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 OF Signed: N. Kearey Date: 08/10/13

**LICENSING & RESOURCE USE**

**INSPECTOR'S REPORT ON A LICENCE APPLICATION**

TO: DIRECTORS

FROM: Michael Owens - Licensing Unit

DATE: 8<sup>th</sup> October 2013

RE: Application for a waste Licence from Bord na Mona Plc for a facility at the Drehid Mechanical Biological Treatment Facility within the townlands of Coolcarrigan, Drummond and Carbury, County Kildare. Licence Register W0283-01

**1 Application Details**

Licence application received:	27 June 2012
EIA Required:	Yes
Classes of Activity (P = principal activity):	3 <sup>rd</sup> Schedule: D8, D13, D 14, D15 4 <sup>th</sup> Schedule: R3 (P), R4, R5, R12, R13
Third party submissions:	None
Site Inspection:	08/07/13

**2 Applicant and facility**

Applicant:	Bord na Mona Plc (CRO No. 297717)
Type of facility:	Mechanical biological treatment (MBT) facility
Existing or new development	New development on greenfield site
Main classes of waste:	Non-hazardous mixed residual solid household, commercial and industrial wastes
Quantity of waste managed per annum:	250,000 tonnes per annum comprising: - 140,000 tonnes per annum of household waste - 55,000 tonnes per annum of commercial

	<p>waste</p> <ul style="list-style-type: none"> <li>- 55,000 tonnes per annum of non-hazardous industrial waste</li> </ul>
Waste activities and/or treatment processes:	<ul style="list-style-type: none"> <li>- Mechanical treatment of mixed solid residual waste</li> <li>- Production of solid recovered fuel (SRF) from the oversize fraction of mixed residual waste</li> <li>- Biological treatment of organic fines remaining after mechanical treatment to produce bio-stabilised residual waste and bio-gas</li> <li>- Generation of electricity and heat from combustion of bio-gas in Combined Heat and Power Plants</li> </ul>
Description of site:	<p>Area: 29 Ha</p> <p>Location: The proposed facility will be situated in a remote rural setting within a greater Bord na Mona landholding of cutaway peat land. Peat extraction has ceased on the land holding. Access to the facility will be via an existing route to the landfill at the nearby Bord na Mona Drehid Waste Management Facility.</p>
Number of employees at facility:	Estimated to be 74.

### 3 Mechanical Biological Treatment

The term 'mechanical-biological treatment' (MBT) encompasses a broad range of distinct technologies that can be combined to treat residual solid waste, typically at the same facility. The treatment of mixed solid waste by MBT maximises the separation and retrieval of recoverable materials and energy from the mixed waste stream. It minimises the amount of recoverable waste that would otherwise be sent for landfill disposal<sup>1</sup>. The process involves a combination of (i) initial mechanical processing based on physical characteristics of the fractions of the waste (e.g. trommelling, sorting, screening, hand-picking etc.) to separate out recyclables and other recoverable non-biodegradable fractions from the waste, and (ii) subsequent biological stabilisation (e.g. composting and/or anaerobic digestion) to stabilise, and reduce the volume of, the residual biodegradable fraction of the waste (known as organic fines) prior to recovery or disposal<sup>2</sup>.

1 Critical Analysis of the Potential of Mechanical Biological Treatment for Irish Waste Management (EPA 2008)

2 Municipal Solid Waste - Pretreatment and Residuals Management An EPA Technical Guidance Document (EPA 2008)

#### 4 Operational Description at Facility

The licence application outlines two possible operational configurations at the facility:

1. Configuration A comprising MBT and associated composting plant for bio-stabilisation of residual waste; or,
2. Configuration B comprising MBT, composting plant *and* also anaerobic digestion. Anaerobic digestion will produce biogas which will be utilised to produce electricity and heat in two combined heat and power (CHP) plants.

The licence application and accompanying EIS address the potential impacts from both configurations. The applicant has not yet decided which configuration will be developed, a decision which ultimately will depend on the financial viability of the respective configurations. Therefore in order to enable the development of the facility under either configuration this Inspectors Report and the RD have been prepared on the basis that configuration B is the scenario that will apply at the facility.

The proposed Mechanical Biological Treatment Facility will be located approximately 1km south of the existing Drehid Waste Management Facility also operated by Bord na Mona (Licence Reg. No. W0201-03). For the remainder of this report the Drehid Waste Management Facility will be referred to as the 'landfill facility'. The surrounding area is remote and sparsely populated. The nearest residential is located approximately 1 km to the west of the MBT facility.

