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Administration,
Licensing Unit,
Office of Climate, Licensing & Resource Use,
Environmental Protection Agency,
Headquarters P.O. Box 3000,
Johnstown Castle Estate,
Co. Wexford

9th June 2010

RE: Application for the Review of Waste Licence Reg. No. W0079-01
Greenstar Ltd. Unit 41, Cookstown Industrial Estate, Tallaght, Dublin 24
Article 14(2)(b)(ii) Further Information

To Whom It May Concern:

On behalf of Greenstar Ltd, I enclose one original and 2 hard copies of the response to your request under Article 14(2)(b)(ii) relating to the application to review Waste Licence W0079-01. I also enclose two CD-ROM discs containing the response in searchable PDF format.

If you have any queries, please call me.

Yours sincerely,


Jim O'Callaghan

0904818/JOC/MS/MW
Encl
CC: Mr. Malcolm Dowling, Greenstar Ltd

email: info@ocallaghanmoran.com Website: www.ocallaghanmoran.com

O'Callaghan Moran & Associates. Registration No. 8272844U

Article 14(2)(b)(ii) Further Information
Particulars and Evidence For
Greenstar Ltd.

Waste Licence Application No.W0079-02

Article 12 Compliance

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Prepared For: -

Greenstar Ltd.,
Unit 6 Ballyogan Road,
Ballyogan Business Park,
Sandyford,
Dublin 18.

Prepared By: -

O' Callaghan Moran & Associates,
Granary House,
Rutland Street,
Cork.

9th June 2010

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1. INTRODUCTION

This document presents the response by Greenstar Ltd., Unit 41, Cookstown Industrial Estate, Tallaght, Dublin 24 to the Agency's Notice issued under Article 14(2)(b)(ii) of the Waste Management Licensing Regulations on the 26th May 2010, in relation to the application for a revised Waste Licence, Application Register No.W0079-02, for a metals and End of Life Vehicles (ELV) recovery facility at Cookstown Industrial Estate, Tallaght, Dublin 24.

Section 2 contains the responses to the Agency's requests. For ease of interpretation each of the Agency's requests are presented in italics followed by Greenstar's response. The response required an alteration to the non-technical summary, which is included in Section 3.

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2. ARTICLE 12 COMPLIANCE REQUIREMENTS

1. *Some of the grid references provided for monitoring and emission locations appear incorrect. These include ADI- AD3, SW-I and SE-I. Also the grid reference for NSLI does not correspond with the location in the noise survey report dated 28/08/2009. Provide the correct 6 digit grid references for all monitoring and emission. Include a grid reference for noise location N5 as shown on Appendix 3 of the above referenced noise report.*

The correct grid references are shown on the enclosed Drawing 3: Monitoring Locations.

2. *There are two oil interceptors shown on Drawing 1E502-002 'Site Drainage' not referred to elsewhere in the application; one on the storm system adjacent to the non-ferrous metal building and one on the foul system west of the weighbridge. Clarify if these are part of the current drainage network, describe their purpose and provide their design specifications (Class II or II, bypass or full retention etc.).*

The two oil interceptors referred to were installed as part of the original facility development works and whose management is regulated under the current Licence. The description of the drainage system in the review application relates to the drainage upgrade works carried out following the prior approval of the Agency (Refer to correspondence in Attachment 1).

The interceptor on the storm water drainage system is a three chamber Class 1 interceptor. This is operational and is routinely cleaned out. The interceptor on the foul drainage system now connects to the newly installed Class 2 bypass separator and is therefore effectively redundant. Both of the original interceptors are included in the bund and tank integrity test programme implemented at the facility.

3. *Noise emissions:*

— *Carry out additional noise monitoring in the vicinity of the facility. Ambient noise levels shall be measured while the facility is non-operational. Monitoring and reporting shall be carried out in accordance with Agency Guidance;*

The report on the additional noise monitoring conducted by Dixon Brosnan is enclosed in Attachment 2. The ambient noise levels measured when the facility was not operational are discussed in Section 2 of the Report and detailed in Table 1. The monitoring methodology, which complied with the Agency's guidance, is described in Appendix 2 of the report.

- *Provide the monitoring data in terms of L_{AeqT} , L_{pT} , L_{A90T} , L_{AIT} , L_{AIOT} $L_{A_{max}}$, and A-weighted Sound Exposure Levels (SEL or L). Also report on the data in terms of 15 minute and 30 minute intervals;*

The requested data is provided in Appendix 5 of the Dixon Brosnan Report.

- *Provide an assessment of the impact of noise emissions from the facility on the surrounding environment including neighbouring properties. Provide details on how noise levels of 55dB(A) LAeq (daytime) and 45dB(A) LAeq (night time) would be met at the monitored locations;*

An assessment of the impact of the noise emissions from the facility on the surrounding environment is presented in Section 2 of the Dixon Brosnan Report.

Noise emissions from the facility do not cause an exceedance of the daytime levels at the nearest noise sensitive location, which is included in the routine noise monitoring programme (Location NSL1 in the Dixon Brosnan Report). Similarly noise emissions from the facility are not impacting on the nearest private residences (Location 4 in the Dixon Brosnan Report), which would be considered to be a noise sensitive location.

Noise emissions from the facility contribute to the elevated levels at Location 2, which is opposite the facility entrance. However, the noise levels at this location, which is not considered to be a noise sensitive location, remained above 55dB(A), when the Greenstar facility was not operational. These levels are associated with traffic noise and commercial activities on other lots in the Industrial Estate.

Noise emissions from the facility were the main contributor to the levels recorded at Location 3, however the levels (54dB(A)) were just below the 55dB(A) limit when the Greenstar facility was not operational. This location is not considered to be noise sensitive.

- *Provide details of noise attenuation measures employed and proposed. Include mitigation measures proposed for any tonal or impulsive component;*

Details of the existing noise attenuation measures employed are provided in Section 3.3 of the Dixon Brosnan Report and the recommendations arising from the survey are described in Section 3.4. These recommendations have been implemented.

- *Provide details and specification of the acoustic barriers referred to in the application;*

The details of the acoustic barriers are provided in Section 3.3 of the Dixon Brosnan Report.

— *Explain the correction for near field interference applied in the monitoring reports;*

An explanation for the correction for near field interference applied in the monitoring reports is presented in Appendix 6 of the Dixon Brosnan Report.

— *Complete Table E.5(i): Noise Emissions of the Waste licence application form;*

Table E.5 (i) is included in Attachment 3.

— *Describe how the facility will comply with the requirements of BAT.*

The facility operations were assessed against BAT Management Techniques specified in the Draft BAT 2008 document.

BAT requires the identification of site neighbours that are likely to be sensitive to high noise levels, and this has been completed. The facility has a documented complaints procedure and all complaints are investigated and a response provided to the complainant.

The facility already has implemented a range of mitigation measures, which include acoustic barriers, confinement of certain operations inside the existing buildings, maintenance of plant exhausts and restriction of the operation of particular plant items. The facility has a documented Nuisance Control Procedure, which identifies the measures that are applied to minimise noise.

Noise surveys are routinely carried out and the most recent survey has identified additional mitigation measures which will improve performance. These measures include:

Replacement of the track machine which is relatively old and is a source of increased emissions due to worn parts, failing exhaust silencer, and the tracks when moving. The replacement will reduce the tonal emissions from the facility;

Changes to operational practice to minimise the telescopic loader bucket scraping along the ground, which results in significantly loud emissions audible Location 2. This measure will eliminate potentially significant impulsive emissions;

Changes to operational practices to minimise impulsive emissions associated with larger metal items when dropped from a height. The grab operators will minimise drop heights, and where possible will not release metal until resting on the ground;

Slowing the speed of the vehicles used to load the containers and not compacting the initial loads so as to avoid vibration.

The facility has implemented these actions and has amended the Nuisance Control Procedure accordingly. A copy of the Procedure is in Attachment 4.

4. *Provide responses to each of the issues raised in the submission relating to the application, received on 12th March 2010, and to each of the complaints received since the activities recommenced on-site in December 2008. Include responses submitted to the Office of Environmental Enforcement.*

A single e-mailed submission relating to the application was made on 12th March 2010, which identified the following three grounds for objecting to the Licence:

1. Excess vibrations coming from the yard;
2. Smells from the yard on occasion;
3. Dust emissions.

These grounds are the same as those identified in a complaint to the Office of Environmental Enforcement (OEE) made by the objector on 4th March 2010. Greenstar responded to this complaint and met with the complainant as described in a letter to the OEE dated 11th March, which is included in Attachment 5.

In the period since the submission of the application, Greenstar has implemented actions to address the impacts of site activities. These include a comprehensive noise survey, which identified mitigation measures that will reduce noise and vibration measures (Refer to response to Item No 3), and additional dust suppression measures, which are described in the amended Control of Nuisance Procedure in Attachment 3. Greenstar has also met with the objector on three (3) occasions to discuss the specific issues he has raised.

Since activities recommenced on site in late 2008, Greenstar has received three separate notifications from the OEE of complaints received concerning operations. These include the initial complaint on the 4th March 2010 and subsequent complaints on the 22nd April and 27th May 2010. Greenstar's responses to the OEE, dated 27th April and 4th June respectively are in Attachment 5. Copies of the responses were provided to the complainant.

In addition to the complaint notification issued by the OEE, Greenstar has received seven other complaints about site operations. Details of these, including the dated received and the action taken by Greenstar are presented in extract from the facility's Complaints Register in Attachment 5.

3. NON TECHNICAL SUMMARY WASTE LICENCE APPLICATION

This non-technical summary contains the information specified in Article 12 (1) (u) of the Waste Management (Licensing) Regulations, 2004 (S.I. No. 395 of 2004).

Articles 12 (1) (a) to (d)

Greenstar Ltd. (Greenstar) Unit 6, Ballyogan Business Park, Ballyogan Road, Sandyford, Dublin 18 is applying to the Environmental Protection Agency (EPA) for a review of Waste Licence W0079-01 at Cookstown Industrial Estate Tallaght Dublin 24.

The purpose of the review is to allow for the change of the principal activity from storage of waste to metals recovery, to allow for the acceptance of metal wastes arising from commercial enterprise and households, to allow for processing and storage of metals outside the building and to allow for the recycling of scrap cars and vans. South Dublin County Council is the relevant sanitary authority.

