interpretations indicated are outside the scope of our INAB accreditation.
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Template: 1146 Revision: 018

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Environmental Laboratories

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www.cityanalysts.ie

Certificate Of Analysis

Customer

Steven Tooher

Steven Tooher
14 Allendale Avenue
Melbourn
Bishopstown
Cork

Report Reference: 15-12887

Report Version: 1

Site: Not Applicable

Sample Description: Ashgrove Toxicity - Waste Water

Sample Type: Effluent (Final)

Lab Reference Number: 307604

Date of Sampling: 17/12/2015

Time of Sampling: 09:50

Date Sample Received: 17/12/2015

Site / Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value (Drinking Water Only)
S/S3235	22/12/2015	48 h EC50 to Daphnia magna	>100	%vol/vol	-

= INAB Accredited, U = UKAS Accredited, * = Subcontracted

Note:
PV Value is the parametric value, taken from European Communities, (Drinking Water) Regulations, 2014. S.I. No. 122 of 2014 and relates only to drinking water samples.
For queries on results, please contact us within two weeks of the report date to ensure that we can accommodate your query as samples cannot be stored indefinitely.
NAC & ATC - No abnormal change and acceptable to customers.
TVC - Total viable count
Site D = Analysed at City Analysts Dublin. Site S = Analysed at City Analysts Shannon

SURFACE WATER

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ISO 17025 IVNAB ACCREDITED TESTING DETAILED IN SCOPE REG NO. 111T

Contact Name	Toddy Cuthbert	**Report Number**	**87423 - 1**
Address	Cuthbert Environmental 15A Westside Centre, Model Farm Road	**Sample Number**	87423/001
		Date of Receipt	17/07/2015
		Date Started	17/07/2015
Tel No	021-4346072	**Received or Collected**	Hand
Fax No		**Condition on Receipt**	Good
Customer PO	Not Required	**Date of Report**	31/07/2015
Quotation No	QN004047	**Sample Type**	Surface Waters
Customer Ref	Ashgrove Recycing		

CERTIFICATE OF ANALYSIS

TEST	ANALYTE	SUB	METHOD	LOQ	SPEC	RESULT	UNITS	ACCRED.	OOS
Ammonia									
	Ammonia (as N)		EW154M-1	0.0070		1.4	mg/l N		
	Ammonium (as NH4)(Calc)		EW154M-1	0.009		1.752	mg/l NH4		
BOD									
	BOD		EW001	1.0		<43	mg/L	INAB	
	Analyst BOD Comment: Result was outside range for the dilutions used								
GCFID TPH Split									
	TPH >C20 - C40 (MO)		EO063	10		62405	ug/L		
Suspended Solids									
	Suspended Solids		EW013	5		1253	mg/L		
Titralab									
	pH		EW153			7.4	pH Units	INAB	

Signed : _____ 31/07/2015

Dr. Ruairí OConcubhair-Technical Manager

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Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

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Deeside
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Tel: +44 (0) 1244 833780
Fax: +44 (0) 1244 833781

Cuthbert Environmental
14 Allendale Avenue
Melbourn
Bishopstown
Cork
Ireland

Attention :	Toddy Cuthbert
Date :	31st December, 2015
Your reference :	
Our reference :	Test Report 15/17956 Batch 1
Location :	Ashgrove Recycling Cork
Date samples received :	16th December, 2015
Status :	Final report
Issue :	1

One sample was received for analysis on 16th December, 2015 of which one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Jones Environmental Laboratory

Client Name: Cuthbert Environmental
Reference:
Location: Ashgrove Recycling Cork
Contact: Toddy Cuthbert
JE Job No.: 15/17956

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1-2												
Sample ID	ASHGROVE RECYCLING												
Depth													
COC No / misc													
Containers	P G												
Sample Date	15/12/2015												
Sample Type	Surface Water												
Batch Number	1												
Date of Receipt	16/12/2015												
												LOD/LOR	Units	Method No.
Mineral Oil (C10-C40) #	<10											<10	ug/l	TM5/PM30
Ammoniacal Nitrogen as N #	0.06											<0.03	mg/l	TM38/PM0
BOD (Settled) #	4											<1	mg/l	TM58/PM0
pH #	7.19											<0.01	pH units	TM73/PM0
Total Suspended Solids #	1427											<10	mg/l	TM37/PM0

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 15/17956

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

All solid results are expressed on a dry weight basis unless stated otherwise.

