



Headquarters,
Johnstown Castle Estate,
County Wexford, Ireland

GREENHOUSE GAS EMISSIONS PERMIT

Permit Register Number:	IE-GHG106-10402-3
Operator:	Bord na Móna Fuels Limited Main Street Newbridge Kildare
Installation Name:	Bord na Móna (Littleton Briquette Factory)
Site Name:	Bord na Móna (Littleton Briquette Factory)
Location:	Littleton Thurles Tipperary Ireland

Introductory Note

This introductory note does not form a part of the Greenhouse Gas Emissions Permit.

This Greenhouse Gas Emissions Permit authorises the holder to undertake named activities resulting in emissions of Carbon Dioxide from the listed emission sources. It also contains requirements that must be met in respect of such emissions, including monitoring and reporting requirements. This Greenhouse Gas Emissions Permit places an obligation on the Operator to surrender allowances to the Agency equal to the annual reportable emissions of carbon dioxide equivalent from the installation in each calendar year, no later than four months after the end of each such year.

Contact with Agency:

If you contact the Agency about this Greenhouse Gas Emissions Permit please quote the following reference: Greenhouse Gas Emissions Permit N^o IE-GHG106-10402.

All correspondence in relation to this permit should be addressed to:

Email: help.ets@epa.ie

By Post: Climate Change Unit, Environmental Protection Agency
P.O. Box 3000, Johnstown Castle Estate,
Co. Wexford

Updating of the permit:

This Greenhouse Gas Emissions Permit may be updated by the Agency, subject to compliance with Condition 2. The current Greenhouse Gas Emissions Permit will normally be available on the Agency's website at www.epa.ie and [ETSWAP](#).

Surrender of the permit:

Before this Greenhouse Gas Emissions Permit can be wholly or partially surrendered, a written application must be made to the on-line ETS portal, and written permission received from, the Agency through [ETSWAP](#).

Transfer of the permit or part of the permit:

Before this Greenhouse Gas Emissions Permit can be wholly or partially transferred to another Operator a joint written application to transfer this Greenhouse Gas Emissions Permit must be made (by both the existing and proposed Operators) to, and written permission received from, the Agency through the on-line ETS portal [ETSWAP](#).

Licence held pursuant to the Environmental Protection Agency Act 1992, as amended. (as of the date of this permit):

IPC/IE Licence Register Number
P0499-01

Status Log

Current Permit

Permit number	Date application received	Date Permit issued	Comment
IE-GHG106-10402-3	11 May 2015	03 November 2015	<p>1. Correction to linkage between Source Streams F4 (Propane) and F5 (Acetylene) and their emission sources.</p> <p>2. Inclusion of new Emission Source (R&D Gas oil Boiler)</p>

Previous Permits

Permit number	Change Type	Date application received	Date Permit issued	Comment
IE-GHG106-10402-1	GHG Permit Application	25 September 2013	25 November 2013	
IE-GHG106-10402-2	GHG Variation	28 February 2014	12 May 2014	<p>1 Inclusion of acetylene and propane as de minimis fuels.</p> <p>2 Change to the Activity Data for peat from tier 3 to 4.</p> <p>3 Revision of analysis and management procedures.</p>

End of Introductory Note

Glossary of Terms

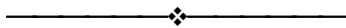
For the purposes of this permit the terms listed in the left hand column shall have the meaning given in the right hand column below:

The Agency	Environmental Protection Agency.
Agreement	Agreement in writing.
Allowance	Permission to emit to the atmosphere one tonne of carbon dioxide equivalent during a specified period issued for the purposes of Directive 2003/87/EC by the Agency or by a designated national competent authority of a Member State of the European Union.
Annual Reportable Emissions	Reportable Emissions of carbon dioxide made in any calendar year commencing from 1 January 2005 or the year of commencement of the activity, whichever is the later.
A & V Regulation	Commission Regulation (EU) No 600/2012 of 21 June 2012 on the verification of greenhouse gas emission reports and tonne-kilometre reports and the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council and any amendments or revisions thereto.
Category A Installation	As defined in Article 19.2 (a) of the M&R Regulation.
Category B Installation	As defined in Article 19.2 (b) of the M&R Regulation.
Category C Installation	As defined in Article 19.2 (c) of the M&R Regulation.
The Directive	Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.
Emissions	The release of greenhouse gases into the atmosphere from sources in an installation.
EPA	Environmental Protection Agency.
Fall-Back Methodology	As defined in Article 22 of the M&R Regulation.
GHG	Greenhouse gas.
GHG Permit	Greenhouse gas emissions permit.
Greenhouse Gas	Any of the gases in Schedule 2 of the Regulations.
IPC/IE	Integrated Pollution Control/Industrial Emissions.
Installation	Any stationary technical unit where one or more activities listed in Schedule 1 to the Regulations are carried out. Also any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution. References to an installation include references to part of an installation.