Compliance with Requirements of the Waste Management Act 1996 to 2010

Best Available Techniques (BAT) will be used to prevent, eliminate or, where this is not possible reduce to a minimum the impact of site activities on the environment.

Article 12 (1) (e) Nature of the Facility

The current Licence, which was issued in January 2000, allowed the operator to accept Commercial and Industrial (C&I) and Construction and Demolition (C&D) waste, including metals. Up to 145,000 tonnes of waste can be accepted annually, broken down into 43,500 tonnes of C&I waste and over 100,000 tonnes of C&D waste.

In 2006, it had been Greenstar's intention to close the site and surrender the Licence. However, due to subsequent changes in market conditions, Greenstar decided to retain the facility. In November 2008 Greenstar agreed to lease the facility to a scrap metal operator-Midland Scrap Metal Ltd (MSM), who started working at the site in December 2008. Only metal wastes are taken in at the site and it is not proposed to take the other wastes authorised under the current licence. It is intended to take scrap cars and vans.

Article 12 (1) (f) Classes of Activity

The relevant activities as per the Fourth Schedule of the Waste Management Acts 1996 – 2003 will be as follows: -

Third Schedule – Waste Disposal Activities

Class 13: 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 is produced.

Fourth Schedule – Waste Recovery Activities

Principal Activity:

Class 3: Recycling or reclamation of metals and metal compounds (P).

Class 13: 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 such waste is produced.

Article 12 (1) (g) Quantity and Nature of the Waste to be Recovered or Disposed

WASTE TYPE	TONNES PER ANNUM (existing)	TONNES PER ANNUM (proposed)
Household	0	5,000
Commercial	23,500	25,000
Sewage Sludge		
Construction and Demolition	100,000	10,000
Industrial Non- Hazardous Sludges		
Industrial Non- Hazardous Solids	20,000	10,000
Hazardous (End of Life Vehicles)		10,000

Article 12 (1) (h) Raw and Ancillary Materials, Substances, Preparations, Fuels & Energy used on the Site

Table 12(1)h: Estimate of Resources Used On-Site 2008

Energy Stream	Annual Quantity	Units	Period	Estimate 12 Month Period
Electricity	7,000	kWh	December 2008	75,000
Heating Oil	260	Litre	December 2008	1,600
Diesel	1,800	Litre	December 2008	19,000

Article 12 (1) (i) Plant, Methods, Processes, Abatement, Recovery, Treatment and Operating Procedures

The principal activity is metals recovery, which involves separating the metals into the different types, cutting and baling and then sending the bales to overseas smelters. It is proposed to de-pollute scrap vehicles which will involve taking out the batteries, hydraulic and lubricating oils, coolants and petrol/diesel and then crushing the vehicle.

The metals come from construction and demolition sites, industries that make and use metal products, other waste recovery facilities, and households and businesses. All deliveries are thoroughly inspected to make sure that unsuitable wastes are not accepted. As the operator pays for all of the materials he takes in it is in his interest to only take materials that he can sell on. Any unsuitable materials that are found are sent to the appropriate disposal site and the person who produced it is billed for the disposal cost.

It had been the intention that all of the metals would be handled inside the main building, but this cannot be done safely due to the size of the processing equipment and therefore some metals are processed outside the building. The scrap vehicles will be cleaned out and crushed inside the building. The equipment used includes a shears, baler cutters, cable stripper and fork lifts.

Article 12 (1) (j) Information Related to Section 40(4) (a) to (g) of the Waste Management Act

Emissions from the facility, including noise, will not contravene any relevant standard or emission limit set in the current legislation, nor will they cause environmental pollution. The activity is consistent with the Dublin Region Waste Management Plan and operations are based on guidance published by the Agency.

The Facility Manager and Deputy will complete appropriate training programmes for example the FAS Waste Management Training Programme.

Energy will be used efficiently and measures will be taken to prevent accidents that could impact on the environment. If the site has to close, the closure will be done in accordance with a Plan agreed with the Agency to ensure that pollution is avoided.

Article 12 (1) (k) Source, Location, Nature, Composition, Quantity, Level and Rate of Emissions

Actual and potential emissions to the environment include surface water, foul water, dust and noise. The monitoring programme specified in the Licence includes foul water, dust and noise monitoring and in addition monitoring of surface water run-off was carried out in May 2009.

Surface Water/ Foul Water

The surface water drainage system has been changed to redirect rain fall in the open yard where the metal is handled to the foul sewer. An oil interceptor has been installed on this drain. The only rainwater that now goes to the surface water sewer is from the roofs and the section of the yard not used for metal handling. The surface water monitoring in May 2009 found that the water entering the surface water sewer was generally of good quality, although the amount of sediment was higher than expected.

The discharge to foul sewer includes the runoff from the floor of the building and rainwater from the section of the open yard where metal is handled. The monitoring carried out in May and September 2009 and February and May 2010 confirmed that the quality of the discharge complied with the Licence requirements.

Noise

Noise monitoring has been carried out within the site boundary bi-annually since the Licence was issued in 2000. The nearest noise sensitive location is Tallaght Hospital, which is approximately 200m away and was unlikely to have been affected by the noise from the site.

Since the site reopened, four noise monitoring surveys have been carried out. These included both the site boundary locations specified in the Licence and Tallaght Hospital and also a number of locations adjacent the facility which were requested by the Agency. The surveys were completed in December 2008, February and May 2009 and May 2010.

The monitoring confirmed that noise levels from the current activities are not a cause of nuisance at the nearest noise sensitive locations. The monitoring has also shown that the existing noise levels at the site boundary locations are generally lower than those recorded in 2005 and that there are significant offsite sources of noise, which is not unexpected given the commercial and industrial nature of the surrounding area.

From the time the site reopened in 2008 until March 2010, there were no complaints about noise. Since March 2010, the facility has received six complaints from a neighbour regarding noise levels. All of these complaints were investigated and responded to and Greenstar also commissioned an additional noise survey to help identify effective mitigation measures which have been implemented.

Dust

Dust monitoring has been carried out monthly from the time the Licence was issued in 2000. The monitoring identified that dust deposition levels regularly exceeded the limits set in the Licence. The site closed in April 2006 and the monitoring carried out between May 2006 and January 2007 continued to find high dust levels at the monitoring locations. This indicates that the dust sources within the industrial estate were contributing to the high levels measured when the site was operational.

Since the site reopened dust monitoring has been carried out monthly from January to April 2010 at three locations. The dust deposition limit was exceeded at one monitoring location on the northern boundary in January, March, April, May, June, July and October 2009.

Following the implementation of dust mitigation measures the results improved and were below the limits in August, September, November 2009 and January, February 2010. In March 2010 the levels exceeded the limit, but were less than the limit in April 2010. The levels recorded in the other two locations consistently complied with the limit. The other activities in the Industrial Estate are sources of dust and are most likely to be contributing to the levels recorded at the site.

From the time the site reopened in 2008 until March 2010, there were no complaints received about dust emissions. In 2010, the facility has received three (3) complaints from a neighbour about dust levels. All of these complaints were investigated and responded to and Greenstar has implemented additional mitigation measures.

Odours

The types of waste accepted at the facility are not odorous. However, in 2010 the facility received three complaints from a neighbour concerning odours from the site. All of these were investigated and responded to.

Article 12 (1) (l) Details and Assessment of the Effects of Emissions on the Environment & Mitigation Measures

Surface Water

The metal and scrap vehicle processing will not result in any new discharge to surface water. The volume of rainwater run-off to the surface water sewer has been reduced as most of the open yard now drains to the foul sewer. Recent monitoring has found that the run-off is

generally of good quality. The current Licence does not require surface water monitoring, but the Licensee proposes to do so four times a year. In addition, a surface water management plan has been prepared that covers regular checking, clearing and cleaning of manholes, gullies and the oil separator.

Foul Sewer

The foul water drainage system has been changed. The current Licence allows for drainage from the floor of the main building and a vehicle wash to discharge to the municipal foul sewer. Vehicle washing and floor wash downs are no longer carried out and rainfall on the main process yard has been directed to the foul sewer. The monitoring of the discharge has confirmed that it complies with the limits set in the Licence.

Dust

Monitoring carried out while the site was closed found that dust levels measured at the site continued to exceed the limits set in the Licence. The site is in a commercial/industrial area and the sensitivity of adjoining lots in the industrial estate to dust impacts is limited. The operator has a dust control plan which includes regular yard cleaning and damping down the yard in dry weather and the provision of hoses to dampen the material stockpiles.

Noise

Noise monitoring carried out after the site reopened has shown that noise levels are not impacting on the nearest noise sensitive location, Tallaght Hospital. There are no other noise sensitive locations within 250m of the facility. The current noise levels are also generally lower at the site boundary than those recorded before the site temporarily closed in 2006.

However, in response to complaints from a neighbour the facility has introduced new mitigation measures, which include ensuring machinery do not hit walls, changes to the way containers are loaded and replacement of old machinery. The facility has also amended its Nuisance Control Procedure to describe the new measures.

Article 12 (1) (m) Monitoring and Sampling Points & Consequences of such emissions

Dust

Dust will be monitored monthly at three locations on the property boundary.

Noise

Noise will be monitored twice a year at the nearest noise sensitive location and site boundary locations.

Surface Water

The surface water discharge from the facility will be monitored four times a year. As the discharge will be linked to rainfall and therefore not continuous, grab samples will be collected.

Waste Water

The wastewater discharge from the oil water separator will be monitored four times a year basis. As the discharge will be linked to rainfall and therefore not continuous, grab samples will be collected.

The effects of the emissions have been described in Article 12 (1) (l) above.

Article 12 (1) (n) Prevention and Recovery of Waste

Waste oils and batteries recovered during de-pollution of the scrap vehicles will be collected and sent off-site for recovery.

Article 12 (1) (o) Off-site Treatment or Disposal of Solid or Liquid Wastes

Wastewater from the site offices, canteen and toilets and run-off from the yard area is discharged to the foul drainage system. This drainage system is connected to the Council's foul sewer.

Article 12 (1) (p) Emergency Procedures to Prevent Unexpected Emissions

Greenstar have prepared an Emergency Response Procedure to deal with any emergency that may occur, including a fire and oil spills. The Procedure will ensure a rapid response to any incident by trained staff and minimise the impact on the environment.

