NON-TECHNICAL SUMMARY

1.0 Introduction

Nurendale trading as Panda Waste Services (PANDA) is applying to the Environmental Protection Agency (EPA) for a review of a Licence (Register Number: W0140-04) for its existing Materials Recovery Facility at Beauparc, County Meath.

The current licence authorises the operation of a biological treatment plant and the manufacture of solid recovered fuel from the waste. For commercial reasons it is has been decided not to proceed with the operation of the biological treatment plant and to use the building for other waste activities. It is also proposed to accept and process non-hazardous incinerator bottom. The processing will be confined to the removal of the ferrous and non-ferrous metals.

2.0 Planning

Previous planning permissions associated with the installation include register numbers: 01/4304, SA/20106, SA/20249, SA/30347, SA/60656, SA/900875, SA/140011 and SA/140429. Meath 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 EPA requested an EIS to be submitted as part of the application for the current licence under Section 87 (1I)(b) of the EPA Act 1992, as amended. This EIS was submitted on the 26th May 2014 and a copy is in **Attachment No. B6.**

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

3.0 Existing Site

The installation occupies 7.9 hectares (ha) and comprises operational and undeveloped areas. The operational area (4.7ha) is either paved or occupied by buildings and an Integrated Constructed Wetland. There are three main waste processing buildings (Buildings 1, 2 ad 3) a skip repair building, a weighbridge, an administration building. The undeveloped area (3.2ha), which is to the east of the operational area has not been developed and is where Building 4, in which it was intended to install the biological treatment plant, will be constructed.

The licence allows the acceptance of 250,000 tonnes non-hazardous household, commercial and industrial (C&I) waste, construction and demolition (C&D) waste and bio-waste at this installation.

Waste processing activities have evolved over time in response to changes in waste management policy, the opening of new markets for recyclable materials and the development of new treatment technologies.

Building 1 was originally used to process mixed MSW, but is now used to handle non-recyclable dry waste for SRF production and bulking up of dry mixed recyclables. Building 2 is used to segregate the C&D waste using an automated processing line, while Building 3 is used to produce SRF. An odour abatement system comprising the extraction and treatment of air has been installed in the building. The infrastructure required by the

biomass furnace that will be used to dry the SRF has been installed, but the furnace has not been commissioned.

Building 4 has not been constructed, but was intended to house the biological treatment plant comprising anaerobic digestion. The process would generate a bio-gas that would be used as a fuel to generate electricity that would be sold to the national grid. The odorous air extracted from the building would be treated in a biofilters located on the building roof.

Currently approximately 70 people are based at the facility. These comprise 9 operatives and 60 administrative staff. The current operational hours, except for the SRF/RDF manufacturing process which may operate continuously, are 7.30 am to 7 pm Monday to Friday and 8.30am to 5 pm on Saturdays.

4.0 Proposed Changes

For commercial reasons it has been decided not to proceed with the installation of the biological treatment plant. It is proposed to accept and process 130,000 tonnes per annum of 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. Subsequently the ash may be dried to increase the metal recovery rates in the fines fraction.

There are currently no recycling options in Ireland for the treated IBA, 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 treated ash in engineering works in non-hazardous landfills and, subject to Agency approval, in mines.

The processing will initially be carried out in Building 3 and to facilitate this the SRF manufacturing will be moved to another licensed facility. The biological treatment plant will not be installed in Building 4, but at some time in the future the IBA processing may be moved into this building. The negative air systems in both Building 3 and 4 will be retained, as will the odour and dust control units. There will be no change to the overall quantities of waste and operational hours already authorised.

It is the intention that the processing of the ash will continue at the installation in the medium term; however for commercial reasons PANDA seeks to retain the capacity to accept C&I waste, C&D waste and MSW and to carry out the waste processes, other than biological treatment, authorised under the current licence.

5.0 Classes of Activity

The current 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)	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 Water Treatment Regulations 2001 (SI No. 254 of 2001) apply):
(i)	• biological treatment; when the only waste treatment activity carried out is anaerobic digestion, the capacity threshold for this activity shall be 100 tonnes per day;
(ii)	• Pre-treatment of waste for incineration or co-incineration;
(iii)	• Treatment of slags and ashes;
(iv)	• Treatment in shredders of metal waste, including waste electrical and electronic equipment and end-of-life vehicles and their components.

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

6.0 BAT / Bref Documents

PANDA carried out a review of the proposed development 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 will comply with the BAT Conclusions on Waste Treatment is included in **Attachment No. I8** along with an analysis of the proposed development against the BAT Conclusions on Energy Management and an assessment against the BAT Conclusions on Storage and 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 Use

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
- Biomass

9.0 Sources of Emissions

The actual and potential point and fugitive emissions are:

- Noise from plant and equipment used to process the wastes, including delivery/collection vehicles, shredders, crushers, conveyors, magnets, biomass furnace fans, and odour control fans.
- Emissions to atmosphere from biomass furnace, dust/odour control units on Buildings 3 and 4.
- Outfall from integrated constructed wetland that receives rainwater run-off from the yards and building roofs.
- Odours from waste processing.
- Vehicle exhaust gases from the delivery and collection vehicles.
- Sanitary wastewater.
- Dust from waste processing and vehicle movements on yards during dry weather.