Jones Environmental Laboratory **Method Code Appendix**

JE Job No: 15/17956

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			
TM37	Modified USEPA 160.2 .Gravimetric determination of Total Suspended Solids. Sample is filtered and the resulting residue is dried and weighed.	PM0	No preparation is required.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes			
TM58	Modified USEPA methods 405.1 and BS 5667-3. Measurement of Biochemical Oxygen Demand.	PM0	No preparation is required.	Yes			
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			

APPENDIX V: PRTR

Sheet : Facility ID Activities AER Returns Workbook 24/3/2016 16:39

| PRTR# : W0147 | Facility Name : Ashgrove Recycling | Filename : W0147_2015 PRTR.xls | Return Year : 2015 |

Environmental Protection Agency

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2015

1. FACILITY IDENTIFICATION

Parent Company Name	Ashgrove Plant Ltd., t/a Ashgrove Recycling
Facility Name	Ashgrove Recycling
PRTR Identification Number	W0147
Licence Number	W0147-01

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Churchfield Industrial Estate
Address 2	Churchfield
Address 3	Cork
Address 4	
	Cork
Country	Ireland
Coordinates of Location	-8.49543 51.9133
River Basin District	IESW
NACE Code	3832
Main Economic Activity	Recovery of sorted materials
AER Returns Contact Name	Steven Tooher
AER Returns Contact Email Address	stooher@hotmail.com
AER Returns Contact Position	Environmental Officer
AER Returns Contact Telephone Number	(021) 4304420
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	
Production Volume	50000.0
Production Volume Units	tonnes
Number of Installations	1
Number of Operating Hours in Year	0
Number of Employees	20
User Feedback/Comments	
Web Address	www.ashgroverecycling.com

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 ?	No
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	No

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

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

[PRTR# : W0147 | Facility Name : Ashgrove Recycling | Filename : W0147_2015 PRTR.xls | Return Year : 2015]