Article 12 (1) (q) Closure, Restoration and Aftercare of the Site

The majority of the site is either paved or occupied by buildings. It is not anticipated that the waste processing will cease in the medium to long term. If the site has to close, this will be done in accordance with a Decommissioning Plan agreed with the Agency. The plan may include for environmental monitoring to continue after the closure.

Article 12 (1) (s) Control of Major Accident Hazards involving Dangerous Substances Regulations

The facility is not subject to these Regulations.

Article 12 (1) (t) Emissions to Aquifer

The activity will not result in emissions of dangerous (List I and II) substances to an aquifer.

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DRAWINGS

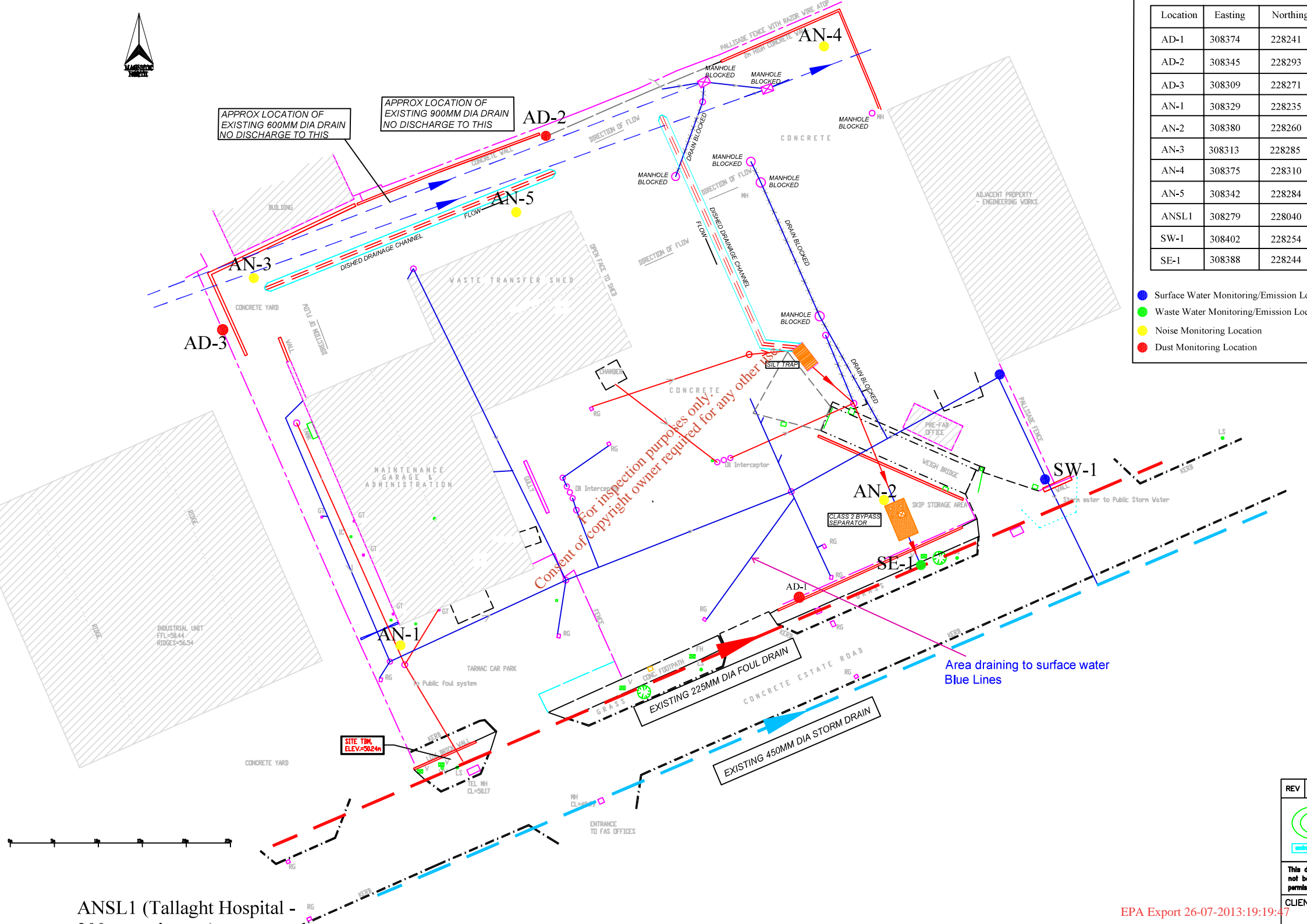
Drawing 3 Monitoring Locations

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Location	Easting	Northing
AD-1	308374	228241
AD-2	308345	228293
AD-3	308309	228271
AN-1	308329	228235
AN-2	308380	228260
AN-3	308313	228285
AN-4	308375	228310
AN-5	308342	228284
ANSL1	308279	228040
SW-1	308402	228254
SE-1	308388	228244

- Surface Water Monitoring/Emission Location
- Waste Water Monitoring/Emission Location
- Noise Monitoring Location
- Dust Monitoring Location

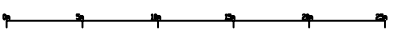


APPROX LOCATION OF EXISTING 600MM DIA DRAIN NO DISCHARGE TO THIS

APPROX LOCATION OF EXISTING 900MM DIA DRAIN NO DISCHARGE TO THIS

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Area draining to surface water Blue Lines



REV	DESCRIPTION

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ATTACHMENT 1

Drainage Works

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Mr Niall Horgan
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Richview,
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Fax: + 353 1 294 7990
Email: info@greenstar.ie

19th March 2009

Re: Proposed Drainage Works at Unit 41, Cookstown Industrial Estate, Tallaght -
Waste Licence Reg. No. W0079-01

Dear Mr Horgan,

I refer to recent discussions between us in relation to drainage at the above referenced site and attach a revised proposal whereby drainage from the open area to the east of the site and north of the site will now be connected to the foul water system. It is noted from your letter of 13/03/2009 that a previous proposal involving connection to the surface water drainage system was not to the satisfaction of the Agency.

It is agreed that the best course of action in this instance is to divert drainage from the yard area into the existing foul connection rather than connecting to the surface water drainage system. I now attach a revised drainage proposal for the site in which drainage from the yard area will be directed to the foul water drainage system, preferable given the existing sewer connection at the site (E to existing 225mm dia. foul drain on proposed layout). To facilitate monitoring of the final discharge from the site, it is proposed to relocate monitoring location E3 to a manhole just south of the proposed Class 2 separator (at G on proposed layout).

We have examined the emission levels specified in Schedule G.2 of the licence and are confident that the proposal will satisfy these in terms of volume to be emitted and levels of specified parameters.

G2 specifies Emissions to Sewer – Limit Values. In terms of volume, emission limits will be complied considering rainfall amounts averaged over an annual and daily basis (taking average annual rainfall in this area of Dublin of 810mm).

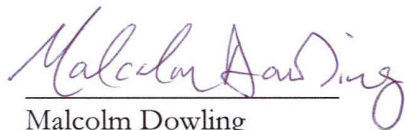
An assessment was also undertaken considering a very high intensity rainfall event (50mm/hour) over a short duration (3 minutes) and in this case, volume emitted also complies with the limits set in the licence.

Given the current nature of activity at the site, Greenstar is satisfied that run-off from the yard area will not lead to the emission limits specified in G.2 being exceeded under the current proposal. It is proposed to construct a new Class 2 by-pass separator as indicated on the attached layout. We are likewise confident that the proposal will ensure compliance with Condition 7.7 of the licence.

To expedite the matter, Greenstar has forwarded the amended scope of works, specification and drawing to selected contractors for this work and it is our expectation that works will commence in late March/early April 2009.

Please contact me should you wish to receive clarification on any aspect of the proposal.

Yours Sincerely,



Malcolm Dowling
Group Compliance and Environment Manager
Greenstar

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**Re: Proposed Drainage Upgrading Works at Greenstar Tallaght – Amended Proposal –
Discharge to Foul Sewer**

The revised proposal to discharge to the foul sewer is summarised below. This proposal is similar to the original Redmond proposal:-

1. Construct new stormwater drain from proposed manhole 'A' to proposed manhole 'B' including gullies as shown – this will provide drainage for the northwest corner of the site.
2. As before, constructed manhole 'B' as a catchpit manhole to capture solids from the northwest corner area.
3. Connect 'B' to existing manhole 'C'.
4. Construct new drain from existing manhole 'C' to existing manhole 'D'. The existing drain from 'D' to 'C' will have to be removed as this currently flows in the wrong direction, however the new drain could be laid in the same trench.
5. Replace existing gullies along existing open stormwater drain and connect to new drain between 'C' and 'D'. This will provide drainage for the main open yard area and where the majority of scrap metals are currently stored and processed
6. Construct manhole 'D' as a large catchpit manhole to capture solids from the main yard processing area
7. Construct a new drain between manhole 'D' and existing manhole 'E'. The existing drain from manhole 'E' discharges directly to the council foul sewer therefore this may be the easiest way of connecting stormwater runoff from the northwest area and the main yard area to the foul sewer. The yellow 'X' marked on the drawing shows the location of where it was proposed to locate the separator as per the original Redmond proposal. There was also to be a new drain constructed from existing manhole 'D' to 'X', however as can be seen from the drawing this would have meant crossing several existing sewers and drains which may have been very disruptive.
8. Provide a Class 2 bypass separator at the location shown
9. Construct secondary catchpit manholes 'F' and 'G' upstream and downstream of the bypass separator. Additional catchpit manholes have been provided because in most circumstances when discharging storm waters to a foul sewer one of the primary concerns of the council will be the amount of suspended solids in the discharge.

