

## NON-TECHNICAL SUMMARY

### 1.0 Introduction

Starrus Eco Holding Ltd (SEHL) is applying to the Environmental Protection Agency (EPA) for a review of a Licence (Register Number: W0183-01) for its existing Materials Recovery Facility at Millennium Business Park, Ballycoolin, County Dublin.

It is proposed to accept and process non-hazardous incinerator bottom ash. The processing will be confined to the removal of the ferrous and non-ferrous metals.

### 2.0 Planning Permission

Planning permission (Re F02A/1474) was granted for the development of the facility in March 2003. Greenstar subsequently appealed the conditions to An Bord Pleanála. An Bord Pleanála decided the appeal in August 2003. The EIS which accompanied the original planning application was included with the original Licence Application and a copy is in **Attachment N.B6**. The An Bord Pleanála's decision and Inspectors Report are in **Attachment No. B6**.

Fingal County Council has confirmed that the proposed changes do not require planning permission and a copy of the letter is in **Attachment No. B6**.

The site and proposed activities do not come under the EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2006.

### 3.0 Existing Site

The installation occupies 4.45 hectares (ha) in the east of the Millennium Business Park. It was intended to develop the facility and expand waste acceptance rates over three Phases between 2004 and 2012. Phases 1 and 2 opened in July 2006 and involved the construction of the Materials Recovery building (4,760m<sup>2</sup>) offices and supporting ancillaries. The licence allows for the construction of a biowaste treatment building but this has not yet been constructed.

The current Licence allows the acceptance of 220,000 tonnes non-hazardous municipal waste, commercial & industrial waste, and construction and demolition waste broken down as follows in Schedule A of the Licence:

- Municipal Waste – 100,000 tonnes
- Commercial & Industrial Waste – 90,000 tonnes
- Construction and Demolition Waste – 30,000 tonnes

The Licence also allows the acceptance of 50,000 tonnes of Biowaste Waste for treatment on site. However, the biowaste treatment plant has not been developed.

The Materials Recovery building was designed to accommodate distinct waste handling areas for the Commercial and Industrial (C&I) Waste, Municipal Solid Waste (MSW) and Construction and Demolition (C&D) Waste. Each area has separate access for loading and unloading and waste sorting, processing and storage.

The types of waste accepted and the method of processing changed over time. In 2014 the C&D and C&I processing line were removed and the processing of C&I and C&D waste ceased. The site continues to accept C&D waste, primarily household skip waste, and

residual household MSW and food waste. These wastes are bulked up and sent to other waste management facilities for treatment. Loose and baled SRF produced at other waste management facilities is accepted and stored at the site. The loose SRF is stored inside the building while the bales are stored in a designated open area.

Currently approximately 70 people are based at the facility. These comprise 9 operatives and 60 administrative staff. The current operational hours are 24 hours a day Monday to Sunday inclusive.

#### **4.0 Proposed Changes**

It is proposed to accept and process approximately 130,000 tonnes per annum non-hazardous incinerator bottom ash (IBA) from the Dublin Waste to Energy Ltd waste recovery plant at Poolbeg at the facility, which is scheduled to open later in 2017.

The processing will initially be confined to the removal of the ferrous and non-ferrous metals which will then be sent for recycling. The treatment plant will comprise a series of conveyors, screens, magnets and eddy current separators. In the future the IBA may be dried to increase the metal recovery rates in the fines fraction and crushed and screened.

There are currently no recycling options for the treated IBA in Ireland, but in the medium to longer term there is the potential to use it in cement manufacture, as aggregate in concrete block and in road construction.

It could take up to 18 months to demonstrate that the treated IBA is suitable for use in construction works and the manufacture of products and to obtain approval for an end-of-waste protocol. During this period it is proposed to use some of the materials in engineering works at non-hazardous landfills and, subject to Agency approval, in the mines.

The IBA will be off-loaded and processed in the western part of the Materials Recovery building that is currently used to process the C&D waste and residual household waste. It is intended to stop the acceptance and storage of the loose SRF and relocate the C&D and residual household waste to the eastern side of the building. There will be no other changes to waste activities and there will be no change to either the overall quantities of waste accepted, or the operational hours.