The physical layout of the facility (under configuration B) will comprise the following main buildings and infrastructure:

1. A mechanical treatment building where mechanical processing will take place.
2. Two separate biological treatment buildings. The activities in each building will be identical comprising composting, AD and a CHP.
3. A refining building where final screening and treatment is carried out to produce (i) bio-stabilised residual waste and (ii) compost-like output.
4. SRF building where solid recovered fuel (SRF) will be manufactured from the non-recyclable non-biodegradable waste fraction.
5. An enclosed storage bay for storage of baled and wrapped SRF.
6. Three separate buildings each housing an odour abatement system comprising acid scrubbers, humidifiers, bio-filter units and bio-filter outlet stacks.
7. Administration, maintenance and welfare buildings. Weigh bridge, wheel wash, hard standing areas and other ancillary plant.

The mechanical treatment element of the activity will involve a series of steps with the specific purpose of separating undersize and oversize waste fractions. The oversize fraction will comprise metals, plastics and cardboard. A certain amount of the oversize fraction will be sent off-site for recycling while the remainder (being unsuitable for recycling) will be used on-site to produce solid recovered fuel (SRF). The SRF production process involves drying, compacting, baling and wrapping of the waste and exporting it for use as fuel at authorised facilities off-site (e.g. cement kilns). A quality control programme will be implemented for the production and

testing of SRF. Condition 8.13 of the RD includes controls on production, export and use of SRF.

The undersize fraction of the waste (known as organic fines) will be passed by a covered conveyor system to the biological treatment buildings in which it will be treated by anaerobic digestion followed by composting. Composting is biological treatment in the presence of oxygen while AD is (by definition) carried out in the absence of oxygen. The AD process leads to the formation of a gas, termed biogas, which is rich in methane (typically > 55%) and carbon dioxide. At the facility, the biogas will be used in the CHP engines to generate heat, which will be used at the facility, and electricity which will be exported to the national grid. Composting will be used to produce biologically stable waste streams known as bio-stabilised residual waste and compost-like output. See section on 'wastes generated' below for more detail.

Planning Permission for the facility was granted by An Bord Pleanala on the 15 March 2013. The Planning Permission recognises, and provides for, the two operational configurations described above.

A summary of the processes on-site is set out below:

**Process Summary**

<b>Mechanical Treatment Building</b>			
<b>Inputs</b>	<b>Process</b>	<b>Outputs</b>	<b>Emissions</b>
Mixed residual municipal, commercial and industrial waste	Mechanical treatment to remove organic fines and to separate fractions for recycling and manufacture of SRF	(i) Oversize fraction (ii) Undersize fraction (Organic fines) (iii) Process waste	Dust Odour

<b>Biological Treatment Buildings</b>			
<b>Inputs</b>	<b>Process</b>	<b>Outputs</b>	<b>Emissions</b>
Organic fines	Biological treatment by dry anaerobic digestion and composting	(i) Biogas (ii) Unrefined stabilised waste (iii) Waste water	Dust Odour Bio-aerosols
Bio-gas	Combined Heat and Power Plant	Electricity and Heat	Flue gases Dust

<b>Refining Building</b>			
<b>Inputs</b>	<b>Process</b>	<b>Outputs</b>	<b>Emissions</b>

Unrefined stabilised waste	Screening, sterilisation	(i) Bio-stabilised residual waste (ii) Compost-like output	Dust Odour Bio-aerosols
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<b>SRF Production Building</b>			
<b>Inputs</b>	<b>Process</b>	<b>Outputs</b>	<b>Emissions</b>
Oversize fraction (not fit for recycling)	Drying, baling	(i) SRF (ii) Process waste	Dust Odour

## 5 Emissions

### 5.1 Air

Unless adequately controlled activities at the facility have the potential to impact on air quality due to fugitive emissions and point source emissions. To counter the potential for fugitive emissions of dust and odour, all waste storage and processing will take place indoors. In addition the applicant is proposing to install an alarmed SCADA-controlled air handling system which will include negative air pressure and an odour abatement system. The odour abatement system will comprise dust filters, acid scrubbers, humidifiers and bio-filters (six bio-filters in total). The bio-filters will be covered for operational control and will discharge through six 20m stacks (i.e. one stack per bio-filter). Negative building pressure, acid scrubbing and bio-filtration are BAT for large scale biological treatment facilities. Condition 3.10 of the RD sets requirements in relation to dust and odour abatement. In line with BAT for the sector condition 2.2.2.8 of RD also includes a requirement for the development of leak detection and repair procedures for the air handling and abatement system in the waste processing buildings. The RD includes a limit for dust deposition and requires dust deposition monitoring to be carried out on a bi-annual basis.