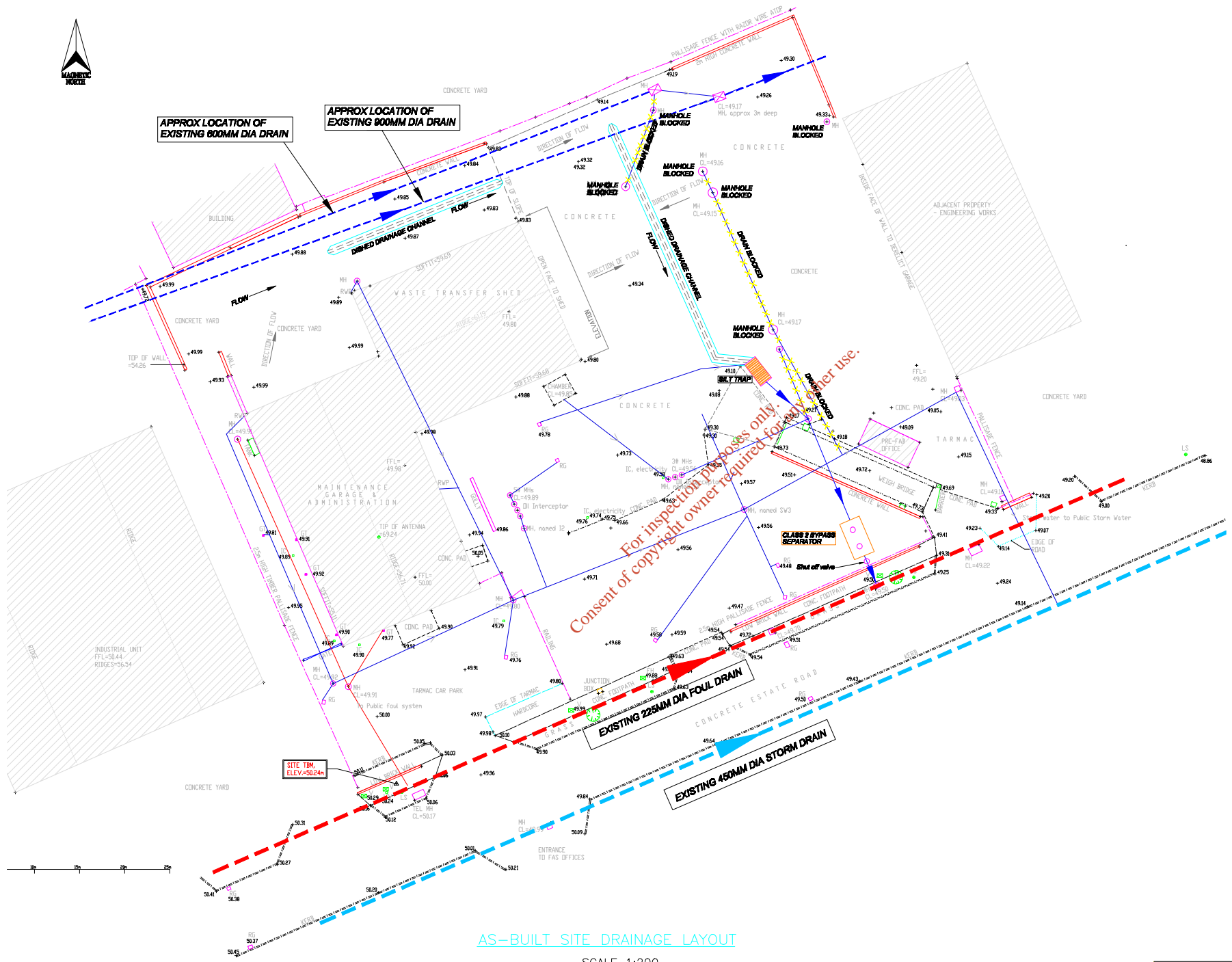
10. Abandon and backfill existing manholes 1,2, 3 and 4 as per previous proposal
11. Abandon and backfill existing drain between manhole 'C' and manhole 'H' as per previous proposal
12. Remove existing manhole covers 'H' and 'J' and replace with 2m x 2m concrete slabs as per previous proposal.
13. Manholes A, B, C, D and E to have Group 6 Class F900 manhole covers. Manholes F & G to have Group 5 Class E600 covers.
14. Replace existing downpipe and gully at 'K' as per previous proposal.

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APPROX LOCATION OF EXISTING 800MM DIA DRAIN

APPROX LOCATION OF EXISTING 900MM DIA DRAIN



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NOTES:-
1. DO NOT SCALE FROM THIS DRAWING

rev.	date	amendment	dm	ckd
B	25.05.09	Updated after construction	PMG	PMG
A	20.05.09	AS-BUILT LAYOUT	LM	PMG
P2	13.03.09	ISSUED TO CONTRACTORS FOR PRICING	LM	PMG
P1	04.02.09	ISSUED TO CLIENT	LM	PMG



MSM RECYCLING LTD
COOKSTOWN INDUSTRIAL ESTATE
TALLAGHT
CO DUBLIN

SITE DRAINAGE
AS-BUILT DETAILS

DRAWING STATUS:	SCALE:	AS_SHOWN	A1
LICENCE	DATUM:	LOCAL	
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REV	APPROVED:		
B	DATE:	25.05.2009	

AS-BUILT SITE DRAINAGE LAYOUT

SCALE 1:200

ATTACHMENT 2

Noise Assessment

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DixonBrosnan
 environmental consultants
 dixonbrosnan.com

Project				
Noise survey at Greenstar Ltd., Cookstown Industrial Estate, Tallaght - EPA waste licence W0079-01				
Client				
O'Callaghan Mbran & Associates				
Project no	No pages	Client reference	©DixonBrosnan 2010	
08160	13	W0079-01	v180210	
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Report no	Date	Status	Prepared by	Chkd
08160.4.1	18.05.10	Original	Damian Brosnan	CD
08160.4.2	19.05.10	Additional details	Damian Brosnan	CD
08160.4.3	31.05.10	Update re EPA letter 26.05.10	Damian Brosnan	CD
08160.4.4	04.06.10	Additional mitigation agreed	Damian Brosnan	CD
08160.4.5	09.06.10	Mitigation clarified	Damian Brosnan	CD
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1 Introduction

1.1 DixonBrosnan Environmental Consultants were instructed by O'Callaghan Mbran & Associates, on behalf of their client Greenstar Ltd., to carry out a noise survey at the latter's premises at Unit 41, Cookstown Industrial Estate, Tallaght, Dublin 24. The Environmental Protection Agency (EPA) has issued waste licence W0079-01 in respect of the site. As part of a licence review process currently underway, the Agency has requested that a specific (facility operational) and background (facility shut down) noise survey be undertaken. The Agency has also requested, by letter dated 26.05.10, a list of additional details including possible noise mitigation measures.

1.2 The specific and background noise survey was carried out on Wednesday 12.05.10. Monitoring was conducted at four offsite stations agreed in advance with the Agency. The stations, shown in appendix 1, were as follows:

NSL1: Northeast gate to Tallaght hospital complex, 190 m southwest of Greenstar facility. As the hospital constitutes the closest noise sensitive location (NSL) to the facility, this station is included in the routine noise monitoring programme undertaken at the site.

Station 2: Directly across roadway from Greenstar facility entrance, 6 m from façade of FAS training building and offices. Training buildings and offices are not included in the Agency's NSL definition.

Station 3: Southeast corner of premises occupied by Ricesteel Ltd. which directly adjoins the northern boundary of the Greenstar facility. As the commercial sites in this area are staggered, the southeast corner of the Ricesteel premises lies midway along the northern boundary of the Greenstar site. The boundary structure generally consists of solid concrete.

Station 4: Located in a vacant lot between two dwellings at Colbert's Fort, 275 m east of the Greenstar facility. While several dwellings in this cluster lie slightly closer to the facility (240 m), it was not possible to measure near these due to continuous intrusion from a generator located at a nearby premises.

1.3 Monitoring was undertaken using two sound level meters manned by two personnel. Survey methodology, equipment specification and weather conditions are presented in appendix 2. Operations at the Greenstar facility continued throughout the survey, excluding the periods 1005-1031 and 1231-1301 hours when the site was fully shut down to facilitate the background survey. Neither specific nor background survey coincided with the lunch period. Noise emissions at the facility arose from the following:

Small grab and baler-shears machine at northwest corner processing aluminium

Large grab and baler-shears machine near northeast corner processing large scrap items.

Forklift truck in use around site.

Telescopic loader and skidsteer used to load scrap into containers.

Track machine with magnetic attachment, in limited use after lunch.

Cutting equipment (gas torch and grinder) in intermittent use around site.

Waste handling operations in buildings.

Trucks and other vehicles accessing site, including diesel refuelling truck in afternoon.

2 Results & analysis

21 Noise levels recorded are presented in appendix 3. Frequency spectra are presented in appendix 4. Noise data recorded are summarised in the table below. Paragraphs 2.2 to 2.5 include an assessment of impacts as requested in the EPA's letter of 26.05.10. The Agency has also requested that an extensive list of parameters be included with respect to the noise data recorded. The requested data are presented in appendix 5. An explanation required by the Agency with respect to the routine noise monitoring programme is outlined in appendix 6.

Table 1: Noise data summary.

Station	Facility	L _{Aeq} 30min dB	LAF ₁₀ 30min dB	LAF ₉₀ 30min dB
NSL1	Open	56	58	52
	Closed	55	57	48
Station 2	Open	66	69	57
	Closed	61	58	46
Station 3	Open	66	68	61
	Closed	54	54	52
Station 4	Open	53	53	44
	Closed	50	53	40

2.2 At NSL1, the difference between L_{Aeq} 30min and LAF₁₀ 30min values recorded during the presence and absence of site operations was negligible, indicating that facility operations did not significantly impact on the local noise environment. However, emissions from scrap metal manipulation by the large grab were continuously audible at a low level, and this was reflected in an increase of 4 dB in the LAF₉₀ 30min value. The recorded data therefore suggest that emissions from the facility were audible but not significant. No tones were detected here, other than from site reversing alarms. NSL1 is the only station included in the routine noise monitoring programme, the purpose of which is to assess compliance with noise limits specified in waste licence W0079-01. Noise levels at NSL1 attributable to the site were lower than the 55 dB daytime limit specified in the licence.

2.3 The proximity of station 2, located opposite the entrance to the Greenstar facility, is reflected in the noise levels recorded. Increases in L_{Aeq} 30min, LAF₁₀ 30min and LAF₉₀ 30min values were noted when operations progressed at the facility. No tones were detected in the emissions other than in reversing alarms. Impulsive emissions arose from container loading. The L_{Aeq} 30min level remained significantly above 55 dB when Greenstar emissions ceased, due to the influence of commercial and traffic noise across the industrial estate. Tones were also audible from offsite reversing alarms. Station 2 is not a noise sensitive location.

