EPA Application Form

4. Activity and Capacity

4.3.1 - Storage of Waste and Other Materials - Attachment

Organisation Name: *	Bord na Móna Public Limited Company
Application I.D.: *	LA010978

* indicates required field

Amendments to this Application Form Attachment

Version No.	Date	Amendment since previous version	Reason
V.1.0	July 2017	N/A	Online application form attachment
V.1.0	March 2018	Identification of required fields	Assist correct completion of attachment

Storage of Waste and Other Materials

State the maximum amount of waste and other materials that will be stored on the site at any one time in the table below[1].

Waste/Other Material	Amount (tonnes) *
Waste accepted and in storage pending treatment:	21,932
Other materials (Non-waste) accepted, including non-waste feedstocks:	0
Capacity of treatment vessels and chambers:	7,468
Treated waste, whether classified as waste or not:	30,275

List any other feedstocks to the treatment process not classified as waste. State '*none*' if none.*

c. 15,000 m3 per annum of leachate - recirculation

[1] This should include waste and other materials in: (1) reception, inspection and quarantine areas; (2) storage pending treatment; (3) storage after treatment; and (4) vessels, chambers or tanks during treatment or processing.

Waste and material outputs from waste activities (i.e., those subject to Waste licensing or class 11 of the First Schedule of the EPA Act)

Describe the waste and material outputs from the installation resulting from the treatment of waste. If no treatment is carried out on the waste, the waste outputs will be the same as the inputs.

If waste is treated, describe the nature and quantity of the treated waste and its onward fate/destination, and in particular whether it is sent for onward recovery or disposal operations.

If waste is treated and a material is produced that is no longer a waste, provide the rationale for such classification. The requirements of Article 28 of the European Communities (Waste Directive) Regulations 2011 should be addressed in any such rationale. Include the response in this attachment.

Landfill Infrastructure Outputs:

Leachate - generated from water passing through the waste body and landfill gas generated, formed due to the waste materials decomposition. Emissions of odour and noise will also be generated, with details discussed in the relevant chapters of the EIAR. The estimated leachate volume generated ranges from 6,878 m3 during the initial full year of operation to a peak of 26,704 m3 in 2046. Annual leachate quantities will fluctuate over the facility's lifetime depending on annual rainfall, active landfill area, area of temporary capping and area of final capping. Further details on leachate generation are provided in Section 2.4 of the EIAR. Leachate generated in the existing landfill was transferred to the following facilities in 2021:

- JFK Environmental, John F. Kennedy Industrial Estate, Dublin – W0196-01
- Leixlip Wastewater Treatment Plan (WWTP), Kildare – D0004-01
- Ringsend WWTP, Dublin – D0034-01
- Rilta Environmental (now part of Enva), Rathcoole, Dublin – W0192-01

Landfill gas – generated from the existing landfill biodegrading waste. The landfill gas is collected in a series of vertical wells and horizontal collector drains located within the waste body. Vertical wells and horizontal collector drains within the waste body collect this gas. It's directed to the existing landfill gas management compound, housing landfill gas flares and LGUP. Excess or unsuitable landfill gas that can't be used in the combustion plant is flared off, following standard practice at such installations. An upgraded landfill gas flare was installed at the facility in 2021/2022 to ensure optimum treatment of waste gas. Landfill gas generated from the proposed development will be collected, diverted and treated in an identical manner to the current arrangement. New landfill gas collection pipework will be installed within the new landfill and will be connected to the existing flares and LGUP in the landfill gas compound. The current flare and utilisation plant is suitable to treat gas generated from the new landfill and no additional gas treatment infrastructure is required as part of this proposed development.

Composting Process - outputs from this process will comprise a biostabilised waste material which has achieved the required EPA enforced biostability levels as set out in the EPA's *Guidance Note on Daily and Intermediate Cover at Landfills* (2014) and has undergone treatment in the plant in accordance with the DAFM requirements for handling ABP (refer to Section 2.2.4 of the EIAR for further detail).
Due to the nature of the materials which will be accepted at the compost facility, the output material will not be of a standard which makes the material suitable for spreading on land or use as a soil improver. Therefore, this material will be disposed of to landfill or recovered in the landfill for use as daily cover or intermediate cover. Based on an input rate of 30,000 TPA of suitable organic waste and 60,000 TPA of MSW, the estimated output of biostabilised waste from the proposed MSW Processing & Composting Facility will be approx. 40,000 TPA. Upon cessation of landfilling activity at the proposed development (25 years from commencement), biostabilised wastes generated from the composting process will be removed off-site for disposal to landfill or other suitable treatment/use which may be in place at that time.

Process losses - carbon dioxide and water vapour will account for approximately 30,000 TPA from the composting and MSW processing activities. Collected water vapor and leachate from the building floor are recirculated into the composting process, reducing the need to dispose of process leachate and minimising raw water consumption required to maintain proper moisture content in the composting tunnels.

MSW processing plant - will identify and segregate plastics and metals from the incoming waste stream which will be stored in dedicated bays and baled/packaged for removal off-site for further processing. The remaining oversize material (>60 mm) will be diverted to dedicated storage bays to be baled/packaged and removed off-site as RDF or for further processing into SRF products. These products can then be utilised in Waste-to-Energy plants, co-firing in approved cement kilns or exported for treatment abroad. Outputs from the MSW processing activity which will be removed from the Drehid WMF will be approx. 20,000 TPA. These output materials will be transferred off-site in bulk haulage vehicles to approved waste facilities located in the GDA.

For Soil Recovery Activities (only), please complete the following table:

All blank fields in the table are mandatory

Soil Recovery Activity Details	**Input a value into ALL blank cells (where applicable)**			
Volume of void to be filled and authorised by planning permission:	**297,186 (MSW Landfill void remaining in existing landfill as of November 2023) plus 7,250,000 for new landfill**		**m^3**	
Quantity of waste soil and stone that is required to fill the void:	**Varies – recovered soil to be used as engineering material in MSW Landfill**		**tonnes**	
Proposed annual intake of waste soil and stone:	**Total intake of 209,00 TPA (CD fines and rubble, non-hazardous soil & stone) of which circa 50,000 TPA recovered as soil and stone for engineering purposes.**		**tonnes per annum**	
Proposed duration to complete the fill:	**3-5 (until 2028 or completion of waste placement in the Non-Hazardous Landfill whichever happens first) plus 25 years for the new landfill.**		**years**	
Stage of fill: 'Not Commenced' **OR** 'Commenced':				
- **If commenced: quantity of waste already deposited in the void:** (Enter a value in both cells)	4,742,814	**m^3**	5,643,949	**Tonnes**
- **Volume of void remaining**:	**297,186**		m^3	
Period of previous fill: (<Year> **to** <Year>):	2008 - Current			

* indicates required field

Quantity of fill authorised by planning permission: (Enter a value in both cells)	**7,250,000**	**m^3**	8,627,500	**Tonnes**
Waste Licence, waste facility permit, or certificate of authorisation number: (Attach copy in this document)	Soil and stone recovery in the landfill was carried out in accordance with the current IED Licence (W0201-03) and is proposed to continue under the new IED Licence.			