Installation with low emissions	As defined in Article 47 of the M&R Regulation.
Major Source Streams	As defined in Article 19.3 (c) of the M&R Regulation.
M&R Regulation	Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council and any amendments or revisions thereto.
Mis-statement	An omission, misrepresentation or error in the Operators reported data, not considering the uncertainty permissible pursuant to Article 12(1)(a) of Regulation (EU) no 601/2012.
N/A	Not applicable.
Monitoring Plan	The Plan submitted and approved in accordance with Condition 3.1 of this permit and attached at Appendix 1.
Non-conformity	Any act or omission by the Operator, either intentional or unintentional, that is contrary to the greenhouse gas emissions permit and the requirements of the Monitoring Plan.
The National Administrator	The person so designated in accordance with the requirements of any Regulations adopted as provided for under Article 19.3 of Directive 2003/87/EC.
The Operator (for the purposes of this permit)	Bord na Móna Fuels Limited
“operator”	Any person who operates or controls an installation or to whom decisive economic power over the functioning of the installation has been delegated.
Person	Any natural or legal person.
Reportable emissions	The total releases to the atmosphere of carbon dioxide (expressed in tonnes of carbon dioxide equivalent) from the emission sources specified in Table 2 and arising from the Schedule 1 activities which are specified in Table 1.
The Regulations	European Communities (Greenhouse Gas Emissions Trading) Regulations 2012 (S.I. No 490 of 2012) and any amendments or revisions thereto.
The Verifier	A legal person or another legal entity carrying out verification activities pursuant to Regulation (EU) No 600/2012 and accredited by a national accreditation body pursuant to Regulation (EC) No 765/2008 and Regulation (EU) No 600/2012 or a natural person otherwise authorised, without prejudice to Article 5(2) of Regulation (EC) No 765/2008, at the time a verification report is issued.
The Registry	The Registry as provided for under Article 19 of Directive 2003/87/EC.

Schedule 1

Schedule 1 to the Regulations.



Reasons for the Decision

The Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this permit, the Operator is capable of monitoring and reporting emissions in accordance with the requirements of the Regulations.

Activities Permitted

Pursuant to the Regulations the Agency issues this Greenhouse Gas Emissions Permit, subject to any subsequent revisions, corrections or modifications it deems appropriate, to:

The Operator:

Bord na Móna Fuels Limited
Main Street
Newbridge
Kildare

Company Registration Number: 303301

to carry out the following

Categories of activity:

Annex 1 Activity

Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)
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at the following installation(s):

Bord na Móna (Littleton Briquette Factory) **Installation number:** 83

located at

Littleton
Thurles
Tipperary
Ireland

subject to the five conditions contained herein, with the reasons therefor and associated tables attached thereto.

Conditions

Condition 1. The Permitted Installation

- 1.1 This permit is being granted in substitution for the previous GHG permit granted to the Operator as listed in the Status Log of this GHG permit.
- 1.2 The Operator is authorised to undertake the activities and/or the directly associated activities specified in Table 1 below resulting in the emission of carbon dioxide:

Table 1 - Activities which are listed in Schedule 1 of the Regulations and other directly associated activities carried out on the site:

Installation No.: 83

Activity Description
Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)

Directly Associated Activity Description
N/A

- 1.3 Carbon dioxide from Schedule 1 activities shall be emitted to atmosphere only from the emission sources as listed in Table 2 below:

Table 2 Emission Sources and Capacities:

Emission Source Reference	Emission Source Description	Capacity	Capacity Units
S1	Peat Fired Boiler	22.72	MW
S2	Auxiliary Boiler	1.95	MW
S3	Workshop	0.01	MW
S4	R&D Gas oil Boiler	0.7	MW

- 1.4 The activity shall be controlled, operated and maintained so that emissions of carbon dioxide shall take place only as set out in this GHG Emissions Permit. The permit does not control emissions of gases other than carbon dioxide. All agreed plans, programmes and methodologies required to be carried out under the terms of this permit, become part of this permit.
- 1.5 This GHG Permit is for the purposes of GHG emissions permitting under the European Communities (Greenhouse Gas Emissions Trading) Regulations 2012 and any amendments to the same only and nothing in this permit shall be construed as negating the Operator's statutory obligations or requirements under any other enactments or regulations unless specifically amended by the Regulations.