2.4 As at station 2, significant increases across all three measured parameters were attributable to site operations when measured at station 3 outside the north boundary. Despite the presence of several offsite noise sources here (Ricestele condenser/fan emissions, wood flooring facility emissions), several sources near the north boundary of the Greenstar facility dominated the local noise environment. A tone detected in the 63 Hz band was most likely associated with operations at the facility. While the site was shut down, impulsive emissions were audible from an adjacent premises. This station is not a noise sensitive location.

2.5 Marginal differences were recorded between specific and background levels measured at station 4 to the east of the facility. Greenstar emissions were only faintly audible here however, and it is considered that the differences recorded were most likely attributable to other variations such as local movements and plant operations closer to station 4. Tones detected in the 80 and 630 Hz bands at station 4 were unlikely to have been associated with the facility, particularly as the former tone was also detected during the background survey. Station 4 is a noise sensitive location, and thus limits specified in licence W0079-01 apply to this location. Noise levels attributable to site operations were significantly lower than the 55 dB limit.

3 Conclusions & mitigation

3.1 At NSL1 and station 4, both of which are noise sensitive locations, site emissions were slightly audible only (audible at a low level at NSL1, faintly audible at station 4). The emissions were not significant, and levels attributable to site operations remained below the daytime noise limit included in waste licence W0079-01. No action is considered necessary with respect to these locations.

3.2 Due to their proximity to the facility, stations 2 and 3 were influenced by site operations, with an increase in measured parameters evident. While neither station is a noise sensitive location in the context of the definition provided by the EPA, both stations will benefit from mitigation measures, and site management has confirmed that the measures outlined below will be applied.

3.3 As requested by Greenstar, a site inspection was undertaken following the survey in order to identify onsite sources which may benefit from mitigation. Mitigation measures currently employed onsite consist chiefly of acoustic barriers, confinement of certain operations to within site buildings, and satisfactory maintenance of plant exhausts. It was noted that, apart from the track machine, plant used onsite is in good condition with properly working exhaust silencers. Acoustic barriers, consisting of mass concrete structures, are installed on much of the north, east and west boundaries. With a surface density significantly in excess of 10 kg/m², the structures constitute barriers in the context of *International Standard ISO 9613 Acoustics: Attenuation of sound during propagation outdoors Part 2 General method of calculation (1996)*.

3.4 The following additional potential measures were identified and discussed with site management

The track machine with magnetic attachment is relatively old, with a resulting increase in noise emissions due to worn parts and failing exhaust silencing. In addition, emissions from the tracks are significantly loud when moving. Site management has identified the need to replace this machine. This measure will result in elimination of potentially significant tonal emissions.

When gathering steel, the telescopic loader bucket is scraped along the ground, resulting in significantly loud emissions audible at station 2. As the yard surface is cleared regularly by the grab operator using a metal brush, additional cleaning by the loader driver is considered superfluous. It has therefore been agreed that the driver will maintain a clearance distance of approximately 30-50 mm above the ground when loading metal. This measure will eliminate potentially significant impulsive emissions.

Larger metal items may generate impulsive emissions when dropped from a height. It has been agreed that the grab operators will minimise drop heights, and where possible will not release metal until resting on the ground. This measure will also result in the minimisation of significantly potential impulsive emissions.

Waste metal is placed within containers using a skidsteer. It was noted that the skidsteer operator manoeuvres his machine quickly when inside the container in order to build up momentum, thus packing the metal tighter. The quick and sudden movements of the skidsteer result in increased noise emissions. It has been agreed that this operation will be slowed in order to reduce noise emissions.

Noise emissions from container loading tend to become magnified due to vibration of the container walls, resulting from transmission of vibrations in the packed metal through direct contact with the container sides, floor and roof. The emissions, which are impulsive in character, are most pronounced during the early stages of container loading due to the absence of damping in the system. Following a detailed examination of the loading procedure, it has been agreed that the first four loads placed in the container using the skidsteer will be left loose. The increased damping provided by the loosely packed metal will assist in absorption of vibration, thereby reducing the generation of impulsive emissions. The skidsteer operator will be instructed accordingly.

It has been agreed that the onsite environmental policy document will be revised to include stricter control of noise emissions, particularly through the use of the onsite nuisance control procedure.



Appendix 2 Survey details

Survey	Project ref.	08160
	Purpose	Specific & background survey
	Locations	NSL1 & Station 4
	Comment	Facility shut down 1005-1031 & 1231-1301
Event	Date	12.05.10
	Day	Wednesday
	Time	Morning
Operator	On behalf of DixonBrosnan	Damian Brosnan
Conditions	Cloud cover	Gradually increasing to 100%
	Precipitation	Passing mist 1130-1200
	Temperature	8-10°C
Wind	Direction	NE
	Speed	0-2 m/s
	Measurement	Anemo anemometer 2 m above ground level
Sound level meter	Instrument	Bruel & Kjaer Type 2250
	Instrument serial no.	2506594
	Microphone serial no.	2529531
	Application	BZ7224 Version 2.5
	Bandwidth	Broadband
	Max input level	141.16 dB
	Broadband weightings	Time: Fast Frequency: AC
	Spectrum weightings	Time: Fast Frequency: Z
	Windscreen correction	UA-1650
	Sound Field correction	Free-field
	UKAS calibration	09.12.09
	UKAS calibration certificate	Available on request
	Onsite calibration	Time
Calibration type		External
Sensitivity		48.92 mV/Pa
Post measurement check		93.9 dB
Onsite calibrator	Instrument	Bruel & Kjaer Type 4231
	Instrument serial no.	1723667
	UKAS calibration	14.09.09
	UKAS calibration certificate	Available on request
Monitoring methodology	Standard	ISO 1996 Acoustics: Description and measurement of environmental noise - Part 1 (2003) & Part 2 (2007)
	Exceptions	-
	Intervals	30 min (26 min at NSL1 background), logging

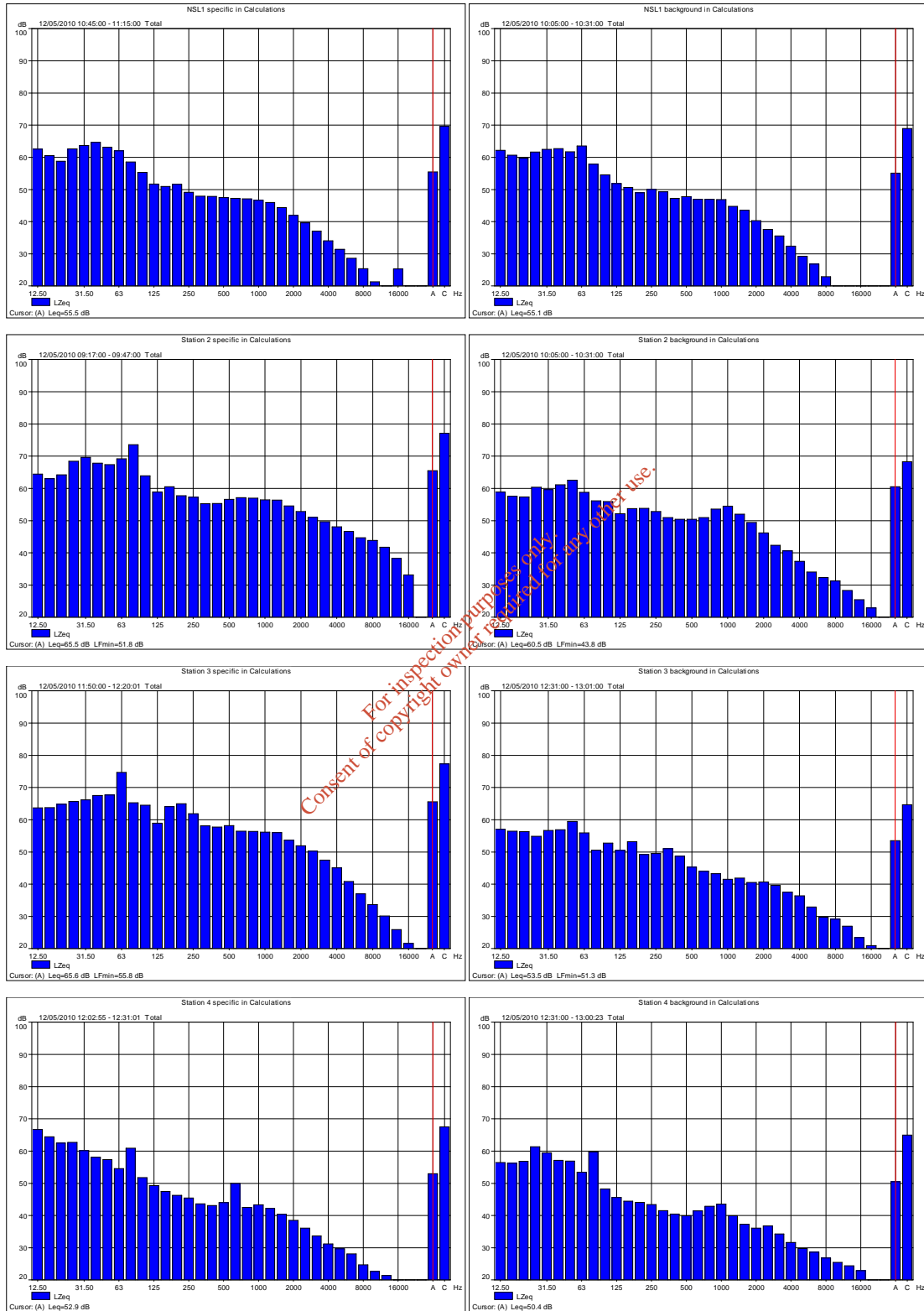
Survey	Project ref.	08160
	Purpose	Specific & background survey
	Locations	Station 2 & Station 3
	Comment	Facility shut down 1005-1031 & 1231-1301
Event	Date	12.05.10
	Day	Wednesday
	Time	Morning
Operator	On behalf of DixonBrosnan	Damian Brosnan & Rose Lloyd
Conditions	Cloud cover	Gradually increasing to 100%
	Precipitation	Passing mist 1130-1200
	Temperature	8-10°C
Wind	Direction	NE
	Speed	0-2 m/s
	Measurement	Anemo anemometer 2m above ground level
Sound level meter	Instrument	Brüel & Kjær Type 2250-L
	Instrument serial no.	2566801
	Microphone serial no.	2571655
	Application	BZ7130 Version 2.0
	Bandwidth	Broadband
	Max input level	142.66 dB
	Broadband weightings	Time: Fast Frequency: AC
	Spectrum weightings	Time: Fast Frequency: Z
	Windscreen correction	WA-0237
	Sound Field correction	Free-field
	UKAS calibration	30.09.08
	UKAS calibration certificate	Available on request
Onsite calibration	Time	12/05/2010 08:24:45
	Calibration type	External
	Sensitivity	41.46 mV/Pa
	Post measurement check	93.9 dB
Onsite calibrator	Instrument	Brüel & Kjær Type 4231
	Instrument serial no.	1723667
	UKAS calibration	14.09.09
	UKAS calibration certificate	Available on request
Monitoring methodology	Standard	ISO 1996 Acoustics: Description and measurement of environmental noise - Part 1 (2003) & Part 2 (2007)
	Exceptions	None, although stacked IBCs < 3.5 m at Station 3
	Intervals	30 min (26 min at station 2 background), logging