Treated sanitary wastewater used to discharge to an on-site percolation area, but this has been discontinued and the effluent is currently collected and tankered off-site for treatment in a local authority owned municipal wastewater treatment plant.

10.0 Site Location

The facility is located is in the townland of Rathdrinagh on the N2, approximately 4 km south of Slane. The surrounding land use is predominantly agriculture, however there are some commercial units to the west. There are nine residential dwellings with 0.5km of the site along Knockcommon Road, with a further thirteen residences within 0.5km, along the N2 and Senchelstown Road.

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 from the south west. All new developments that give rise to extra greenhouse gases (GHG) emissions are considered to have a negative effect on climate. There will be no increase in the waste acceptance rates. The decision not to proceed with the anaerobic digestion plant means the loss of a renewable energy source and therefore will have a negative, imperceptible impact on climate.

11.2 Soils and Geology

The subsoils comprise a brown clay to approximately 1m, which is underlain by at least 10m of grey/black clay. The underlying bedrock is a coarse sandstone shale which is classified as generally unproductive aquifer except for local zones. The proposed changes will not will involve disturbance of the ground and there will be no new emissions to ground. The current waste licence requires the routine inspection of the wastewater storage tank to ensure it continues to be fit for purpose and does not leak. The development will have no impact on soils and geology.

11.3 Water

The development will not present an increased risk of flooding either within, or outside the site boundary. The proposed changes will not affect the quality of the outfall from the ICW.

The underlying sandstone shale is classified as generally unproductive aquifer except for local zones. 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

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 is The River Boyne and River Blackwater Special Area of Conservation (SAC). The outfall from the ICW discharges into the land drain along the southern site boundary that joins a tributary of the River Boyne.

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 in the vicinity of the site is good. 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. Not proceeding with the anaerobic

digestion and plant and the associated combined heat and power plants will reduce the number of point air emission sources at the facility. Air dispersion modelling has confirmed that dust emissions from the IBA processing will not breach any air quality standard. The proposed changes will have a slight, positive impact on air quality.

11.6 Noise

The current activities are sources of noise. The current licence sets noise levels for the site operations and requires noise surveys to be conducted. The results of the surveys show that noise emissions consistently comply with the emission limits. The noise emissions from the IBA processing plant will be similar to those already in use in Building 3. Not proceeding with the anaerobic digestion plant and the associated CHP units will reduce the number of noised sources.

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 predominantly agricultural. There are nine residential dwellings within 500m of 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 waste activities will not cause problems.

11.11 Material Assets

The installation 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 for Waste Incineration which specifies BAT for the processing of IBA.

The current waste 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. They require 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 odour and dust control, and require appropriate emergency response procedures to be in place.

13.0 Measures to Comply with Waste Management Hierarchy

The proposed processing of the ash is consistent with the Waste Hierarchy as the recovery of metals from the ash waste will gain the maximum value from the waste. The biodegradable wastes that were intended to be treated in the anaerobic digestion plant will be sent to a licensed biological treatment plant in the Eastern and Midlands Region.

14.0 BAT

Condition 2 of the current Licence requires PANDA to develop and implement an Environmental Management System for the facility. The licence also requires PANDA 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

Panda has adopted Emergency Response Procedures (ERP). The ERP identifies 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

PANDA 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. PANDA has revised the DMP and the ELRA to include for the proposed processing of the IBA.

17.0 Environmental Monitoring

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

Dust

Dust is monitored 4 times a year at 5 locations (AD1 – AD5).

Noise

Noise is monitored at four existing monitoring locations (NSL1 – NSL4).

Odour

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

Surface Water

The outfall from the ICW is visually checked daily. Grab samples are collected weekly and the electrical conductivity, suspended solids, TOC, and ammonia (as NH4) are measured. At quarterly intervals the samples are tested for BOD and sulphate. There is also annual sampling for metals analysis.

Air Emissions

Air emissions from the biofilter, biomass furnace and carbon filter will be monitored in accordance with licence conditions.

Wastewater

Samples of the effluent sent off site for disposal are collected and tested quarterly.

18.0 Measures to Comply with an Environmental Quality Standard

The emission limit values proposed in the application 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 PANDA Materials Recovery Facility at Millennium Business Park, Ballycoolin, Dublin 11. It has planning approval and an Industrial Emissions Licence (W0183-01).

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 removing the metals uses technologies that have been proven to be effective in ash processing plants in Europe and the USA and which are considered best industry practice.