- 1.6 Any reference in this permit to 'installation' shall mean the installation as described in the Greenhouse Gas Emissions Permit application and any amendments approved by the Agency.

Reason: To describe the installation and clarify the scope of this permit.

Condition 2. Notification

- 2.1 No alteration to, or reconstruction in respect of, the activity or any part thereof which would, or is likely to, result in a change in:
- 2.1.1 the nature or functioning of the installation;
 - 2.1.2 the capacity of the installation as detailed in this permit;
 - 2.1.3 the fuels used at the installation;
 - 2.1.4 the range of activities to be carried out at the installation
- that may require updating of the GHG permit shall be carried out or commenced without prior notice to and without the prior written agreement of the Agency.
- 2.2 The Operator shall notify the Agency in writing of the cessation of all or part of any activity listed in Table 1 of this permit no later than one month from the date of cessation or by 31 December of the year of cessation, whichever is sooner.
- 2.3 The Operator shall apply for an update of this GHG Permit where there is a change to the Operator name and/or registered address of the Operator, within seven days of the change.
- 2.4 For installations or parts of installations which have not come into operation when the application for this permit was made the Operator shall notify the Agency of the date of commencement of the activity within seven days of commencement.
- 2.5 The Operator shall notify the Agency in writing within three days of becoming aware of any factors which may prevent compliance with the conditions of this permit.
- 2.6 The Operator shall submit to the Agency by 21 January of each year a declaration of operability. The declaration submitted shall be in the format required by the Agency.
- 2.7 All notifications required under Condition 2 above shall be made to the address given in the Explanatory Note included with this permit.
- 2.8 The Operator shall submit to the Agency by 31 December of each year all relevant information about any planned or effective changes to the capacity, activity level and operation of an installation. The information submitted shall be in the format required by the Agency.

Reason: To provide for the notification of updated information on the activity.

Condition 3. Monitoring and Reporting

- 3.1 The Operator shall monitor and record greenhouse gas emissions on site in accordance with the M&R Regulation and the approved Monitoring Plan attached at Appendix 1 to this GHG permit and in compliance with any other guidance approved by the Agency for the purposes of implementing the Directive and/or the Regulations.
- 3.2 The Operator shall modify the monitoring plan in any of the following situations:
- 3.2.1 new emissions occur due to new activities carried out or due to the use of new fuels or materials not yet contained in the monitoring plan;

- 3.2.2 the change of availability of data, due to the use of new measurement instrument types, sampling methods or analysis methods, or for other reasons, leads to higher accuracy in the determination of emissions;
- 3.2.3 data resulting from the previously applied monitoring methodology has been found incorrect;
- 3.2.4 changing the monitoring plan improves the accuracy of the reported data, unless this is technically not feasible or incurs unreasonable costs;
- 3.2.5 the monitoring plan is not in conformity with the requirements of the M&R Regulation and the Agency requests a change;
- 3.2.6 it is necessary to respond to the suggestions for improvement of the monitoring plan contained in the verification report.

The Operator shall notify any proposals for modification of the monitoring plan to the Agency without undue delay. Any significant modifications of the monitoring plan, as defined in Article 15 of the M&R Regulation, shall be subject to approval by the Agency. Where approved these changes shall be implemented within a timeframe agreed by the Agency.

3.3 Temporary changes to the monitoring methodology:

- 3.3.1 Where it is for technical reasons temporarily not feasible to apply the tier in the monitoring plan for the activity data or each calculation factor of a fuel or material stream as approved by the Agency, the Operator shall apply the highest achievable tier until the conditions for application of the tier approved in the monitoring plan have been restored. The Operator shall take all necessary measures to allow the prompt restoration of the tier in the approved monitoring plan. The Operator shall notify the temporary change to the monitoring methodology without undue delay to the Agency specifying:
 - (i) The reasons for the deviation from the tier;
 - (ii) in detail, the interim monitoring methodology applied by the Operator to determine the emissions until the conditions for the application of the tier in the monitoring plan have been restored;
 - (iii) the measures the Operator is taking to restore the conditions for the application of the tier in the approved monitoring plan;
 - (iv) the anticipated point in time when application of the approved tier will be resumed.
- 3.3.2 A record of all non-compliances with the approved monitoring plan shall be maintained on-site and shall be available on-site for inspection by authorised persons of the Agency and/or by the Verifier at all reasonable times.