Please enter all quantities on this sheet in Tonnes

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 Non 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 03	No	2.42	wooden packaging	R3	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork, ,Ireland		
Within the Country	16 01 03	No	7.66	end-of-life tyres	R3	M	Weighed	Offsite in Ireland	Pat Kelleher Rubber Ltd,WFP-CK-10-0059-02	Roovesmore,Coachford,Co. Cork, ,Ireland		
Within the Country	17 01 07	No	1117.62	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R13	M	Weighed	Offsite in Ireland	Mallow Contracts Ltd,CK (N) 277/05	Mallow Road,,,Co. Cork, ,Ireland		
Within the Country	17 02 01	No	314.5	wood	R3	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork, ,Ireland		
Within the Country	**17 04 02**	**No**	11.47	aluminium	R4	M	Weighed	Offsite in Ireland	Cork Metal Company Ltd,WFP-CK-10-0067-02	Dublin Hill,Cork, , ,Ireland		
Within the Country	17 05 04	No	1801.08	soil and stones other than those mentioned in 17 05 03	R3	M	Weighed	Offsite in Ireland	Conhor Construction Ltd,WFP-CK-14-0137-01	Lanes Yard,Aherla,Co. Cork, ,Ireland		
Within the Country	17 08 02	No	0.0	gypsum-based construction materials other than those mentioned in 17 08 01	R13	M	Weighed	Offsite in Ireland	Envirogrind Ltd,WFP-DL-11-004-01	Donegal Road,,,,,,Ireland		
Within the Country	17 08 02	No	0.0	gypsum-based construction materials other than those mentioned in 17 08 01	R13	M	Weighed	Offsite in Ireland	Ted O'Donoghue & Sons Ltd,W0214-01	Waterfall,,Co. Cork,,,Ireland		
Within the Country	17 08 02	No	116.0	gypsum-based construction materials other than those mentioned in 17 08 01	R13	M	Weighed	Offsite in Ireland	Allied Waste Facility,WFP-KE-08-0347-01	Naas Ind. Est ,Naas ,Co. Kildare, ,Ireland		
Within the Country	19 12 01	No	0.0	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Country Clean Recycling Ltd,07/02/2012	John F Connelly Road,Churchfield Industrial Estate,Cork, ,Ireland		
Within the Country	19 12 01	No	0.0	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork, ,Ireland		
Within the Country	19 12 02	No	0.0	ferrous metal	R13	M	Weighed	Offsite in Ireland	Cork Metal Company Ltd,WFP-CK-10-0067-02	Dublin Hill,Cork, , ,Ireland		
Within the Country	19 12 04	No	0.0	plastic and rubber	R13	M	Weighed	Offsite in Ireland	Irish Polymers Extrusions Ltd,WFP-LS-13-0001-01	Unit 20,Day Road Business Park,Mountmellick,Laois,Ireland		
Within the Country	19 12 04	No	0.0	plastic and rubber	R13	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork, ,Ireland		
Within the Country	19 12 05	No	2193.24	glass packaging	R13	M	Weighed	Offsite in Ireland	Glassco Rehab,WFP-KE-08-0357-01	Naas,Co. Kildare, , ,Ireland		
Within the Country	19 12 05	No	59.06	glass	R13	M	Weighed	Offsite in Ireland	Gannon Concrete Ltd,WFP-WM-2009-0007-01	Kilbeggan,Co. Westmeath,,,,Ireland		
Within the Country	19 12 07	No	0.0	wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	CTO,W0012-02	Kinsale Road Landfill Site,Kinsale Road,Cork,Cork,Ireland		
Within the Country	19 12 07	No	0.0	wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	Clonmel Waste,WFP-TS-11-0001-01	Clonmel, ,Co Tipperary,,,Ireland		
Within the Country	19 12 07	No	0.0	wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork, ,Ireland		
Within the Country	19 12 12	No	4416.82	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	D5	M	Weighed	Offsite in Ireland	Drehid Waste Management Facility,W0201-03	Killina Upper,Co. Kildare,,,,Ireland		
Within the Country	20 01 08	No	590.81	biodegradable kitchen and canteen waste	R13	M	Weighed	Offsite in Ireland	Acorn Recycling,W0249-01	Ballybeg,Littleton,Co. Tipperary,,,Ireland		
Within the Country	20 01 11	No	3.46	textiles	R5	M	Weighed	Offsite in Ireland	Textile Recycling Ltd,NWCPO-08-01225-02	Ashfield,Naas Road,Clondalkin,Dublin 22,Ireland		