The existing internal wall that separates the loose SRF storage area from the MSW transfer area will be extended to the roof. The dust extraction system that was used to control occupational dust levels when the C&I and C&D processing lines were in operation will be recommissioned. The 3 roller shutters on the doors accessing the proposed IBA treatment area will be repaired. Although the IBA is not likely to be a source of significant odours, as a precaution provision is made for the installation of an odour control unit adjacent to the dust filter.

It is intention that the processing of the IBA will continue at the installation in the medium term; however for commercial reasons SEHL seeks to retain the capacity to accept C&I waste, C&D waste and MSW and to carry out the waste processes authorised under the current licence. If this occurs, the inclusion of a point emission source from an odour control unit would facilitate the installation of an odour abatement system by means of an SEW and not a licence review, which could take many months.

## 5.0 Class of Activity

The current licence was granted in April 2004. In December 2015, the Licence was amended to bring it into conformity with the provisions and requirements of Council Directive 2010/75/EU. The amended licence authorises the following activities:

Class	Description
11.1	The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this Schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required.
11.4 (b)	<p>11.4.(b) Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities, (other than activities to which the Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001) apply):</p> <p>(i) biological treatment;</p> <p>(ii) pre-treatment of waste for incineration or co-incineration;</p> <p>(iii) treatment of slags and ashes</p> <p>(iv) treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.</p>

The processing of the IBA falls under Class 11.4 (b)(iii)

## 6.0 BAT / BREF Documents

SEHL carried out a review of the proposed changes against the BAT Conclusions and recommendations on best practice in the following guidance documents:

- Reference Document on Best Available Techniques for the Waste Treatments Industries August 2006
- Reference Document on Best Available Techniques for Energy Efficiency February 2009.
- Reference Document on Best Available Techniques from Storage.
- Reference Document on Best Available Techniques for Waste Incineration.

An assessment of how the facility complies with the BAT Conclusions on Waste Treatment is included in **Attachment No. 18** along with an analysis of the proposed development against the BAT Conclusions on Energy Management, an assessment against the BAT Conclusions on Storage and BAT Conclusions on Waste Incineration.

## **7.0 Waste Management Policies**

The proposed changes are consistent with European Union, national and regional waste management policies and plans, the objective of which is to maximise the recovery/recycling of wastes in the country where they are generated and minimise the disposal to landfill.

## **8.0 Raw & Auxiliary Materials and Energy Usage**

Raw materials and energy that are and will be used include:-

- Diesel for on-site equipment
- Hydraulic oil and engine oil for use in on-site equipment
- Electricity
- Water

## **9.0 Sources of Emissions**

The actual and potential emissions from the site are:

- Vehicle exhaust gases from the delivery and collection vehicles.
- Emissions to atmosphere from dust/odour control system.
- Noise from plant and equipment used to process the wastes; including delivery/collection vehicles, conveyors, screens, magnets and dust/odour control fans.
- Surface water run-off from the paved areas
- Sanitary and process wastewater.
- Dust/Odours from waste processing and dust from vehicle movements on yards during dry weather.

## **10.0 Site Location**

The site is located in the Millennium Business Park which is accessed off the Cappagh Road. This is also the sole access route for the Business Park. The site occupies 4.45 hectares in the east of the Business Park. The surrounding land use is a commercial and industrial, including power generation and quarrying.

## **11.0 Existing Environment, Potential Environmental Effects and Mitigation Measures**

### 11.1 Climate

The climate in the area is mild and wet, with the prevailing wind direction from the south west. All new developments that give rise to extra direct and indirect greenhouse gases (GHG) emissions are considered to have a negative effect on climate. There will be no increase in the waste acceptance rates and the waste processing will be less energy intensive than that previously carried out and therefore the proposed changes will have a slight positive impact on climate.

## 11.2 Soils and Geology

The subsoils are clayey tills that range from 1.3 m to 8.45 m thick. The underlying bedrock is limestone and shale. The proposed development will not will involve disturbance of the ground and there will be no new emissions to ground. The current licence requires the routine inspection all underground pipes and tanks to ensure they continues to be fit for purpose and do not leak. The development will have no impact on soils and geology.