- 3.4 The Operator shall appoint a Verifier to ensure that, before their submission, the reports required by Condition 3.5 below are verified in accordance with the criteria set out in Schedule 5 of the Regulations, the A&V Regulation and any more detailed requirements of the Agency.
- 3.5 The written report of the verified annual reportable emissions and the verification report in respect of each calendar year shall be submitted to the Agency by the Operator no later than 31 March of the following year. The reports shall be in the format required by the Agency and meet the criteria set out in the M&R and A&V Regulations.
- 3.6 The Operator shall enter the verified annual reportable emissions figure for the preceding year into the Registry no later than 31 March of the following year. This figure shall be electronically approved by the Verifier in the registry no later than 31 March of each year.

- 3.7 Where an Operator is applying the Fall-Back methodology, the Operator shall assess and quantify each year the uncertainties of all parameters used for the determination of the annual emissions in accordance with the ISO Guide to the Expression of Uncertainty in Measurement or another equivalent internationally accepted standard and include the verified results in the written report of the verified annual reportable emissions to be submitted to the Agency by 31 March each year.
- 3.8 An Operator shall submit to the Agency for approval a report containing the information detailed in (i) or (ii) below, where appropriate, by the following deadlines:
- (a) for a category A installation, by 30 June every four years;
 - (b) for a category B installation, by 30 June every two years;
 - (c) for a category C installation, by 30 June every year.
- (i) Where the Operator does not apply at least the tiers required pursuant to the first subparagraph of Article 26(1) and to Article 41(1) of the M&R Regulation, the Operator shall provide a justification as to why it is technically not feasible or would incur unreasonable costs to apply the required tiers. Where evidence is found that measures needed for reaching those tiers have become technically feasible and do not incur unreasonable costs, the Operator shall notify the Agency of appropriate modifications to the monitoring plan and submit proposals for implementing appropriate measures and its timing.
- (ii) Where the Operator applies a fall-back monitoring methodology, the Operator shall provide a justification as to why it is technically not feasible or would incur unreasonable costs to apply at least tier 1 for one or more major or minor source streams. Where evidence is found that measures needed for reaching at least tier 1 for those source streams have become technically feasible and do not incur unreasonable costs, the Operator shall notify the Agency of appropriate modifications to the monitoring plan, submit proposals and a timeframe for implementing appropriate measures.
- 3.9 Where the verification report states outstanding non conformities, misstatements or recommendations for improvements the Operator shall submit a report to the Agency for approval by 30 June of the year in which the verification report is issued. This requirement does not apply to the Operator of an installation with low emissions where the verification report contains recommendations for improvements only. The report shall describe how and when the Operator has rectified or plans to rectify the non-conformities identified and to implement recommended improvements. Where recommended improvements would not lead to an improvement of the monitoring methodology this must be justified by the Operator. Where the recommended improvements would incur unreasonable costs the Operator shall provide evidence of the unreasonable nature of the costs. The Operator shall implement the improvements specified by the Agency in response to the report submitted in accordance with this Condition in accordance with a timeframe set by the Agency.
- 3.10 The Operator shall make available to the Verifier and to the Agency any information and data relating to emissions of carbon dioxide which are required in order to verify the reports referred to in Condition 3.5 above or as required by the Agency to facilitate it in establishing benchmarks and/or best practice guidance.
- 3.11 Provision shall also be made for the transfer of environmental information, in relation to this permit, to the Agency's computer system, as may be requested by the Agency.
- 3.12 The Operator shall retain all information as specified in the M&R Regulation for a period of at least 10 years after the submission of the relevant annual report.
- 3.13 A record of independent confirmation of capacities listed in this permit shall be available on-site for inspection by authorised persons of the Agency at all reasonable times.

- 3.14 The Operator shall keep records of all modifications of the monitoring plan. The records shall include the information specified in Article 16.3 of the M&R Regulation.
- 3.15 The Operator shall ensure that members of the public can view a copy of this permit and any reports submitted to the Agency in accordance with this permit at all reasonable times. This requirement shall be integrated with the requirements of any public information programme approved by the Agency in relation to any other permit or licence held by the Operator for the site.