Within the Country	20 01 38	No	0.0	wood other than that mentioned in 20 01 37	R3	M	Weighed	Offsite in Ireland	WRS,W0107-02	Fermoy,Co. Cork, , ,Ireland		
Within the Country	20 02 01	No	0.0	biodegradable waste	R3	M	Weighed	Offsite in Ireland	CTO,W0012-02	Kinsale Road Landfill Site,Kinsale Road,Cork,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 Non 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	20 02 01	No	302.27	biodegradable waste	R3	M	Weighed	Offsite in Ireland	CTO Environmental Solutions Ltd.,WFP-CK-09-0018-03	Rostellan,Midleton,Co. Cork,n/a,Ireland		
Within the Country	20 02 01	No	0.0	biodegradable waste	R3	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork, ,Ireland		
Within the Country	20 03 01	No	1657.98	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Advanced Skip Hire Ltd,WFP-CC-01/2013	Old Gold Crop Building,Centre Park Road,Cork,Cork,Ireland		
Within the Country	20 03 01	No	274.82	Dry Recyclables	R13	M	Weighed	Offsite in Ireland	Quality Recycling Ltd,WFP-TS-12-0002-03	Ballylynch,Carrick-on-Suir,Carrick-on-Suir,Tipperary,Ireland		
Within the Country	20 03 01	No		mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Gortnadroma Landfill,W0017-04	Gortnadroma Landfill,Ballyhahill, ,Limerick,Ireland		
Within the Country	20 03 01	No		mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Greenstar,W0116-02	Six Cross Roads,Carrignard,Butlerstown,Waterford,Ireland		
Within the Country	20 03 01	No	1436.7	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Greenstar,W0136-03	Sarsfieldscourt,Glanmire,Cork,,,Ireland		
Within the Country	20 03 07	No	52.7	bulky waste	D5	M	Weighed	Offsite in Ireland	Thortons recycling,W0044-02	Killeen Road,Ballyfermot,Dublin 10,Dublin 10,Ireland		
Within the Country	20 03 07	No		bulky waste	R5	M	Weighed	Offsite in Ireland	Boomerang Recycling,WFP-CC-10/201	Unit B,Ballyvolane Business Park,Cork, ,Ireland		
Within the Country	20 03 01	No	59.06	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Thortons recycling,W0044-02	Killeen Road,Ballyfermot,Dublin 10,Dublin 10,Ireland		
Within the Country	20 03 01	No	911.8	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Greyhound Household Recycling,W0205-01	Crag Avenue,Clondalkin Industrial Estate,Clondalkin Dublin 22,D22 E718,Ireland		
Within the Country	15 01 03	No	153.12	wooden packaging	R3	M	Weighed	Offsite in Ireland	Eirebloc,WFP-CK-13-0127-01	Dunisky,Lissarda,Co. Cork,,,Ireland		
Within the Country	17 01 07	No	6891.98	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Fitzpatrick Plant Sales Ltd.,WFP-CK-11-0104-01	Barryscourt,Carrigtwohill,Co. Cork,n/a,Ireland		
Within the Country	17 01 07	No	2636.23	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Conhor Construction Ltd,WFP-CK-14-0137-01	Lanes Yard,Aherla,Co. Cork,,,Ireland		
Within the Country	17 02 01	No	44.68	wood	R3	M	Weighed	Offsite in Ireland	Donal Murphy,WFP-CK-10-0054-01	Caher,Connagh,Ballineen,Co rk,Ireland		
Within the Country	17 02 01	No	224.54	wood	R3	M	Weighed	Offsite in Ireland	CTO Environmental Solutions,WFP-CK-09-0018-02	Rostellan,Midleton,Co. Cork,,,Ireland		
Within the Country	17 02 01	No	147.18	wood	R3	M	Weighed	Offsite in Ireland	Eirebloc,WFP-CK-13-0127-01	Dunisky,Lissarda,Co. Cork,,,Ireland		
Within the Country	17 04 02	No	1.9	aluminium	R4	M	Weighed	Offsite in Ireland	Hammond Lane Metal Company Ltd.,WFP-CK-13-0125-01	Ringaskiddy,Co. Cork,,,,Ireland		
Within the Country	19 12 05	No	50.18	glass packaging	R13	M	Weighed	Offsite in Ireland	Country Clean Recycling Ltd,W0257-01	John F Connelly Road,Churchfield Industrial Estate,Cork, ,Ireland		
Within the Country	19 12 12	No	870.0	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	D5	M	Weighed	Offsite in Ireland	Greenstar Bray Depot,W0053-03	Fassaroe,Bray,Co. Wicklow,,,Ireland		
