

D1 Operational Requirements

Development and Operational History

In 2002, Meath County Council granted planning permission (Ref 01/4301) for the operation of the waste transfer facility. The planning application included an EIS and the permission approved the acceptance of 44,600 tonnes of waste annually. The EPA granted the first Waste Licence (W0140-01) in March 2002.

In March 2004, the Council granted permission (SA/30347) to construct a new building (Building 2) and expand the recycling capacity to 165,000 tonnes. PANDA also applied to the EPA to revise the Waste Licence to approve the expansion of the site, which included composting using two 'Wright Tunnels'. An EIS was submitted with the application and the revised Licence (W0140-02) was issued in April 2005.

In 2006, PANDA applied to the Council for permission to construct a new building (Building 3), a skip repair building, install a reed bed surface water treatment area and extend the site area to allow an expansion of recycling activities. The Council granted permission (SA/60656) in September 2007.

In May 2007, PANDA applied to the EPA to revise the Waste Licence to increase the license area, construct Building 3 and increase the volume of waste inputs 250,000 tonnes per annum. The revised Licence (W0140-03) was issued in March 2009 and Building 3 was completed in 2010.

In June 2009, PANDA applied for planning permission to construct a new building (Building 4) to house a biological treatment plant and to manufacture Refuse Derived Fuel in Building 3. The Council granted permission (SA/960875) in September 2009.

On the 24th September 2009, PANDA applied to the EPA revise the Waste Licence to extend the licence area and construct Building 4 and to approve the expansion the RDF manufacturing process in Building 3.

In June 2012, there was a fire in building 3 that damaged the building structure and a number of plant items. PANDA implemented its emergency response procedures and called out the local authority emergency services. It took a number of days to extinguish the fire and a number of residents in the vicinity of the site were evacuated. The actions carried out by facility staff and the fire services ensured that there was no long term adverse environmental impact. The current Licence (W0140-04) was issued in August 2016.

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, with the organic fines loaded into the two Wright Tunnels south of the building for treatment before being sent to landfill. An odour abatement system was provided on the Tunnels, comprising air extraction and treatment in an on-site biofilter. Owing to the introduction of source segregation collection systems and the access to alternatives to landfill, the processing of the mixed MSW and the use of the Tunnels stopped and the associated biofilter was decommissioned. Building 1 is now used to process

C&D processing used to be carried out in the open, but this is now carried out in Building 2 using a shredder, trommel, density separator, magnet, ballistic separator and a picking line to recover ferrous and non-ferrous metals, rubble, timber and inorganic fines. The 'light fraction' which comprises paper and plastics, are sent to Building 3 for further processing to produce SRF, while the 'heavy fraction' is sent to the crusher. Wood and timber recovered from the in-coming waste is shredded and then sent to various outlets for different uses, such as the manufacturing of pallet blocks.

Building 3 was constructed in 2010 and used for processing of mixed and source separated dry recyclables and the trial of the RDF manufacture. The building was damaged by fire in 2012, but is now back in operation. It now produces SRF from the 'lights' from Building 2 and residuals from dry recycling MRFs. The plant includes a shredder, magnets, eddy current separator, ballistic separator, density separators and final shredders.

Proposed Operations

As part of the integration of the PANDA and Greenstar businesses, it is proposed to relocate the SRF manufacturing and C&D processing lines to other licensed installations in Dublin, but to continue to accept skip waste and dry recyclables from the local area. 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 be commissioned by Q2 of 2017.

In the short term, the processing will be carried out in Building 3 and will initially be confined to the removal of the ferrous and non-ferrous metals, which will then be sent for recycling. Following the construction of Building 4 the IBA processing may be relocated to there.