## 11.3 Water

The site is in the catchment of the River Tolka and there is a tributary of the river approximately 1km to the west of the site. The site is not in a flood plain and there is no record of any flooding either at or in the vicinity of the site.

Rainwater run-off from the site used to discharge to the municipal storm water sewer; however due to the external storage of the waste the run-off is now discharged to the foul sewer serving the Business Park. The monitoring carried out in accordance with the current licence conditions confirms that the run-off from the site meets the emission limit values set in the licence.

The proposed changes will not present an increased risk of flooding either within, or outside the site boundary. They will not affect the quality of the run-off to the municipal storm sewer.

The limestone and shale bedrock is classified as a moderately productive aquifer. The development will not have any impact on the rainfall contribution to groundwater and, as there will be no new emissions to ground, there will be no impact on groundwater.

## 11.4 Ecology

The entire site is either paved or covered by buildings. There are no habitats of any ecological importance within the site boundary and the habitat values of the surrounding lands are low. The site is not inside the boundary of any designated protection area (Natura 2000 Sites) and the development will not result either in direct loss of any habitats, or damage to a Natura 2000 Site.

The closest Natura 2000 site with the potential to be impacted by site operations is the South Dublin Bay and River Tolka Estuary Special Protection Area (SPA) Natura 2000 Site, which is more than 10 km to the east and this is an important bird habitat. The rainwater run-off from the site goes the storm water drain in the Stadium Business Park, which connects to the River Tolka.

Given the nature of the operations, the measures that are in place to prevent contamination of the rainwater run-off and the distance from the installation the proposed changes will not have any indirect or cumulative impacts on the Natura 2000 Site and will have no impact on the ecology.

## 11.5 Air Quality

The ambient air quality is good and the routine dust monitoring carried out in accordance with the current licence conditions confirms dust is not an issue. Odours from the existing waste activities are not a cause of nuisance. The acceptance of the IBA will not result in additional traffic movements and there will be no additional source of a major odour nuisance. The proposed change will have an imperceptible, neutral impact on air quality.

## 11.6 Noise

The noise levels in the area are typical of an area zoned for industrial use. All waste processing is and will continue to be carried out indoors. The existing activities are sources of noise and the current licence sets noise levels for the site operations and requires noise surveys to be conducted. These surveys have confirmed that the noise levels in the vicinity of the site are as would be expected in an industrial area and that the existing operations are not causing a nuisance outside the site boundaries.

The closest noise sensitive receptor is the private residence 260 m from the southern site boundary. PANDA has already constructed a 2.4 m high acoustic wall along the boundary the southern site boundary.

## 11.7 Landscape

The proposed changes will not material change the external appearance of the installation and will have no impact on the landscape.

## 11.8 Traffic

The proposed changes will not result in any increase in the amount of waste accepted meaning there will be no change to current traffic movements to and from the site. The local road network will not be affected .

## 11.9 Cultural Heritage

There are no known archaeological, heritage or socio-cultural features on the site. The proposed changes will not require any ground disturbance and therefore will not have an impact on cultural heritage.

## 11.10 Human Beings

Land use in the surrounding area is a mix of industrial and commercial activities and agricultural. The nearest house is approximately 260m from the site boundary. There are no hospitals, hotels or holiday accommodation within 1 km of the site. The odour control measures that are and will be provided will ensure that odours from the continued handling of the household waste will not cause problems.

## 11.11 Material Assets

The site is in an area zoned for industrial and related development, and it does not have a significant leisure or amenity value. The proposed changes will have no impact on amenities and leisure land use in the vicinity of the site.

## 11.12 Interaction of the Foregoing

The location, design and proposed method of operation have taken the potential impacts associated with the proposed changes into account. Proven effective control measures will continue to be implemented to ensure that the installation will have an overall neutral impact.

## **12.0 Proposed technology and other techniques to prevent or eliminate, or where this is not practicable, limit, reduce or abate emissions from the installation**

The design and method of operation of the existing facility are based on the requirements of the European Commission's Reference Document on Best Available Techniques for the Waste Treatment Industries 2006 (BREF), which specifies the Best Available Techniques (BAT) for Waste Management Facilities and the BREF on Waste Incineration which describes BAT for the processing of IBA.