Appendix 3 Noise data

Survey date: 12/05/10

Station	Facility	Time	L _{Aeq} 30min dB	L _{AF} 10:30 min dB	L _{AF} 90:30 min dB	Noise audible
NSL1	Closed	1005-1031	55	57	48	No facility emissions audible. No commercial noise other than forklift truck in yard outside unit at 80m, with some vehicle movements and audible angle grinder. Frequent traffic movements through hospital gate and pedestrian voices dominant. Distant traffic noise audible in background. Aircraft and distant sirens.
NSL1	Open	1045-1115	56	58	52	Facility reopened, with emissions from grab manipulating metal continuously audible at low level, not significant. Reversing alarms onsite also audible. Otherwise, noise audible as above.
Station 2	Open	0917-0947	66	69	57	Facility emissions dominant, chiefly large grab manipulating metal, and loader and skidsteer loading container. Loader bucket scraping on ground significant. No other site emissions audible apart from vehicles through entrance. During lulls, aircraft audible. Sporadic traffic on industrial estate roadway.
Station 2	Closed	1005-1031	61	58	46	Noise audible intermittently from commercial units across industrial estate, including reversing alarms, mobile plant and metal banging in distance. Sporadic traffic locally on estate roadway. Aircraft & sirens.
Station 3	Open	1150-1220	66	66	61	Several sources at Greenstar facility codominant Small grab and baler-shears machine at NW corner Large grab manipulating metal in main yard Baler-shears engine at NE corner Emissions from local condenser/fan units at Ricesteele also codominant. No emissions from adjacent wood flooring premises. No offsite noise audible.
Station 3	Closed	1231-1301	54	54	52	Sporadic emissions from adjacent wood flooring unit now audible, including banging, forklift truck and saws. Condenser/fan unit emissions at Ricesteele continuously audible and dominant in background. Distant noise audible from traffic & Luas. Sirens & aircraft.
Station 4	Open	1202-1231	53	53	44	No emissions audible from Greenstar facility apart from faintly audible manipulated scrap, not significant. Plant operating in carpark of adjacent commercial premises to W continuously audible. Sporadic car and truck movements in this carpark also audible. Pause x1 due to car nearby. Belgard Road traffic continuously significant. Bird song/calls, sirens and aircraft.
Station 4	Closed	1231-1301	50	53	40	No Greenstar emissions audible. Noise emissions as above. Dog barking locally 1251-1252. Plant in carpark at rear of nearby premises reducing from 1252. Belgard Road traffic becoming more significant toward lunch, and rain developing.

Appendix 4: Frequency spectra



Appendix 5: Noise data requested by EPA

Survey date: 12/05/10

Station		NSL1		Station 2		Station 3		Station 4	
Status		Open	Closed	Open	Closed	Open	Closed	Open	Closed
First 15 min interval	L _{Aeq} 15min	56	56	66	62	65	54	55	49
	L _{Ar} 15min	61 ¹	56	71 ²	67 ³	70 ⁴	59 ⁵	60 ⁶	54 ⁶
	L _{AF90} 15min	52	49	58	45	61	52	45	41
	L _{AF1} 15min	61	65	75	76	72	59	69	58
	L _{AF10} 15min	60	57	70	60	67	54	55	52
	L _{AF max}	75	75	81	87	83	75	80	70
	L _{AE}	86	86	96	92	95	83	84	79
Second 15 min interval	L _{Aeq} 15min	55	53	65	55	66	53	49	52
	L _{Ar} 15min	61 ¹	53	70 ²	60 ³	71 ⁴	58 ⁵	54 ⁶	57 ⁶
	L _{AF90} 15min	52	47	56	47	61	52	44	39
	L _{AF1} 15min	58	58	74	67	75	57	56	62
	L _{AF10} 15min	57	56	68	54	68	54	51	54
	L _{AF max}	70	72	83	77	82	74	68	70
	L _{AE}	85	81	94	83	96	83	78	81
Total 30min interval	L _{Aeq} 30min	56	55	66	61	66	54	53	50
	L _{Ar} 30min	61 ¹	55	71 ²	66 ³	71 ⁴	59 ⁵	58 ⁶	55 ⁶
	L _{AF90} 30min	52	48	57	46	61	52	44	40
	L _{AF1} 30min	61	65	75	73	74	58	65	62
	L _{AF10} 30min	58	57	69	58	68	54	53	53
	L _{AF max}	75	75	83	87	83	75	80	70
	L _{AE}	88	87	98	92	98	86	85	83

¹Reversing alarms.

²Scraping bucket & container loading.

³Offsite reversing alarms.

⁴Engine hum & banging metal.

⁵Banging noise from offsite premises.

⁶Tone sources not identified; unlikely to have been Greenstar facility.

The EPA letter of 26.05.10 requests an explanation for the near field correction applied in routine noise monitoring reports submitted in respect of the study site. Two of the monitoring stations used, N3 and N4, are located at the northwest and northeast corners of the site respectively. Both corners are defined by high concrete walls. A baler-shears machine operates in proximity to each corner. For reasons of safety, it is necessary to set up the sound level meter microphone within 1 m of both walls defining each corner. By necessity, this distance is significantly lower than the 3.5 m offset recommended by several standards, including EPA noise guidance documents and ISO standards.

International Standard ISO 1996 Acoustics: Description and measurement of environmental noise Part 2 (2007) sets out corrections to be applied in near field environments, including monitoring positions close to façades. Unfortunately the guidance does not include corner positions. Basic noise mathematics states that where a microphone is located close to a façade (although not so close that incident and reflected waves become coherent), reflected sound energy will almost equal incident sound energy, resulting in a doubling of total sound energy at that location. The doubling in acoustic energy results in an approximate increase of 3 dB. As a second wall façade also reflects noise at the corner, reflected energy off this façade will lead to an additional increase. This increase is estimated to be 3 dB also, resulting in a total increase of 6 dB. This 6 dB factor is consistent with a directivity factor of 4, resulting from the propagation of baler-shears emissions into the corner.

It should be noted that stations N3 and N4 are located entirely within the near field of both baler-shears machines (due to the machine dimensions significantly exceeding the distance to the corner), and therefore simple noise mathematics do not apply. The 6 dB correction identified above is merely an approximate.

Appendix 7: Glossary

Ambient	Total noise environment at a location, including all sounds present
A-weighting	Weighting or adjustment applied to sound level to approximate non-linear frequency response of human ear. Denoted by suffix A in parameters such as L_{AeqT} , L_{AF10T} , etc.
Background level	L_{AF90T} . A-weighted sound pressure level of residual noise exceeded for 90% of time interval T.
Decibel	Shortened to dB. Unit of noise measurement scale. Based on logarithmic scale so cannot be simply added or subtracted. 3 dB difference is smallest change perceptible to human ear. 10 dB difference is perceived as doubling or halving of sound level. Throughout this report noise levels are presented as decibels relative to 20 μ Pa. Examples of decibel levels are as follows: 20 dB: very quiet room; 30-35 dB: night-time rural environment; 55-65 dB: conversation; 80 dB: busy pub; 100 dB: nightclub.
Fast response	0.125 seconds response time of sound level meter to changing noise levels. Denoted by suffix F in parameters such as L_{AF10T} , L_{AF90T} , etc.
Frequency	Number of cycles per second of a sound or vibration wave. Low frequency noise may be perceived as hum, while whine represents higher frequency. Range of human hearing approaches 20-20,000 Hertz.
Hertz	Shortened to Hz. Unit of frequency measurement
Impulse	Noise which is of short duration, typically less than one second, sound pressure level of which is significantly higher than background.
Interval	Time period T over which noise monitoring is conducted. Denoted by T in L_{AeqT} , L_{AF90T} , etc.
L_{AeqT}	Equivalent continuous sound level during interval T, effectively representing average A-weighted noise level.
L_{AF}	Sound pressure level averaged over one second, and changing each second in fluctuating noise environment
L_{Alep}	Sound pressure level at particular instant, measured using impulse time response. May be used in assessment of impulse noise.
L_{ReqT}	Rating noise level, derived from L_{AeqT} plus specified adjustments for tonal and impulsive characteristics.
L_{AF10T}	Sound pressure level exceeded for 10% of interval T, usually used to quantify traffic noise.
L_{AF90T}	Sound pressure level exceeded for 90% of interval T, usually used to quantify background noise. May also be used to describe noise level from continuous steady or almost-steady source, particularly where local noise environment fluctuates.
Noise sensitive location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires absence of noise at nuisance levels.
1/3 octave band	Frequency spectrum may be divided into octave bands. Upper limit of each octave is twice lower limit. Each octave may be subdivided into thirds, allowing greater analysis of tones.
Residual level	Noise level remaining when specific source is absent or does not contribute to ambient
Specific level	Sound pressure level contribution arising from specific noise source, measured directly or by estimation or calculation.
Tone	Character of noise caused by dominance of one or more frequencies which may result in increased noise nuisance.
Z-weighting	Standard weighting applied by sound level meters to represent linear scale.