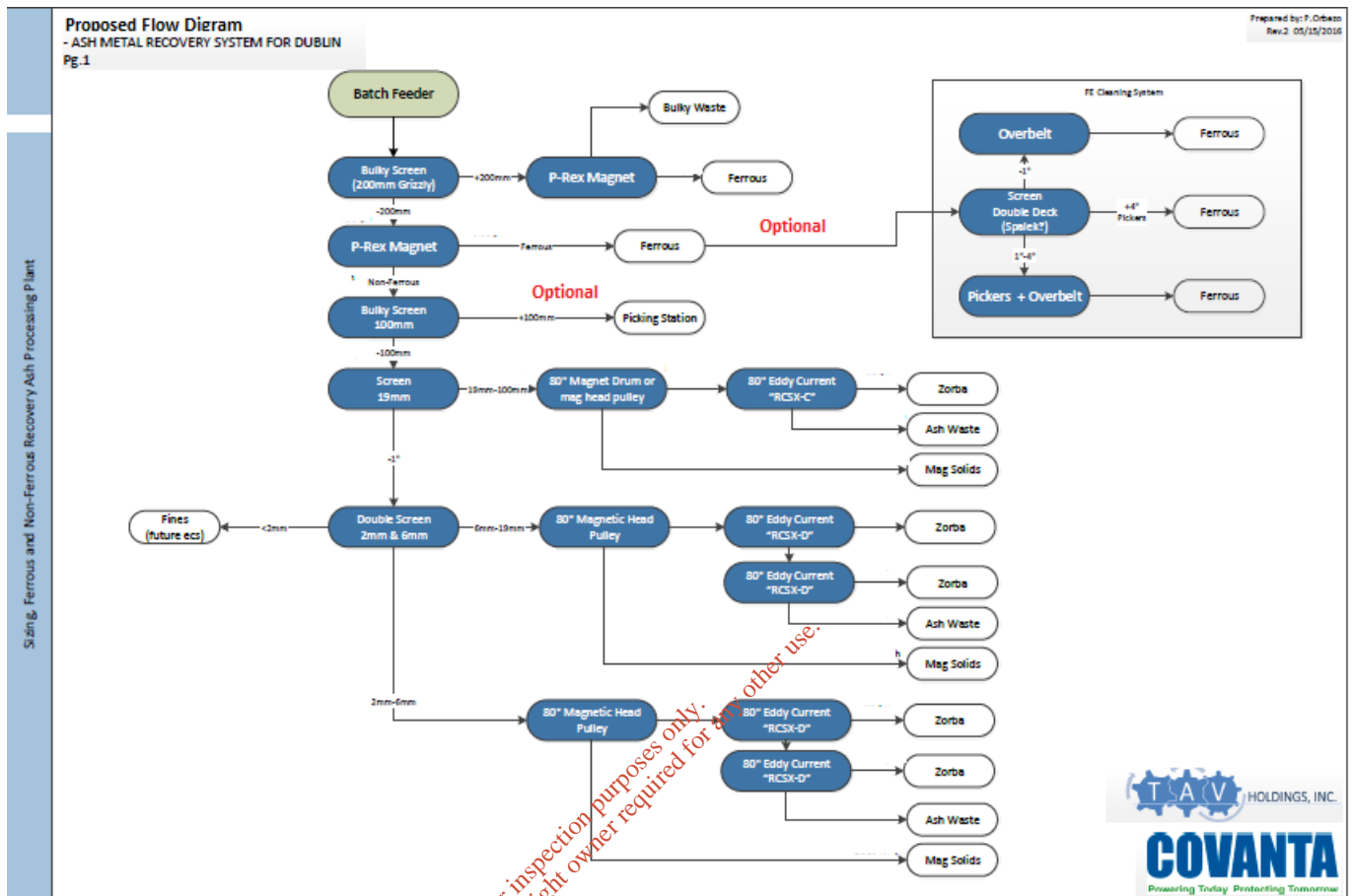
There are currently no recycling options for the IBA, but in the medium to longer term there is the potential to use the bottom ash as an additive in cement manufacture, as bound and unbound fill in road construction and as aggregate in concrete block manufacture.

While these uses have been approved in a number of other EU member states, in Ireland they will a) require confirmation from the Irish cement and concrete manufacturers and the National Standards Authority of Ireland (NSAI) that the IBA meets the relevant performance specifications and b) the achievement of 'end of waste' status.

It is envisaged that 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 IBA in engineering works in non-hazardous landfills and, subject to Agency approval, in the mines.