There will be point source emissions to air from the bio-filter units and from the CHP stack. A summary of these air emission points is set out in the table below:

#### Summary of Air Emission Points

<b>Emission Point</b>	<b>Control</b>	<b>Parameters to be regulated in the licence</b>
Bio-filter outlet stacks A2-1, A2-2, A2-3, A2-4, A2-5, A2-6	Acid scrubber, humidifier and bio-filter	Bio-filter off-gases
CHP stack A2-7	Dispersion at height through final stack	Dust, combustion gases, acid gases, hydrogen sulphide

In order to assess the potential for impact on air quality due to these point sources, air dispersion modelling of the emissions from the bio-filters and the CHP stack was carried out by the applicant. Modelling was conducted in accordance with the methodology outlined in the Agency Guidance Note (AG4). The modelling utilised a five-year period of meteorological data and applied worst-case scenarios for emissions and background concentrations. Predicted worst-case ground level concentrations were compared against relevant standards. According to the modelling results there will be not be a significant impact on air quality or a health risk due to emissions to air from the facility. Modelling results are provided in summary form in the table below:

### Summary of Air Dispersion Modelling

<b>Bio-filter units</b>			
<b>Parameter</b>	<b>Averaging Period</b>	<b>Predicted Concentration</b>	<b>Ambient Standard</b>
Odour <sup>Note 1</sup>	Max 1-hour (98 <sup>th</sup> /oile)	0.72 OD <sub>E</sub> /m <sup>3</sup>	3.0
Total Bacteria	Max 1-hour	172 cfu/m <sup>3</sup>	1000
Gram-neg Bacteria	Max 1-hour	172 cfu/m <sup>3</sup>	300
A. Fumigatus	Max 1-hour	19 cfu/m <sup>3</sup>	500

**Note 1:** Odour *emissions* are predicted to be in the order of 1447 Odour Units/m<sup>3</sup>. BAT for odour emissions in a MBT facility is 500 – 6000 Odour Units/m<sup>3</sup>.

<b>CHP engines <sup>Note 1</sup></b>			
<b>Parameter</b>	<b>Averaging Period</b>	<b>Predicted Concentration</b>	<b>Ambient Standard (ug/m<sup>3</sup>)</b>
NO <sub>2</sub>	99.8 <sup>th</sup> /oile of 1-hour means	75	200
	Annual mean	13	40
PM <sub>10</sub>	90 <sup>th</sup> /oile of 24-hour means	32	50
	Annual mean	10	40
PM <sub>2.5</sub>	Annual mean	7.5	25
SO <sub>2</sub>	1-hour mean	21	350
	24-hour mean	9	125

CO	8-hour	404	10000
HCl	1-hour	6	800
	Annual mean	0.3	20
HF	1-hour	0.4	160
	Annual mean	0	16
H <sub>2</sub> S	1-hour	5.2	150
	Annual mean	0.5	140

**Note 1:** 'Predicted concentration' is the sum of background levels and predicted process contribution.

To limit the emissions from point sources *Schedule B.1 Emissions to Air* of the RD includes limit values for emissions from the bio-filters and the CHP stack. *Schedule C.1.2 Monitoring of Emissions to Air* of the RD includes the monitoring requirements for these emission points.

Biological treatment of waste has the potential to generate bio-aerosols although it is important to note that other activities (both natural and man-made) can affect local ambient concentrations of bio-aerosol, for example, natural woodland or crop harvesting can elevate local bio-aerosol levels. *Schedule C.4 Ambient Monitoring* of the RD includes a bi-annual monitoring requirement for bio-aerosols.

In the event that the CHPs are unavailable the facility will have bio-gas storage capacity. Where that storage capacity is exceeded the excess bio-gas will be diverted to a standby gas flare unit which will facilitate thermal destruction of the bio-gas. In line with BAT, *Schedule C.1.1* of the RD requires the outlet temperature of the flare flue-gas to be at least 900°C with a residence time 0.3 sec.

## 5.2 Emissions to Sewer

There will be no connection to sewer at the facility. All sanitary effluent as well as any waste water generated at the facility (e.g. excess process water, contaminated storm water, wheel wash water) that is not reused at the facility will be stored in an on-site holding tank prior to its removal off-site for treatment at a licensed WWTP.

## 5.3 Emissions to Surface Waters

There will be no process emissions to surface waters.

