

ENVIRONMENTAL PROTECTION  
AGENCY WASTE LICENSING  
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INITIALS.....

**APPENDIX 3**

ELRA 2003

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**ENVIRONMENTAL LIABILITIES**

**RISK ASSESSMENT**

**FOR**

**greenstar Materials Recovery Ltd. (Bray)**

**Waste licence no. 53-2**

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## 1. INTRODUCTION

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Condition 12.2.1 of the greenstar Materials Recovery Ltd. (Bray), Waste Licence (Reg. No. 53-2) requires the licensee to submit a revised Environmental Liabilities Risk Assessment (ELRA) for the facility, which will address liabilities arising from the carrying on of the activities to which this licence relates.

This report presents details of the likely costs associated with addressing any potential environmental liabilities. This report takes account of the following:

- A review of the types of activities carried out on the site, including processes and services.
- Identification of events that could cause sudden emissions to air, surface water, groundwater, land or sewer, which would give rise to environmental liability, e.g. explosion, fire or chemical spills.
- Identification of events that could cause gradual emissions to air, surface water, groundwater, land or sewer, which would give rise to environmental liability, e.g. leaks in underground storage tanks.
- Identification of existing and potential hazards, including an evaluation of the raw materials and waste products typically handled and stored on-site, site hydrogeology, sewer and bund integrity.
- Identification of existing control measures to prevent incidents.
- Examination of all environmental monitoring records, i.e. emissions to air, water and sewer.
- A review of information on historic environmental incidents and any remediation works carried out.

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## 2. POTENTIAL ENVIRONMENTAL LIABILITIES

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The potential for environmental liabilities is associated with impacts on the receiving environment of emissions from site activities. Environmental liabilities are considered to include contamination or damage to environmental media (air, surface water, soils, groundwater). The three main receptors were included in the assessment:

- Air
- Soil
- Surface Water and Groundwater

### 2.1 Emissions to Air

#### 2.1.1 Current Emissions

Emissions to air include odours, dust, litter and noise. The licence includes emission limits for noise, dust, and landfill gas. The licence also requires the control of windblown litter. The facility has implemented the environmental monitoring programme specified in Condition 8.1 of the licence.

##### 2.1.1.1 Dust

The dust emission monitoring carried out in 2002 confirmed that while occasional elevated levels had been detected, the results indicate there is no evidence to suggest that there is any risk to the surrounding environment from dust emissions. greenstar Materials Recovery Ltd. (Bray) conducts routine monitoring in accordance with the licence conditions in order to confirm this position. There is no long term liability associated with dust emissions.

##### 2.1.1.2 Litter

A Facility Inspection procedure, see PT 9 attached, was put in place by the facility in accordance with the licence requirements, (condition 7.1 of licence) and this greatly reduces the potential for litter nuisances, as this particular

aspect is addressed on a daily basis. There is no long term liability associated with any isolated incidences of wind blown litter. There were no complaints or incidents in relation to wind blown litter in 2002.

#### 2.1.1.3 Noise

Noise monitoring undertaken at the site indicates that noise levels in the vicinity of the site are primarily associated with traffic movements into and out of the site.

In the event that the noise monitoring programme identifies continual exceedances of the licence noise emission limits, attributable to the site, appropriate corrective actions will be implemented.

It is considered that noise does not present a long-term liability following the cessation of site operations.

#### 2.1.1.4 Landfill gas

Landfill gas monitoring undertaken at the site indicates that some landfill gas is being produced, due to possible historical landfilling of biodegradable waste at the site. However, the monitoring results indicate that the volume of degradable material is low, therefore the volume of gas produced will decrease over time. There is also no landfill gas control measures in place as the concentrations measured in routine monitoring indicate that there is no need for such control measures.

It is considered that landfill gas does not present a long term liability following the cessation of site operations, as there is no longer any landfilling activities at the site and the volume of landfill gas being produced is continually decreasing over time.

#### 2.1.2 Unexpected Emissions

The on-site potential for unanticipated releases to air is considered to be confined to incidents such as a fire. The site has prepared and updated Emergency Response Procedures (reference Procedure PT4 submitted to the Agency on the 19<sup>th</sup> of June 2003). The procedure will ensure a rapid response to any incident by trained staff. In the event of release to air during an incident, such emissions are likely to have short-term impacts on air quality and the surrounding environment.

## **2.2 Emissions to Soil**

### *2.2.1 Current Emissions*

The only direct emissions to ground at the facility are from the percolation area of the on-site treatment plants wastewater and contaminated surface water run-off. Only uncontaminated storm water from is directed to the surface water drains and courses.

There are no direct emissions to ground from the on-site waste management operations. There is the potential for indirect emissions associated with accidental releases from oil storage areas.

In compliance with Condition 3.10 of the Waste Licence, all tank, drum, fuel and quarantine storage areas are bunded and the waste water from these is directed to the on-site waste water treatment plant.

### *2.2.2 Historic Emissions*

Monitoring of BH4 in previous years (2001/2002) has indicated the presence of elevated levels of total organic carbon (TOC). This was attributed to oil contamination from a former unbunded oil storage area which had been located near this well. The oil storage area has since been removed.

As per condition 4.2.1 of the waste license, greenstar will assess the extent of this hydrocarbon contamination, and remove any contaminated soil as necessary.

There is no evidence of a significant spillage having occurred at the site. Minor drips and spills would have volatilised.

It is considered that there is no long term liability associated with historic emissions to soil.