The IBA will be off-loaded and processed inside Building 3. The treatment plant (Figure D.1) will comprise a series of conveyors, screens, magnets and eddy current separators. The bulky (>200mm) ferrous (mag solids) will be removed first, followed by >100mm fraction. Then the non-ferrous (Zorba) fractions (19-100mm and 2-19mm) will be extracted. At a later date an eddy current separator (ecs) may be installed to remove non-ferrous metals from the fines and the IBA may be dried to increase the recovery rate from this fraction and crushed to produce different aggregate sizes.

Figure D.1 IBA Treatment Process Flow Diagram



The IBA will be delivered in purpose built fully enclosed trailers that are weighed in at the weighbridge. It will be off-loaded inside the Materials Recovery building, where it will be stored pending processing. The recovered metals will be consigned to metal recycling facilities and the treated IBA will be sent to non-hazardous landfills and or mines for recovery/disposal.

It is intention that the processing of the IBA will continue at the site in the medium term; however PANDA 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, with the exception of the operation of the anaerobic digestion plant and the associated combined heat and power plant..

For commercial reasons it has been decided not to proceed with the installation and operation of the anaerobic digestion plant. Building 4 will be constructed and will be used for waste processing, including treatment of the IBA. At this time the nature of the processing has not been determined; however as it may include the handling of odorous waste and or waste that are sources of dust, approval is sought for the retention of the odour control system comprising a negative air pressure system and biofilter. Similarly, approval is sought for the retention of the odour control system (dust and carbon filter) in Building 3.

Site Infrastructure

The site layout is shown on Drawing No. 2009-101-103. The installation occupies 7.9 hectares (ha) and comprises an operational and undeveloped areas. The operational area

(4.7ha) is either paved (35,000m²), or occupied by buildings (10,000m²) and an Integrated Constructed Wetland. There are currently three main waste processing buildings (Buildings 1 (2,800m²), Building 2 (2,600m²) and Building 3 (4,208m²), a skip repair building, a weighbridge an associated office and an administration building. In addition to the buildings three are above ground oil storage tanks, an above ground water reservoir, underground surface water holding tanks and underground wastewater holding tanks.

The undeveloped area (3.2ha), which is to the east of the operational area has not been developed and is where Building 4 (12,183m²) and supporting ancillaries will be located.

Services

Drinking water and water used in the canteen and toilets is obtained from the mains supply Water for all other uses (e.g. dust suppression) is obtained from two on-site wells. There is a 660m³ water tank and associated pump house located at the northern boundary, which is topped up from the wells as required. Electricity is provided by utility companies (Energia and Airtricity) and there are two electrical substations, one in Building 2 and one in Building 3.

Surface Water Drainage

A land drain that runs along the southern boundary connects to an unnamed tributary of the Roughgrange River. The Roughgrange is a tributary of the River Boyne, which it joins approximately 3km downstream from the site.

A second drain that runs along the southern boundary, parallel to the N2, originally entered the site and flowed south-west beneath the footprint of Building 3 to join the drain on the southern boundary. As part of the emergency response measures implemented to combat the fire in Building 3 in 2012, this drain was diverted and now runs along the western boundary to a new connection point with the drain on the southern boundary.

When the site was first developed, rainwater run-off from the roofs and paved yards discharged to the land drain on the southern site boundary. This changed in 2006, when the internal drains were diverted to an underground holding tank via silt traps and an oil interceptor. The run-off was stored pending consignment to an off-site waste water treatment plant.

In 2016 the Integrated Constructed Wetland (ICW) was commissioned and run-off from the existing building roofs and paved yards now passes through the ICW before discharge to the drain on the southern boundary. Rainwater run-off from the paved area around Building 4 will be discharged to a soakaway via an appropriately sized oil interceptor.

Wastewater

Sanitary wastewater from the Administration Building is collected and directed to an on-site Biocycle wastewater treatment plant, located to the south of the building. The treated effluent used to discharge to an on-site percolation area, but this has been discontinued and the effluent is currently sent off-site for treatment in a local authority owned municipal wastewater treatment plant.

Water from floor wash downs inside the waste processing buildings discharges to three underground holding tanks located near the buildings. Wash water from the vehicle wash is collected in a separate underground storage tank. All the wastewater is sent to the municipal wastewater treatment plant.

*For inspection purposes only.
Consent of copyright owner required for any other use.*