ATTACHMENT 3

Table E. 5. (i)

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Table E.5(i): NOISE EMSSIONS - Noise sources summary sheet

Source	Emission point Ref. No	Equipment Ref. No	Sound Pressure ¹ dBA at reference distance	Octave bands (Hz) Sound Pressure ¹ Levels dB(unweighted) per band								Impulsive or tonal qualities	Periods of Emission	
				31.5	63	125	250	500	1K	2K	4K			8K
Telescopic loader			70 @ 10m	-	82	72	63	65	67	64	56	49	No	
Forklift truck			69 @ 10m	71	73	75	64	66	63	63	56	45	No	
Grab (x2)			77 @ 10m	-	84	82	77	75	72	68	60	52	No	
Baler-shears (x2)			81 dB @ 3m	82	83	75	77	76	76	75	70	62	No	
Trucks*			80 passby @ 10 m	-	73	78	78	78	74	73	68	66	No	
Skidsteer			91 LWA	-	-	-	-	-	-	-	-	-	No	
Track machine			70 @ 10m	-	74	70	68	67	64	62	58	50	No	
Gas cutter			65 @ 10m	-	74	76	66	58	56	56	55	55	No	

1. For items of plant sound power levels may be used.

*Typical value only, as trucks types accessing the site vary.

ATTACHMENT 4

Nuisance Control Procedure

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M.S.M RECYCLING LTD			
EMS PROCEDURE MANUAL			
TITLE	NUISANCE CONTROL PROCEDURE	REF	EOP 020
		Revision No	03
ISSUED BY	Rose Lloyd	APPROVED BY	Anthony Ward
SIGNATURE		SIGNATURE	
DATE	03/06/10	PAGE	1 of 3

This document is issued and controlled by the Yard Manager. This is a controlled document subject to change at any time, and therefore should not be copied. Only signed, authorised copies may be used as working documents.

1.0 Purpose

The purpose of this procedure is to ensure potential nuisances are managed effectively and result in minimal environmental impacts.

2.0 Scope

- 2.1 The procedure outlines the steps that will be followed to ensure that MSM reduce as far as possible, emissions from the facility that could cause nuisance at the facility and to surrounding occupants at the industrial estate.

3.0 Responsibility

- 3.1 The Environmental Manager (EM) is responsible for implementing this procedure.
- 3.2 The Recycling Manager (RM) and the EM are responsible for ensuring this procedure is carried out.
- 3.3 All MSM employees are responsible for following this procedure.

4.0 Definitions

- 4.1 "Nuisance" is defined as significant litter, noise, odour, dust or numbers of pests.

5.0 Procedure

The EM will regularly assess the requirements of the site waste licence and performance of mitigation measures described below with regard to noise, dust, litter and odour control.

- 5.1 Noise – Operations on site give rise to noise emissions. These emissions will be kept to a minimum to ensure the facility does not cause nuisance at noise sensitive locations.
- 5.1.1 To minimise noise generation the EM/RM will be required to:
- Restrict the hours of operation of specific items of plant
 - Maintain noise dampening equipment on plant
 - Replace items of plant and/or
 - Revise operating practices on-site
 - Ensure appropriate storage of baled metal

M.S.M RECYCLING LTD			
EMS PROCEDURE MANUAL			
TITLE	NUISANCE CONTROL PROCEDURE	REF	EOP 020
		Revision No	03
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DATE	03/06/10	PAGE	2 of 3

Instruct staff that metal must be handled in a careful manner and not allowed to drop from a height, and the machine grab must not make contact with walls on site.

5.2 Dust – There is potential for dust emission due to vehicles traversing the concrete yard area. Dust may also arise from metal loads as they are delivered (particularly where loads are from C&D sources).

5.2.1 To minimise dust generation the EM/RM are required to:

Ensure that yard area is dampened on dry days and swept daily and all mud/dust debris removed for disposal to on-site skip for storage of non-metallic waste

Ensure that the frequency of dampening down the yard, using the high pressure hose, is adequate during dry spells, four times per day as a minimum, plus additional ad hoc use according to the loads that arrive.

Ensure that all skip loads are dampened upon arrival and deposition at the facility (refer to the Waste Acceptance Procedure EOP 003)

In dry spells MSM will irrigate the shearing scrap heaps to suppress any residual dust that could have accumulated within them

5.3 Litter – Owing to the nature of activity at the site there is limited potential for litter nuisance generation by the facility.

5.3.1 To further minimise the potential for litter nuisance, the following will be implemented under direction of the EM:

The yard will be swept daily to capture any small items of litter that may have been generated during operations

Regular litter picks will be carried out about the perimeter of the facility to clear away any litter that is present

Any material that is collected during site cleanup operations will be dealt with appropriately.

5.4 Odour - In general, waste handling and processing at the facility is 'odour-free'. Occasional metal cutting tasks may generate a short-lived and non-persistent, localised, odour.

5.4.1 To minimise the potential for odour nuisance, the EM will ensure that any metal cutting is carried out away from the site boundary in a ventilated area.

M.S.M RECYCLING LTD			
EMS PROCEDURE MANUAL			
TITLE	NUISANCE CONTROL PROCEDURE	REF	EOP 020
		Revision No	03
ISSUED BY	Rose Lloyd	APPROVED BY	Anthony Ward
DATE	03/06/10	PAGE	3 of 3

5.5 Pests – In general waste metal handling on site is unlikely to encourage pests.

5.5.1 To further minimise the likelihood of pests on site the RM ensures that

Rodent bait is laid and checked monthly, with results kept on site.

Housekeeping of canteen areas and refuse bins will minimise the likelihood of food sources being available to rodents or flies.

6.0 Records

6.1 The EM will ensure that a daily record is kept on-site of the site environmental check including details of nuisance control.

6.2 A complaints file is on-site to record any complaints that may arise

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ATTACHMENT 5

Complaints

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Midland Scrap Metal Company Ltd

ENVIRONMENTAL COMPLAINT REGISTER

	DATE	Complainant	Nature of Complaint	Response
1	08 March 2010	Ricesteels in writing to EPA	Petrol Smell, dust, noise, material falling through fence.	AW by phone
2	18 March 2010	Ricesteel, by phone	Environmental, noise related	AW by phone. MSM took action to move metal away from wall
3	19 March 2010	Ricesteel, by phone	Environmental, noise related	AW by phone. Noise related to the movement of metal away from the wall.
4	22 March 2010	Ricesteel, by phone	Environmental, noise related	AW by phone. Noise related to the movement of metal away from the wall.
5	23 March 2010	Ricesteel, by phone	Environmental, noise related	AW by phone. MSM completed movement of metal and have informed staff to remain vigilant about the storage of metal.
6	09 April 2010	Ricesteel by phone	Smell of burning. Complaint received after the yard had been shut.	AW by phone, likely to have been an isolated case of a cable being cut with a consaw.
7	13 April 2010	Ricesteel by phone	Smell of burning.	AW by phone. Call received at 10.37, AW investigated at 10.45. No smell of burning was evident & no burning activities have taken place on site today. This information was passed on to Ricesteel.
8	22 April 2010	Ricesteel, to EPA	Dust	MSM + Greenstar - meeting 23.4.10. Improve housekeeping + install water hose + ? sprinkler system.
9	26 May 2010	Ricesteel to EPA	Dust, covering of yard.	Greenstar to meet with Pat O'Donoghue.
10	2 June 2010	Ricesteel to MSM by phone	Vibrations/noise -> morning (~12.00)	Stainless steel being sheared. MSM stopped that directly. Greenstar meeting 3.6.10

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ENVIRONMENTAL PROTECTION AGENCY
Office of Environmental Enforcement

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Regional Inspectorate

McCumiskey House

Richview

Clonskeagh

Dublin 14

IRELAND

To: Mr Malcolm Dowling

Fax No: 01-2947990

From: Niall Horgan

Date: 08/03/2010

Total number of pages including this one	2
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Message:

Dear Mr Dowling

Please find attached a record of a complaint received by the Agency regarding Greenstar Materials Recovery Ltd., Waste Licence Reg. No. W0079-01. Please investigate the cause of the complaint and revert to the Agency and the complainant detailing your response to the complaint.

You should be aware that the contents of the complaint have been noted and may be subject to further action by the Agency.

Regards,

Niall Horgan

Inspector

Office of Environmental Enforcement

Received Time 8. Mar. 15:59

RECORD OF TELEPHONE COMPLAINT

Reg. No: W0079-01 **Date:** 08/03/2010

Facility Name: Greenstar Materials Recovery Ltd **Time:** 15:05

Complainant: Mr Pat O'Donoghue

Address: Ricesteele, Unit 31
Cookstown Industrial Estate
Taallaght, Dublin 24
Dublin

Complaint: Mr O'Donoghue stated that a petrol smell from Greenstar Materials Recovery was evident inside the premises of Ricesteele on Thursday 4th March. Mr O'Donoghue stated that they were unable to contact the licensee on Thursday 4th and Friday 5th to relay this complaint.

Mr O'Donoghue also stated that dust emissions from Greenstar Materials Recovery was impacting on their dust filters which now required to be changed quarterly.

Mr O'Donoghue also complained of frequent noise emissions from Greenstar Materials Recovery.

Mr O'Donoghue described an incident of waste from a waste stockpile in the yard of Greenstar Materials Recovery, falling into the yard area of Ricesteele

Has the complainant been requested to put this complaint in writing to the Agency? No

Has the complainant been informed that this correspondence will go on public file? Yes

Has the company been informed of this complaint by telephone? No by fax

Comment: Please investigate the cause of the complaint and revert to the Agency and the complainant with the results of your investigation as soon as practicable.

Complaint taken by: Niall Horgan

ENFORCEMENT DATABASE HAS BEEN UPDATED.

Received Time 8. Mar. 15:59

Mr. Niall Horgan
Inspector
Office of Environmental Enforcement
Environmental Protection Agency
Regional Inspectorate
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Clonskeagh
Dublin 14

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Email: info@greenstar.ie

11th March 2010

Re: Complaint received in respect of Waste Licence Reg. No. W0079-01

Dear Mr. Horgan,

I refer to your fax of 08th March 2010 and our subsequent telephone conversation of 11th March 2010 in relation to a complaint received by the Agency, regarding the above referenced site.

