

Mr. Pádraig Duggan Rilta Environmental Limited, Block 402, Grants Drive, Greenogue Business Park, Rathcoole, Co. Dublin

25th April 2012

RE: MBT Excess Waste Water Treatment

Dear Mr. Duggan,

Bord Na Móna proposes to develop a Mechanical Biological Treatment (MBT) facility. The proposed MBT facility will primarily accept and process municipal solid waste and will be designed for an overall capacity of 250,000 tonnes per annum.

Mechanical Biological Treatment through a combination of mechanical processing and biological treatment reduces the volume of waste which requires treatment by disposation landfill or incineration.

The Planning Application and the Waste Licence Application will provide for the development of a MBT facility with or with out a dry Anaerobic Digestion step. The following facility configurations are proposed:

- Configuration A (MBT with Composting)
- Configuration B (MBT with Dry Anaerobic Digestion and Composting)

In the case of Configuration A (MBT with Composting), all waste water produced by the MBT process will be reused in the process.

In the case of Configuration B (MBT with Dry Anaerobic Digestion and Composting), the worst case scenario considers that all waste water produced by the MBT process may not be reused in the process and that an estimated 3285 cubic metres per annum may require treatment off site at a EPA licensed waste water treatment plant.

The envisaged composition of the waste water that may require treatment off site is provided herewith.

As discussed, we seek confirmation from Rilta Environmental Limited that it has the capacity to accept and the capability to treat the volume of excess waste water that may be produced by the proposed MBT facility.

It is envisaged that the proposed MBT facility will commence operations in 2015.

Yours Faithfully,

Name: Pat O Neill

Email: pat.oneill@bnm.ie

Signed .

On behalf of Bord na Móna PLC





Envisaged MBT Waste Water Composition

	Units	Mean	
ph - Value	[]	8.14	
Conductivity 20°C	[µS/cm]	22250.00	
Conductivity 25°C	[µS/cm]	24928.57	
Dry matter	[% FM]	1.63	
Loss on ignition	[% TM]	32.66	
Alkalinity pH 4,3	[mmol]	226.32	
COD	[mg/I]	7,271.43	
Organic acids	[mg/I]	591.46	
Ammonium (NH4)	[mg/I]	2,223.21	
Nitrate-N	[mg/I]	<u>,</u> 0.26	
Nitrite-N	[mg/I]	mer 0.14	
Total Nitrogen (TKN)	[mg/l] 👏	2,223.21 0.26 0.14 2,122.86 38.14	
Total-phosphor (P)	[mg/l] & of (of	38.14	
Sulphur (S)	[mg/9] liked	87.14	
Chlorine (Cl)	[Ngra]	2,592.86	
Calcium (Ca)	go [mg/l]	274.29	
Potassium (K)	of intellimg/I]	2,996.43	
Magnesium (Mg)	[mg/l]	234.21	
Bicarbonate	toring [mg/l] For the lime [mg/l] [mg/l] one [mg/l]	13,760.71	
_	Offser		



Mr. Pat O Neill Bord na Móna, Drehid Waste Management Facility, Killinagh Upper, Carbury, Co. Kildare,

April 26 2012



A ClearCircle Environmental Company

Rilta Environmental Limited, Block 402 Grants Drive, Greenogue Business Park, Rathcoole, Co Dublin. T: +353 (0)1 401 8000, F: +353 (0)1 401 8080, E: info@rilta.ie www.rilta.ie

RE: MBT Excess Waste Water Treatment

Dear Mr. O Neill,

Further to your letter dated April 25th 2012, Rilta Environmental Limited has considered the envisaged composition of the waste water that may require treatment off site and hereby confirms that it has both capacity and capability to accept and treat the volume of excess waste water outlined. The acceptance of this waste water will be subject to agreement on commercial terms.

Yours sincerely,

Pádraig Duggan

Director

Rilta Environmental Limited





Mr. Kieran Staunton Enva Ireland Limited, Smithstown Industrial Estate, Shannon, Co. Clare.

15th May 2012

RE: MBT Excess Waste Water Treatment

Dear Mr. Staunton.

Bord Na Móna proposes to develop a Mechanical Biological Treatment (MBT) facility. The proposed MBT facility will primarily accept and process municipal solid waste and will be designed for an overall capacity of 250,000 tonnes per annum.

Mechanical Biological Treatment through a combination of mechanical processing and biological treatment reduces the volume of waste which requires treatment by disposal in and fill or incineration.

The Planning Application and the Waste Licence Application will provide for the development of a MBT facility with or with out a dry Anaerobic Digestion step. The following facility configurations are proposed:

Configuration A (MBT with Composting)

Configuration B (MBT with Dry Anaerobic Digestion and Composting)

In the case of Configuration A (MBT with Composting), all waste water produced by the MBT process will be reused in the process.

In the case of Configuration B (MBT with Dry Anaerobic Digestion and Composting), the worst case scenario considers that all waste water produced by the MBT process may not be reused in the process and that an estimated 3285 cubic metres per annum may require treatment off site at a EPA licensed waste water treatment plant.

The envisaged composition of the waste water that may require treatment off site is provided herewith.

As discussed, we seek confirmation from Enva Ireland Limited that it has the capacity to accept and the capability to treat the volume of excess waste water that may be produced by the proposed MBT facility.

It is envisaged that the proposed MBT facility will commence operations in 2015.

Yours Faithfully,

Name: Pat O Neil

Email: pat.oneill@bpm.ie

Signed

On behalf of Bord na Móna PLC





Envisaged MBT Waste Water Composition

	Units	Mean	
ph - Value	[]	8.14	
Conductivity 20°C	[μS/cm]	22250.00	
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COD	[mg/l]	7,271.43	
Organic acids	[mg/I]	591.46	
Ammonium (NH4)	[mg/l]	2,223.21	
Nitrate-N	[mg/l]	0.26	
Nitrite-N	[mg/I]	0.14	
Total Nitrogen (TKN)	[mg/I]	0.14 0.14 0.14 2,122.86 38.14 87.14 2,592.86 274.29	
Total-phosphor (P)	[mg/I]	offe 38.14	
Sulphur (S)	[mg/I] oil ¹	87.14	
Chlorine (CI)	[mg/]}& & & &	2,592.86	
Calcium (Ca)		274.29	
Potassium (K)	[mg/l]	2,996.43	
Magnesium (Mg)	. [SP [mg/I]	234.21	
Bicarbonate	ratof copyright [mg/l]	13,760.71	
	" of cost		



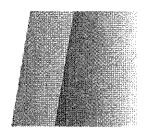


Enva Ireland Limited

Smithstown Industrial Estate, Shannon, Co. Clare www.enva.ie

Tel: 061 707400 Fax: 061 707401

Emall: shannon@enva.le



Mr. Pat O Neill Senior Projects Engineer Bord na Móna Resource Recovery

28/05/12

Dear Mr P.O'Neill,

Enva Ireland Ltd wish Bord na Móna well with the proposed MBT facility development.

Enva Ireland Ltd would like to offer our services for the treatment of effluent which on preliminary review of projected volumes and concentration parameters would appear to be treatable at out Shannon facility. Consent of copyright owner required for

yours sincerely

Kieran Staunton **Business Manager**

Enva Hazardous Waste

Registered Address:

Clonminam Industrial Estate, Portlaoise, Co. Lapis

VAT No: IE 6337186A

Directors:

D Ryan (Managing), T. Breen, T. Davy, G. Kelly, M. Keogh A. Fitzpatrick, A. Mulhall

F. Pyne, J. MacNamara

Co. Secretary G.Kelly