## 5.4 Storm Water Runoff

There will be hard-standing and roofed areas at the facility. Storm water runoff will be collected and diverted via oil interceptors and grit traps to the attenuation ponds (of which there will be three) for settlement. After settlement in the ponds clean storm water will either be reused in the process or will be discharged via one of two emission points (SW7 or SW8) to the existing off-site water drainage system on the greater Bord na Mona land-holding which serves storm water runoff from the landfill facility and the surrounding land. This drainage system discharges to the Cushaling River (a tributary of the River Figile) on the western side of the land-holding. The Cushaling is within the catchment of the River Barrow in the South Eastern River

Basin District. Monitoring on the Cushaling River over the period 2008 to 2011 indicates that Q-values are currently in the range Q3-4 (slightly polluted). The Cushaling is classified as being 'at risk of not achieving good status'. With the exception of ammonia the River Cushaling complies with the quality standards as set in the European Communities Environmental Objectives (Surface Water) Regulations (2009). The levels of ammonia in the River Cushaling reflect the local peat bog environment.

Activities at the facility will not generate ammonia or increase levels of ammonia in the river. Water discharged from the facility will comprise only clean treated rain water that has run from building roofs and hard-standing areas. Condition 5.3 of the RD sets trigger levels for the quality of the storm water discharge at SW7 and SW8 while condition 6.14.2 requires the licensee to develop a programme to respond to instances where a trigger level is reached. The applicant is proposing that the storm water discharge will be continuously monitored using composite sampling. The monitors will be linked to a SCADA system. An actuated valve at the pond outlets will be controlled by the SCADA system and will close should the level of any parameter reach a trigger level. *Schedule C.3 Monitoring of Storm Water Emissions* includes the monitoring requirements for the discharges at SW7 and SW8. *Schedule C.4 Ambient Monitoring* of the RD includes the monitoring requirements for the receiving water in the River Cushaling.

The on-site storm water drainage system and attenuation ponds will be constructed and utilised to manage the run-off that will occur during construction, operation and closure of the facility.

The measures as included in the RD will ensure protection of the Cushaling River from discharges from the facility following commencement of waste activities and will contribute to the achievement of good status in the river by 2021 as required by the Water Framework Directive. They will also ensure compliance with the surface water regulations.

## 5.5 Emissions to ground/groundwater

Ground water in the vicinity of the proposed facility is monitored regularly as required by the waste licence for the nearby landfill facility. Results of that monitoring (and additional monitoring carried out for the purposes of the licence application) confirm that the quality of groundwater is representative of the natural geochemistry beneath peat land. There are no local groundwater abstractions for drinking water in the vicinity of the proposed facility.

There will be no discharge to ground or groundwater. All fuels, liquid chemicals and wastes will be stored in bunded tanks. Sanitary effluent from welfare facilities at the site will be collected and stored in a sealed holding tank prior to removal off-site for treatment at a WWTP. Such measures will ensure compliance with the European Communities Environmental Objectives (Ground Water) Regulations (2010).

## 5.6 Wastes Generated

The facility will accept and process wastes to maximise recovery. The immediate output of the biological treatment process will be screened to produce under- and over-sized fractions. The over-sized fraction is known as 'bio-stabilised residual waste' and will meet the stabilisation requirements set out in the RD. The under-sized fraction will be hygienically treated (so as to meet the requirements of the Animal By-Product Regulation) to produce what is termed as a 'compost-like output'.



Both of these materials will be classified as waste. It is currently proposed that these wastes will be sent to landfill for disposal or recovery (e.g. use as landfill cover). The applicant is also proposing that the compost-like output may be used in the future in waste recovery scenarios such as in brownfield remediation. Condition 8.12.3 of the RD requires that both wastes be sent to landfill unless otherwise agreed by the Agency.

The following particular wastes will be managed as follows:

<b>Waste</b>	<b>Use off-site</b>
Solid Recovered Fuel (SRF)	Supplementary co-incineration fuel (e.g. in cement kilns)
Bio-stabilised residual waste	Recovery or disposal at landfill unless otherwise agreed
Compost-like output	Recovery or disposal at landfill unless otherwise agreed
Recyclables	Recycling
Process waste	Disposal

In general, it is a requirement of the RD that all wastes generated at the facility (including canteen and office wastes etc.) must be sent off site to authorised facilities for disposal or recovery.

### 5.7 Noise

Although the nearest noise receptor is approximately 1 km from the proposed facility there is potential for noise impact during construction and operation of the facility. Noise levels during construction are predicted to be in compliance with recommended noise levels for construction projects and will in any event be regulated and controlled by planning permission. With regard to the likelihood of a cumulative noise impact on sensitive receptors (taking into account operations at the nearby landfill facility) it has been predicted that there will be no significant effect. The RD includes noise limits and requires an annual noise survey to be carried out in accordance with the Agency guidance document NG4.