The current licence specifies the manner in which the facility must operate so as to ensure that pollution and or nuisance to neighbours and the general public is prevented. It requires the site management team to have the appropriate training and qualifications; identify the types of wastes and processes that can be carried out; specify how wastes and raw materials that have the potential to cause pollution are handled and stored; the control measures that must be applied to prevent nuisance, for example dust suppression, and require appropriate emergency response procedures to be in place.

## **13.0 Measures to Comply with Waste Management Hierarchy**

The proposed changes are consistent with the Waste Hierarchy as the recovery of metals from the ash waste will gain the maximum value from the waste.

## **14.0 BAT**

Condition 2 of the current Licence requires SEHL to develop and implement an Environmental Management System for the facility. The licence also requires SEHL to prepare operational control procedures for all waste activities and ensure that facility staff are provided with the appropriate skills and training to perform their assigned functions.

Assessments of compliance with the BAT Conclusions in the References documents on Best Available Techniques for Waste Treatment, Energy Efficiency and Emissions from storage BAT Reference Document have been completed.

## **15.0 Abnormal Operating Conditions**

SEHL has prepared and adopted an Accident Prevention Policy (APP) and Emergency Response Procedures (ERP). The APP addresses all potential hazards, with particular reference to the prevention of accidents that may cause damage to the environment. The ERP identifies all potential hazards at the site that may cause damage to the environment and also specifies roles, responsibilities and actions required to deal quickly and efficiently with all foreseeable major incidents and to minimise environmental impacts.

## **16.0 Avoidance of the Risk of Environmental Pollution due to Closure of the Facility**

SEHL has prepared an Environmental Liability Risk Assessment (ELRA) and Decommissioning Management Plan (DMP) for the facility and these, along with a proposal for Financial Provision, were submitted to and approved by the Agency in December 2013. SEHL is currently engaged with the OEE on revising and updating both documents. SEHL has revised the DMP and ELRA to include the proposed IBA processing.

## **17.0 Environmental Monitoring:**

Environmental monitoring is and will continue to be carried out in accordance with the licence conditions. The monitoring includes noise, dust, surface water and foul sewer emissions.

### *Dust*

Dust is and will be monitored annually. It is currently monitored 3 times a year at 3 locations (D1 – D3).

### *Noise*

Noise is monitored annually at the four existing monitoring locations (N1 – N3, and NSR).

### *Odour*

Daily odour patrols around the site perimeter will be carried out as required under current licence conditions.

### *Surface Water*

The surface water discharge from the site will be visually monitored on a daily basis with quarterly monitoring undertaken in accordance with existing licence conditions. As the discharge will be intermittent and linked to rainfall events grab samples will be collected.

### *Wastewater*

Emissions to the sewer (SE 1) are monitored in accordance with existing licence conditions.

## **18.0 Measures to Comply with an Environmental Quality Standard**

The emission limit values set in the current licence and those that will be set by the EPA in the new licence are and will be based on achieving compliance with the relevant EQS.

## **19.0 Measures to comply with Council Directive 80/68/EEC and 2006/118/EC in relation to the protection of groundwater.**

There are no direct discharges to groundwater and the main operational areas of the site are covered by roofs and concrete yards.

## **20.0 The Main Alternatives to the Proposed Technology, Techniques and Measures**

### *Alternative Sites*

A potentially suitable alternative location is the Nurendale Materials Recovery Facility at Beauparc, County Meath. It has planning approval and an Industrial Emissions Licence (W0140-04). However a third party has taken a Judicial Review against the Agency's decision to grant the current Industrial Emissions Licence and it could take up to 18 months for the Court Hearing to be completed.



Another alternative is to develop a new standalone waste management facility. This would require the acquisition of land, the construction of a new waste processing building and supporting infrastructure and the provision of new site services. The development of such a new facility offers no environmental advantages compared to proposed changes at the existing installation.

The proposed method of treating the IBA uses technologies that have been proven to be effective in IBA processing plants in Europe and the USA and which are considered best industry practice.

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