Within the Country	19 12 12	No	75.78	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	D5	M	Weighed	Offsite in Ireland	Greyhound Household Recycling,W0205-01	Crag Avenue,Clondalkin Industrial Estate,Clondalkin Dublin 22,D22 E718,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 Non 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	19 12 12	No	19.96	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	D5	M	Weighed	Offsite in Ireland	Eirebloc,WFP-CK-13-0127-01	Dunisky,Lissarda,Co. Cork,,,Ireland		
Within the Country	15 01 01	No	335.52	paper and cardboard packaging	R13	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork,,Ireland		
Within the Country	17 05 03	Yes	2.16	soil and stones containing dangerous substances	R13	M	Weighed	Offsite in Ireland	Lehane Environmental,NWCPO-08-04574-03	Little Island Business Park,Wallingstown,Little Island,Co. Cork,Ireland		
Within the Country	20 03 01	No	106.62	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Country Clean Recycling Ltd,W0257-01	John F Connelly Road,Churchfield Industrial Estate,Cork,,,Ireland		
Within the Country	20 03 01	No	15.04	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork,,Ireland		
Within the Country	20 01 21	Yes	0.04	fluorescent tubes and other mercury-containing waste	R13	M	Weighed	Offsite in Ireland	KMK Metals,W0113-04	Cappincur Industrial Estate,Daingean Road,Tullamore Co. Offaly,,,Ireland	KMK Metals,W0113-04	Cappincur Industrial Estate,Daingean Road,Tullamore Co. Offaly,,,Ireland
Within the Country	13 05 03	Yes	4.42	interceptor sludges	R13	M	Weighed	Offsite in Ireland	Lehane Environmental,NWCPO-08-04574-03	Little Island Business Park,Wallingstown,Little Island,Co. Cork,Ireland	Rilta Environmental Ltd.,W0192-03,,,,,,,Ireland	Block 402 Grant's Drive,Greenogue Business Park,Rathcoole,Co. Dublin,Ireland
Within the Country	17 04 07	No	846.44	mixed metals	R4	M	Weighed	Offsite in Ireland	Cork Metal Company Ltd,WFP-CK-10-0067-02	Dublin Hill,Cork,,,,Ireland		
Within the Country	20 01 39	No	23.04	plastics	R13	M	Weighed	Offsite in Ireland	Irish Polymers Extrusions Ltd,WFP-LS-13-0001-01	Unit 20,Day Road Business Park,Mountmellick,Laois,Ireland		
Within the Country	15 01 02	No	0.6	plastic packaging	R13	M	Weighed	Offsite in Ireland	Cork Recycling Company Ltd,WFP-CK-09-0022-02	Lehenaghmore,Togher,Cork,,Ireland		
Within the Country	20 01 02	No	67.46	glass	R5	M	Weighed	Offsite in Ireland	Gannon Concrete Ltd,WFP-WM-2009-0007-01	Kilbeggan,Co. Westmeath,,,,Ireland		
Within the Country	19 12 07	No	1057.43	wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	Eirebloc,WFP-CK-13-0127-01	Dunisky,Lissarda,Co. Cork,,,Ireland		
Within the Country	19 12 07	No	76.76	wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	Acorn Recycling,W0249-01	Thurles,Co. Tipperary,,,,Ireland		
Within the Country	19 12 07	No	233.36	wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	Country Clean Recycling Ltd,W0257-01	John F Connelly Road,Churchfield Industrial Estate,Cork,,,Ireland		
Within the Country	19 12 07	No	25.12	wood other than that mentioned in 19 12 06	R13	M	Weighed	Offsite in Ireland	Drehid Waste Management Facility,W0201-03	Killina Upper,Co. Kildare,,,,Ireland		
Within the Country	20 01 11	No	0.1	textiles	R13	M	Weighed	Offsite in Ireland	Greenstar,W0136-03	Sarsfieldscourt,Glanmire,Cork,,,Ireland		
Within the Country	20 01 36	No	0.6	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R13	M	Weighed	Offsite in Ireland	KMK Metals,W0113-04	Cappincur Industrial Estate,Daingean Road,Tullamore Co. Offaly,,,Ireland		
Within the Country	16 01 20	No	29.1	glass	R13	M	Weighed	Offsite in Ireland	Gannon Concrete Ltd,WFP-WM-2009-0007-01	Kilbeggan,Co. Westmeath,,,,Ireland		

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