### 5.8 Nuisance

Given the nature of the activities at the facility, there is potential for nuisance particularly with regard to dust and odour. To prevent any nuisance impact all waste processing activities will be carried out indoors and all waste will move between treatment buildings on covered conveyors. The RD requires the licensee to take measures to prevent nuisance due to dust, odour, litter etc. In addition, the RD requires bi-annual dust deposition monitoring at 6 locations in the vicinity of the facility.

## 6 Use of Resources

No public water supply exists at the facility. The licensee is proposing to install a groundwater borehole which it is estimated will supply approximately 5 m<sup>3</sup>/day of

potable water for the facility. Heat generated by the on-site CHPs will be used at the facility. Some additional heat will be imported from the landfill facility (which will also be generated by CHP). The facility will also use diesel and electricity for energy needs.

## **7 Closure and Decommissioning**

The applicant submitted a Closure, Restoration and Aftercare Management Plan (CRAMP) as part of the licence application (see Section 13 'Fit and Proper Person Assessment' below for more detail). Condition 10.2.2 of the RD requires the licensee to submit a revised Decommissioning Management Plan prior to commencement of waste acceptance at the facility.

## **8 Waste Management Plan and National Policy**

The facility will support the waste management scenario adopted in the Kildare County Waste Management Plan (2005 – 2010) which seeks to minimise waste sent directly to landfill through the provision of additional mechanical biological treatment capacity in the County. It should be noted that the 2005-2010 waste management plan remains as the relevant waste management plan for the region until its current review is complete.

Activities at the facility will be in accordance with the most recent national Waste Management Policy Statement<sup>1</sup>. In this policy it is recognised that there is a need for adequate national infrastructure and capacity to recover and recycle biodegradable waste and to minimise the landfilling of waste.

To support the Kildare County Waste Management Plan and National Policy condition 8.16 of the RD prohibits the licensee from disposing of any waste that can be recovered and is required to maximise all opportunities to recover waste generated at the facility.

## **9 Compliance with Directives/Regulations**

The RD as drafted takes account of the requirements of the following relevant Directives/Regulations:

<b>Directive/Regulation</b>	<b>Comment</b>
Water Framework Directive	See section 4.4 above for more detail. There will be no process emission to surface water.
European Communities Environmental Objectives (Surface Water) Regulations, S.I. No. 272 of 2009	See section 4.4 above for more detail. There will be no process emission to surface water.
European Communities Environmental Objectives (Ground Water) Regulations, S.I. No. 9 of 2010	The RD as drafted will comply. See section 4.5 above for more detail. There will be no process emission to ground

<sup>1</sup> A Resource Opportunity – Waste Management Policy in Ireland (DOECLG 2012)

	water.
Animal By-Products Regulation (EC Regulation No 1069/2009)	<p>The licensee will be obliged to comply with this Regulation and obtain the appropriate permits on an on-going basis from the Department of Agriculture, Food and the Marine to accept and treat animal by-products.</p> <p>Condition 1.9 requires evidence of compliance with the Regulation prior to commencement of operations.</p>
Environmental Liabilities Directive	<p>The applicant submitted a CRAMP and an Environmental Liabilities Risk Assessment (ELRA) as part of the application (see Section 13 'Fit and Proper Person Assessment' below for more detail). Condition 12.2.2 requires that the ELRA is revised and agreed by the Agency prior to acceptance of waste at the facility.</p> <p>Condition 12.2.3 of the RD requires the applicant to make adequate financial provision to cover any liabilities associated with the activity prior to commencement of activities.</p>
Waste Framework Directive	<p>The RD ensures compliance with the Directive for the following reasons:</p> <p>It will allow for more waste to move up the waste hierarchy as it increases the recycling of biodegradable and other recoverable waste that might otherwise have been disposed of by landfill.</p> <p>The State is obliged to take appropriate measures to establish an integrated network of installations for the recovery of waste collected from private households and from other waste producers. The facility will contribute to this overall national objective.</p> <p>It will contribute towards the general development of a sustainable and self-sufficient approach to the management of waste in accordance with the proximity principle.</p>
Landfill Directive	Although not directly applicable to the activity, the facility will result in

	diversion of biodegradable waste from landfill and will ensure that all waste sent to landfill is adequately pre-treated.
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**10 Environmental Impact Assessment Directive (85/337/EEC)**

An Environmental Impact Statement (EIS) was prepared in support of a planning application to An Bord Pleanala (Ref. PL 09.PA0027) and was submitted with the waste licence application. I have examined the EIS and having regard to the statutory responsibilities of the EPA, I am satisfied that it complies with the Waste Management (Licensing) Regulations (S.I. No. 394 of 2004, as amended). Planning permission was granted by An Bord Pleanala in March 2013.