Greenstar is naturally disappointed to receive a complaint in this instance, given that it is the first such complaint on record since activity recommenced at the facility in late 2008.

Greenstar reacted in a prompt manner to the complaint and arranged a meeting with the Complainant which occurred on the afternoon of the 9th March 2010. I note that the Complainant states in your record that they were unable to contact the licensee on Thursday 4th and Friday 5th March in relation to this complaint. Whilst this is unfortunate, it should be noted that there were several attempts by Mr. Aidan Shanahan, General Manager, Greenstar to respond over both dates and messages were left at the reception desk of the complainant's premises. At our meeting with the Complainant on the 9th March, additional back-up contact numbers were provided to the Complainant.

There are a number of aspects to the complaint that were investigated by Greenstar at the facility and that were subsequently discussed with the Complainant.

The Complainant states that a petrol smell was evident inside the premises of Ricesteele on Thursday March 4th. During the subsequent meeting with the Complainant it was stated that the odour persisted for approximately 20 minutes on the morning in question. Greenstar questioned staff present at the facility on the morning in question as to the potential source of such an odour originating from the site. There is no recollection of any unusual odour in the vicinity of the site yard. The site does not accept vehicles that are not de-polluted in advance and strict waste acceptance procedures are in place.

Registered in Ireland No. 325120

Directors: G. Bailey, C. Bell, J. Dempsey,
N. Parkinson, E. Bolger (Secretary)
Registered Office: Burton Court, Burton Hall Road,
Sandyford, Dublin 18.

Affiliate Organisation, CIWM
Member of the IWMA
Corporate Affiliate of the IEI

The Complainant alleges that dust emissions from the facility are impacting on their dust filters which are now required to be changed quarterly. During the meeting with the Complainant stated that the dust appeared to be worse during the summer months. A brief overview of recent dust monitoring was discussed with the Complainant. The latest results are from January 2010 (we await lab results for February 2010) and these indicate that results from the gauges closest to the Complainant's property recorded levels significantly below the permitted dust deposition limit (350 mg/m²/day). Previous monitoring when the site was temporarily closed (May 2006 to July 2007) but still monitored suggested that there are significant off-site sources of dust in the vicinity of the licensed facility. Notwithstanding this, dust suppression measures will continue at the site including regular damping down of the paved area.

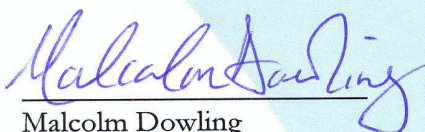
It is noted in the record of the telephone complaint that the Complainant also complained of frequent noise emissions from the facility. During our meeting, the Complainant stated that these noises were apparent from September/October 2009 and on days where noise was noticeable it was not continuous but was a single event that tended to occur at around 1.40pm in the afternoon or on occasion between 09.00 and 10.00 in the mornings. The Complainant and Greenstar will work together in determining a source for any noise nuisance occurring on the site. Because the Complainant states that the noise recorded at his premises is not continuous it is difficult to determine a definitive source at the licensed facility. The Complainant has agreed to notify Senior Site Personnel (Anthony Ward) directly when the next noise emission is noted within his premises. It is agreed that time recording will be synchronised and Greenstar will make use of CCTV footage to determine whether the sound recorded is resulting from a particular on-site operation.

The final aspect of the complaint concerns waste falling onto the Complainants property. Greenstar acknowledges that there should be nothing falling over the wall of the property. On this instance a small number of crushed aluminium cans fell through a gap in the wall from a stockpile close to the boundary. This stockpile has been moved and all site personnel have been informed of the incident.

In the case of above, personnel operating at the facility have been made aware of all aspects of the complaint. Whilst it is extremely disappointing to receive a complaint of any nature in relation to activity at the site, Greenstar and MSM Recycling will continue to investigate all complaints in a thorough manner. As you are aware Greenstar is in the process of regularising all activity at the facility through a licence review process submitted in November 2009. A significant number of improvement works have occurred during the past 16 months. A single complaint has been recorded by the Agency from neighbours within the industrial estate over that time period and Greenstar will continue to work closely with the Complainant and other neighbours to ensure that site activity does not have negative impacts on the surrounding facilities.

A record of this complaint shall be maintained as per Condition 3.11 of the licence.

Yours sincerely,



Malcolm Dowling
Group Compliance Manager

Mr. Niall Horgan
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Environmental Protection Agency
Regional Inspectorate
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27th April 2010

Re: Complaint received in respect of Waste Licence Reg. No. W0079-01

Dear Mr. Horgan,

I refer to your e-mail of 22nd April 2010 detailing a complaint received by the Agency in relation to above referenced site.

Upon receipt of this complaint, an on-site meeting took place the following day (23/04/2010) between Greenstar and Site Management at the licensed facility. The purpose of the meeting was primarily to determine potential sources of dust at the site and to re-evaluate existing dust suppression measures.

A number of actions were agreed to reduce the potential for nuisance created by dust generated at the facility.

1. First of all, the site operator was reminded of the importance that the site is operated in a manner that does not result in nuisance to neighbours in the vicinity of the site. It was agreed that the current nuisance control procedures would be revised and that all site operatives would be advised.

2. It was agreed that a primary source of dust generation at the facility is skips derived primarily from C&D sites. Whilst the number of C&D skips received is reduced substantially, the potential for this waste stream to generate dust is enhanced due to the recent extended dry spell.

As an immediate measure, all incoming skips deposited at the facility will be sprayed upon arrival at the site and upon deposition. A pump and hose fitted will be attached to the water storage tanks already in place at the facility and this will be used to dampen down loads received during dry weather.

3. The more general practice of dampening down the yard area and sweeping will be maintained during all dry days and the frequency increased.

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4. The site operator is to examine the potential to install a permanent, wall mounted, dust suppression system. With this in mind details of the yard have already been forwarded to Mist-Air, an industry leader in the provision of such systems. A proposal from Mist-Air is expected over the coming days and assuming that this is a valid and effective system, then installation of the apparatus will be scheduled without delay. Typically such a system involves the use of a dry fog system to absorb fine airborne dust when generated.

Following directly on from agreement of these actions, Greenstar visited the Complainant at Unit 31, 2nd Avenue, Cookstown Industrial Estate. Greenstar outlined that the measures described above to Mr. O'Donoghue highlighting that the installation of a mounted sprinkler system was under consideration as well as other measures that would be immediately implemented to counter any issues relating to dust.

Other issues were discussed including occasional vibrations and occasional burning smells. The source of vibration is not yet determined as these are infrequent in nature and do not appear noticeable every day. When a vibration is noticed, according to the Complainant, it tends to occur at approximately 4.30pm in the afternoon. Greenstar will work closely with our neighbours in trying to ascertain all possible on-site sources of vibration.

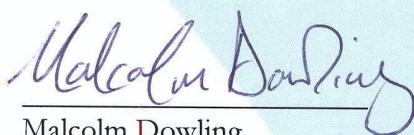
With regard to the alleged nuisance smell described as "diesel fumes and fumes from torching rubber off wires and pipes". This was investigated and it was determined that the burning smell could equate to a recent occasion where it was necessary to cut cables from a load. In general, the recovery operation does involve some cutting of metal using oxyacetylene torches but it is unlikely that these are the source of occasional nuisance smells.

A diesel-type odour could possibly be related to the starting up of an on-site machine. This will be investigated fully. The complainant claims that any odour experienced is fleeting and occasional.

In light of the significant improvement works that have been carried out at the facility over the past number of months it is particularly disappointing to receive any complaints at this facility. Management at the facility and Greenstar understand the importance of ensuring that the activity does not have a negative effect on neighbouring premises and will continue to work with Mr. O'Donoghue on issues that may arise. All site staff will be informed of this complaint and response and any nuisance issues will be addressed immediately.

A follow-up meeting between Greenstar and MSM on issues raised in this complaint will occur on 4th May 2010 and a record of this complaint and response shall be maintained as per Condition 3.11 of the licence. A copy of this response will be forwarded to Mr. O'Donoghue.

Yours sincerely,



Malcolm Dowling
Group Compliance Manager



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04th June 2010

Re: Complaint received in respect of Waste Licence Reg. No. W0079-01

Dear Mr. Horgan,

I refer to your e-mail of 27th May 2010 detailing a dust complaint received on the previous day by the Agency in relation to above referenced site.

The Complainant in this instance was initially contacted by Greenstar on Friday 28th May and it was agreed to meet at the complainant's facility to discuss the issue. This meeting occurred on 03rd June 2010 at 11.30am and was followed by a separate meeting between Aidan Shanahan and Malcolm Dowling with site management at the facility at which dust mitigation was further discussed.

During the initial meeting it was confirmed to the Complainant that dust mitigation measures have been re-assessed at the facility and a series of measures have been put in place to reduce the impact of dust nuisance which could potentially increase during the summer months.

A high pressure pump and hose system has been installed at the facility and is operational since 20th May 2010.

This system is used on the yard surface a number of times per day depending on conditions and on the metal stockpile prior to commencement of operations each day. Loads that arrive on site are inspected in terms of dust and where necessary these are dampened on tipping. The use of this system is now recorded on a daily basis and records will be available on-site.

Prior to the installation of the high pressure hose, a temporary low pressure system was employed at the site during May 2010. It is evident that the newer system has improved the efficiency of dust suppression.

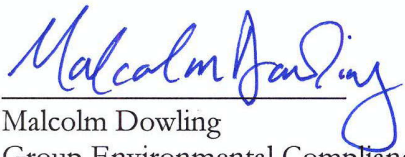
In addition to the above, a road sweeper is contracted for use on site at least once per week.

The above procedures have necessitated the revision of the nuisance control procedure for the site with additional emphasis on mitigating the potential for creation of dust creation. All staff members operating on the site are familiar with this procedure.

It was clarified to the Complainant that dust results are taken at 3 locations on a monthly basis. The latest results available are for April 2010 and will be submitted to the Agency as part of the Q2 Monitoring Report. These results were compliant with limits set in the waste licence.

A copy of this response will be forwarded to the Complainant.

Yours sincerely,



Malcolm Dowling
Group Environmental Compliance Manager

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