### *2.2.3 Unexpected Emissions*

The on-site potential for unanticipated releases to soil is considered to be confined to incidents such as spillages or a fire. greenstar Materials Recovery Ltd. has provided bunding around all oil/fuel storage areas to minimise the risk of unexpected emissions to soil.

greenstar Materials Recovery Ltd. has prepared Emergency Response Procedures (PT4 of EMS) to deal with spills and fire. The procedures will ensure a rapid response to any incident by trained staff, which should minimise the impact on soils. In the event of release to soil during an incident such emissions are likely to be confined within the site boundaries and be amenable to rapid clean up.

## **2.3 Emissions to Surface Water and Groundwater**

### **2.3.1 Surface Water**

#### **2.3.1.1 Current Emissions**

Surface water emissions are generally restricted to that of surface water run-off from hard standing areas after a rainfall event. greenstar Materials Recovery Ltd. has implemented a surface water monitoring programme in accordance with condition 8.1 of the waste licence. Monitoring is carried out at 4 locations on the Glenmunder river. S1 – upriver from site, S2 and S3 – at site boundary and S4 – downriver from site.

The monitoring has identified higher levels of contaminants in the monitoring of surface waters at S1, than in S4, which indicates that the contaminants are not associated with on-site activities and originated from a different source. However, the emission limits specified in the Waste Licence are not being exceeded.

On the basis that the facility is operated in compliance with the licence conditions there are no long-term liabilities associated with emissions to surface water.

#### **2.3.1.2 Historic Releases to Surface Water**

There is no record of any accidental releases from the site adversely impacting on the quality of the stream at the western boundary. The monitoring data has not identified any liabilities associated with historic emissions to surface water from site activities.

#### **2.3.1.3 Unexpected Emissions to Surface Water**

The on-site potential for unanticipated emissions to surface water is considered to be confined to incidents such as spills or a fire. greenstar Materials Recovery Ltd. has improved surface water drainage and provided bunding around all oil



storage areas, which will minimise the risk of unexpected emissions to surface water.

greenstar Materials Recovery Ltd. has prepared an Emergency Response Procedure (reference PT4 of the EMS) to deal with fires, spills and unforeseen emergencies. The procedures will ensure a rapid response to any incident by trained staff, which should minimise the impact on surface water.

In the event of release to surface water during an incident such emissions are likely to have short-term impacts on the receiving waters. The need for and extent of any remedial measures required to address the impacts will be based on the scale of the incident. It is considered that any accidental release will not result in any long-term liability.

## 2.3.2 *Groundwater*

### 2.3.2.1 *Current Emissions*

There are no direct emissions to groundwater. There is minimal potential for direct emissions. All areas where liquids are stored are bunded. The subject of soil contamination has been addressed in Section 2.2.

greenstar Materials Recovery Ltd. operates and maintains a quarantine area, at the site, which will minimise the risk presented by the delivery of unsuitable wastes to the site.

### 2.3.2.2 *Unexpected Emissions to Groundwater*

The potential for unanticipated indirect emissions to surface water is considered to be confined to incidents such as spills or a fire. greenstar Materials Recovery Ltd. has provided bunding around all oil storage areas which will minimise the risk of unexpected indirect emissions to groundwater.

greenstar Materials Recovery Ltd. has prepared an Emergency Response Procedure (PT4). The procedures will ensure a rapid response to any incident by trained staff, which should minimise the impact on groundwater.

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### 3. INSURANCE COVER

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greenstar Materials Recovery Ltd. insurance policy (Refer to Appendix A) includes for cover up of up to €6,350,000. In terms of environmental pollution/contamination the indemnity applies "to damage to any buildings or other structures or of water or land or atmosphere caused by pollution or contamination. The policy covers pollution caused by a sudden, identifiable, unintended and unexpected event and not gradual pollution". This cover will be in excess of any environmental liability that may arise due to such incidents.

There is also a €2,000,000 accrual on the balance sheet for greenstar Recycling Holdings Ltd. for last year. This fund is also available to cover any environmental damage caused by greenstar Materials Recovery (Bray) Ltd.

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## **4. CONCLUSIONS**

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### **4.1 Historic and Current Liabilities**

The overall site sensitivity to environmental liabilities is considered to be low due to the location, site conditions and the nature of activities carried out.

The Waste Licence requires an on-going environmental monitoring programme, which has established baseline conditions and assesses the impacts associated with site activities.

The potential for liabilities associated with long-term or gradual emissions to surface water are considered minimal.

The groundwater water quality monitoring has identified minimal impact on groundwater water quality. The contamination detected is not considered significant, as the groundwater is not used as a source of potable or production purposes. All emission limit values are within the Waste Licence limits.

The on-going surface water quality monitoring will allow the rapid identification of any deterioration in surface water quality and facilitate corrective actions.

### **4.2 Future Liabilities**

The implementation of measures to comply with the Waste Licence conditions, including the current environmental management programme, has reduced the risk of development of new environmental liabilities on-site.

Potential future liabilities are linked to emergency situations such as oil spills and fire. greenstar Materials Recovery Ltd. has adopted Emergency Procedures to manage such incidents and minimise associated environmental impacts.

### **4.3 Insurance Cover**

greenstar's insurance cover for environmental liabilities is €6,350,000, which applies to "sudden identifiable and unintended incidents". It is estimated that this is in excess of any environmental liability that may arise due to such incidents. (see section 3 on insurance cover)

## Appendix A

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