I have examined the content of the EIS and other material (e.g. information submitted in the licence application, the planning permission and the An Bord Pleanala planning inspector's report). I consider that having examined the relevant documents and with the addition of this Inspector's Report that the likely significant direct and indirect effects of the activity (during both construction and operation) have been identified, described and assessed in an appropriate manner as required in Article 3 and in accordance with Articles 4 to 11 of the EIA Directive as respects the matters that come within the functions of the Agency.

An EIA, as respects the matters that come within the functions of the Agency, has been carried out as detailed below. The submitted EIS and the assessment as described in this Inspector's Report address the likely significant direct and indirect effects arising from the activity, as respects the matters that come within the functions of the Agency.

**Likely significant effects**

This section identifies, describes and assesses the main likely significant direct and indirect effects of the proposed activity on the environment, as respects the matters that come within the functions of the Agency, for each of the following factors: human beings, flora, fauna, soil, water, air, climate, the landscape, material assets and cultural heritage. The main mitigation measures proposed to address the range of predicted significant impacts arising from the activity have also been outlined.

**Likely significant effects and associated mitigation measures**

Likely significant effect	Description of effect	Mitigation measures proposed by applicant in EIS or waste licence application and/or as outlined in this report
<b>1. Human Beings</b>		
Traffic	Traffic and its associated emissions, risks and dis-amenity effects.	Traffic impact assessment predicts no significant increase in traffic volumes.  Maintenance of adequate signage and visibility at facility entrance.

Likely significant effect	Description of effect	Mitigation measures proposed by applicant in EIS or waste licence application and/or as outlined in this report
		RD sets hours of operation and waste acceptance.
Socio-Economic	No negative impact predicted. Positive effect in terms of provision of employment and community funding.	Proposed facility when operational will generate 74 jobs and will contribute to a community development fund.
Impact on air quality	Emissions of dust, odour, bio-filter off-gases and bio-aerosols.	<p>Licensed activities will be carried out indoors.</p> <p>Licensee will implement an odour management plan.</p> <p>RD sets controls in relation to odour prevention.</p> <p>Use of odour abatement system and 20m stacks to disperse final discharge from bio-filter and CHP units.</p> <p>Use of standby gas flare to facilitate the thermal destruction of bio-gas in the event that the CHPs are unavailable.</p> <p>RD sets ELVs on emissions to air and requires control and monitoring of air emissions.</p> <p>RD requires measures to control dust and biannual monitoring of dust deposition.</p> <p>RD requires annual bio-erosol monitoring.</p>
Noise	Dis-amenity from noise emissions due to licensed activity and during construction activities.	<p>Lack of proximity to sensitive receptors.</p> <p>Construction activities will be temporary and will not breach guideline levels for</p>

Likely significant effect	Description of effect	Mitigation measures proposed by applicant in EIS or waste licence application and/or as outlined in this report
		<p>construction projects.</p> <p>Licensed activities must take place indoors.</p> <p>Equipment and machinery will be acoustically treated to reduce noise emissions.</p> <p>RD sets noise limit values and requires annual noise survey.</p>
<b>2. Flora &amp; fauna</b>		
<p>Loss of habitat.</p> <p>Impact on local animals (e.g. birds, frogs and badgers).</p> <p>Impact on water in drainage ditches.</p>	<p>Clearance of heath and woodland to construct facility which will lead to reduced area for animals to live, mate and forage.</p> <p>Reduction in water quality due to run-off contaminated with soil or fuels.</p>	<p>No impact is predicted on habitat outside facility boundary.</p> <p>Availability of ecologist during site clearance.</p> <p>Use of best practice guidance during construction.</p> <p>Timing of construction to minimise impact on wildlife during mating or nesting.</p> <p>Use of post-construction habitat plan.</p> <p>RD requires storage of fuels in bunded areas.</p> <p>RD requires control and monitoring of storm water run-off.</p>
<b>3. Soil</b>		
<p>Contamination of soil.</p>	<p>Accidental spillage or discharge to ground.</p>	<p>There will be no discharge to ground or groundwater at the facility.</p> <p>RD requires that all waste processing be carried out indoors. Process building is bunded.</p> <p>RD includes requirements</p>

Likely significant effect	Description of effect	Mitigation measures proposed by applicant in EIS or waste licence application and/or as outlined in this report
		<p>for safe storage and handling of wastes, fuels and materials.</p> <p>RD requires accident prevention policy and emergency response procedure.</p>
<b>4. Water</b>		
Contamination of surface water.	Potential for reduction in quality of Cushaling River due to discharge of potentially contaminated storm water from the facility.	<p>There are no process emissions to surface water.</p> <p>Only clean treated storm water will be discharged from the facility.</p> <p>RD requires control and monitoring of storm water discharge and monitoring of receiving water.</p>
Contamination of groundwater.	Contamination of groundwater due to accidental spillage or discharge to ground.	See mitigation measures outlined above for prevention of contamination of soil.
<b>5. Air</b>		
Impact on air quality.	Emissions of dust, odour, bio-filter off-gases with reduction in air quality	See mitigation measures outlined above for prevention of impact on Humans – impact on air quality.
<b>6. Climate</b>		
Increase in traffic emissions.	Traffic and its associated emissions during construction and operation.	<p>Traffic impact assessment predicts no significant increase in traffic volumes.</p> <p>Emissions due to construction traffic will be temporary.</p>
Increase in greenhouse	Possible increase in	Biological treatment of

<b>Likely significant effect</b>	<b>Description of effect</b>	<b>Mitigation measures proposed by applicant in EIS or waste licence application and/or as outlined in this report</b>
gases.	emissions of greenhouse gases due to activities the facility.	<p>waste in itself does not result in a net increase in greenhouse gas emissions as decomposition would occur naturally anyway.</p> <p>The use of methane to produce energy displaces the fossil fuel that would otherwise be used to produce the same energy.</p> <p>RD will set ELVs for emissions from CHP engines.</p> <p>Use of standby gas flare to facilitate the thermal destruction of bio-gas in the event that the CHP engines are unavailable.</p>
<b>7. Landscape, Material Assets &amp; Cultural Heritage</b>		
Visual impact on nature of landscape.	Potential for minor impact on the character of the landscape in the immediate vicinity of the facility.	<p>Distance of facility from neighbours and from public road has the effect of limiting the effect on the views from outside the facility boundary.</p> <p>Implementation of a landscaping plan, which includes retention of some existing vegetation and planting of additional vegetation along the boundary of the facility, to minimise landscape and visual effects.</p>
Impact on material assets and cultural heritage.	No significant impact is predicted.	Site development work will be supervised by an archaeologist to respond to occurrences where items of interest are uncovered during site



Likely significant effect	Description of effect	Mitigation measures proposed by applicant in EIS or waste licence application and/or as outlined in this report
		clearance works.

The detailed assessment, as set out in the remainder of this Inspector's Report, fully considers the range of likely significant effects of the activity on human beings, flora, fauna, soil, water, air, climate, landscape, material assets and cultural heritage, as respects the matters that come within the functions of the Agency, as identified in Table 1 above, with due regard given to the proposed mitigation measures.

An EIA, as regards the functions of the planning authorities, was carried out by An Bord Pleanála when granting planning permission for the development.

### **Assessment of Parts 1 to 7 of Table 1 and the interaction of effects and factors**

The potential for significant impact due to the interaction between visual impact, noise, air quality and traffic effects was assessed in the EIS. It is concluded in the EIS that with the implementation of the mitigation measures outlined above significant interactive effects are unlikely.

I have considered the potential for interaction between the factors and effects outlined above and I am satisfied that the proposed mitigation measures are adequate. I do not consider that the interactions identified are likely to cause or exacerbate any potentially significant environmental effects due to the activity.

### **Overall Conclusion on Environmental Impact Assessment**

All matters to do with emissions to the environment from the proposed activity, the licence application documentation and EIS have been considered and assessed by the Agency.

I consider that having examined the relevant documents and with the addition of this Inspector's Report that the likely significant direct and indirect effects of the activity have been identified, described and assessed in an appropriate manner as required in Article 3 and in accordance with Articles 4 to 11 of the EIA Directive, as respects the matters that come within the functions of the Agency.

It is considered that the mitigation measures as proposed and the licence conditions included in the RD will adequately control any likely significant environmental effects from the activity.

## **11 Cultural Heritage, Habitats & Protected Species**

The proposed facility is not within or adjacent to a designated site. There are three designated European sites within 10km of the facility all of which are Special Areas of Conservation (SAC). The nearest SAC is Ballynafagh Lake at a distance of 5.8 km.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the sites, if the activity, individually or in combination with other plans or projects is likely to have a

significant effect on the European Sites. The screening addressed the likely significant effects during both construction and operation of the facility.

The screening assessment undertaken demonstrates that the activity is not likely to have significant effects, in terms of maintaining favourable conservation status of the qualifying interests, on the European Sites having regard to their conservation objectives. Having regard to the location and nature of the activity, its emissions and associated controls and the lack of connectivity with a European Site it is not considered likely that activities at the facility will have a significant impact on a European Site.

## **12 Best Available Techniques (BAT)**

I have examined and assessed the application documentation and I am satisfied that the site, technologies and techniques specified in the application and as confirmed, modified or specified in the attached RD comply with the requirements and principles of BAT as stipulated in the Reference Document on the Best Available Techniques for the Waste Treatments Industries (IPPC Bureau 2006). I consider that the technologies and techniques as described in the application, in this report, and in the RD, to be the most effective in achieving a high general level of protection of the environment having regard - as may be relevant - to the way the facility is located, designed, built, managed, maintained, operated and decommissioned.

## **13 Fit & Proper Person Assessment**

The 'fit and proper person' assessment requires three areas of examination:

### i. Technical Ability

The applicant's management team are appropriately qualified and experienced with regard to their technical ability to carry out the proposed waste activities.

### ii. Legal Standing

The applicant Bord na Mona PLC has never been convicted of any relevant offence.

### iii. Financial Standing

The following reports were provided by the applicant:

- Closure, Restoration and Aftercare Management Plan (CRAMP)
- Environmental Liabilities Risk Assessment (ELRA)
- Financial Provision Report

The Agency's *Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision*, EPA 2006, was followed in the preparation of the reports.

In relation to the CRAMP, the following deficiencies were identified:

- There is no provision for unplanned/unexpected closure of the facility and the liabilities arising in such a scenario.
- There is no provision for security during the CRAMP period or for the general maintenance of surface water drainage systems post implementation of the CRAMP.

- The costs have not been adjusted for inflation.

Condition 10.2.2 of the RD requires a revised Decommissioning Management Plan to be agreed by the Agency prior to commencement of waste acceptance at the facility.

The ELRA addresses those costs not identified in the CRAMP which could potentially arise in the event of incidents or accidents. In relation to the ELRA, the following deficiencies in the submitted document were identified:

- The potential liability arising from fuel leakage from vehicles was not considered.
- The risk of unsuitable waste being accepted at the facility, despite the recommended controls in the licence, was not considered.
- There is no contingency built into the total estimated cost arising from potential liabilities.

The 'most likely' cost of unknown environmental liabilities (calculated using current guidance) is estimated at €240,000 and is considered to be somewhat low. The 'worst case' cost is estimated to be €2,400,000. Condition 12.2.2 of the RD requires the submission of a revised ELRA prior to commencement of waste acceptance.

In terms of financial provision, the applicant has estimated the following applicable costs:

Known liability – closure and decommissioning	CRAMP	€2,769,855
Unknown liability	ELRA	€240,000

With regard to making financial provision the applicant proposes to set up a cash deposit or some similar financial mechanism, to be agreed by the Agency, for decommissioning and closure of the facility (i.e. to address known liabilities). In addition, it is proposed to obtain environmental pollution liability insurance to cover the cost of unexpected pollution events (i.e. to address unknown liabilities) although the applicant does not specify an amount of indemnity. Bord na Mona PLC utilises such a mechanism at the nearby landfill facility (which provides indemnity up to €5,000,000). Condition 12.2.3 of the RD requires the making of a financial provision that is agreeable to the Agency prior to commencement of licensed activities.

Having regard to the provision of Section 40(8) of the Waste Management Acts 1996 to 2013, the applicant can be deemed a Fit & Proper Person for the purpose of this licence application.

#### **14 Proposed Decision**

The RD if granted will authorise the acceptance of 250,000 tonnes per annum of mixed non-hazardous household, industrial and commercial waste for processing at the MBT facility. The RD includes a wide range of conditions that will ensure proper handling of wastes, protection of off-site surface water and minimisation of the emission of odourous gases, dust and bio-aerosols. Overall, I am satisfied that the conditions set out in the RD will adequately address all emissions from the facility and will ensure that the carrying on of activities in accordance with the conditions will not cause environmental pollution.

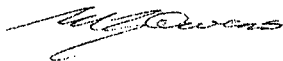
## **15 Charges**

An annual charge of €11,935 is specified in the RD which is based on the enforcement effort predicted for the facility.

## **16 Recommendation**

I have considered all the documentation submitted in relation to this application and recommend that the Agency grant a licence subject to the conditions set out in the attached RD and for the reasons as drafted.

Signed



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Michael Owens

Inspector

## **Procedural Note**

In the event that no objections are received to the Proposed Decision on the application, a licence will be granted in accordance with Section 43(1) of the Waste Management Acts 1996-2013.