Reason: *To provide for monitoring and reporting in accordance with the Regulations.*

Condition 4. Allowances

4.1 Surrender of Allowances

- 4.1.1 The Operator shall, by 30 April in each year, surrender to the Agency, or other appropriate body specified by the Agency, allowances equal to the annual reportable emissions in the preceding calendar year.
- 4.1.2 The number of allowances to be surrendered shall be the annual reportable emissions for the preceding calendar year plus such allowances as may be necessary to cover any earlier calendar year in respect of which allowances remain outstanding and due. This includes allowances to cover the amount of any annual reportable emissions in respect of which allowances were not surrendered in accordance with Condition 4.1.1 in the previous year, and the amount of any reportable emissions which were discovered during the previous year to have been unreported in reports submitted under Condition 3 in that or in earlier years.
- 4.1.3 In relation to activities or parts of activities which have ceased to take place and have been notified to the Agency in accordance with Condition 2.2 above, the Operator shall surrender to the Agency allowances equal to the annual reportable emissions from such activities in the preceding calendar year or part thereof, together with such allowances as may be necessary to cover any earlier calendar year in respect of which allowances remain outstanding and due as described in Condition 4.1.2 above.
- 4.1.4 The Operator may, from 2008 onwards, subject to the provisions of the Regulations and the relevant National Allocation Plan for that compliance year, surrender emission reduction units (ERUs) and certified emission reduction units (CERs) in place of allowances.

- 4.2 The holding, transfer, surrender and cancellation of allowances shall be in accordance with the requirements of any Regulations adopted as provided for under Article 19.3 of Directive 2003/87/EC, any amendment or revision to the same and any guidance issued by the Agency or the National Administrator.
- 4.3 The Operator shall provide the National Administrator with all the necessary information for the opening of an Operator holding account for the installation described in Condition 1 of this permit within twenty working days of the issue of this permit, unless such an account is already open.

Reason: *To provide for the surrendering, holding, transfer and cancellation of allowances in respect of reported emissions.*

Condition 5. Penalties

- 5.1 Any Operator who fails to comply with Condition 4.1 above shall be subject to the provisions of the Regulations, including, but not limited to the payment of penalties.

Reason: To provide for the payment of excess emissions penalties as required under the Regulations.

Sealed by the seal of the Agency on this the 03 November 2015:

PRESENT when the seal of the Agency was affixed hereto:

Ms. Annette Prendergast
Inspector/ Authorised Person

Appendix 1 to Greenhouse Gas Emissions Permit Number IE-GHG106-10402

Monitoring Plan

1. Guidelines & Conditions

1. Directive 2003/87/EC as amended by Directive 2009/29/EC (hereinafter "the (revised) EU ETS Directive") requires operators of installations which are included in the European Greenhouse Gas Emission Trading Scheme (the EU ETS) to hold a valid GHG emission permit issued by the relevant Competent Authority and to monitor and report their emissions and have the reports verified by an independent and accredited verifier.

The Directive can be downloaded from:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2003L0087:20090625:EN:PDF>

2. The Monitoring and Reporting Regulation (Commission Regulation (EU) No 601/2012) (hereinafter the "MRR") defines further requirements for monitoring and reporting.

The MRR can be downloaded from:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:181:0030:0104:EN:PDF>

Article 12 of the MRR sets out specific requirements for the content and submission of the monitoring plan and its updates. Article 12 outlines the importance of the Monitoring plan as follows:

The monitoring plan shall consist of a detailed complete and transparent documentation of the monitoring methodology of a specific installation [or aircraft operator] and shall contain at least the elements laid down in Annex I.

Furthermore Article 74(1) states:

Member States may require the operator and aircraft operator to use electronic templates or specific file formats for submission of monitoring plans and changes to the monitoring plan as well as for submission of annual emissions reports tonne-kilometre data reports verification reports and improvement reports. Those templates or file format specifications established by the Member States shall at least contain the information contained in electronic templates or file format specifications published by the Commission

3. All Commission guidance documents on the Monitoring and Reporting Regulation will be published at the link below as they become available:

http://ec.europa.eu/clima/policies/ets/monitoring/index_en.htm

(a) Information sources:

EU Websites:

EU-Legislation: <http://eur-lex.europa.eu/en/index.htm>

EU ETS general: http://ec.europa.eu/clima/policies/ets/index_en.htm

Monitoring and Reporting in the EU ETS: http://ec.europa.eu/clima/policies/ets/monitoring/index_en.htm

Environmental Protection Agency Website:

<http://www.epa.ie>

Environmental Protection Agency Contact:

GHGpermit@epa.ie

2. Application Details

The Installation Name, Site Name and the address of the site of the installation are detailed below. The Site Name and address can be updated from the Organisation Details Page on the ETSWAP website. The Installation Name can only be updated by your Competent Authority.

Installation name	Bord na Móna (Littleton Briquette Factory)
Site name	Bord na Móna (Littleton Briquette Factory)
Address	Littleton Thurles Tipperary Ireland

Grid reference of site main entrance	E 220367, N 151180
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Licence held pursuant to the Environmental Protection Agency Act 1992, as amended.	Yes
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IPC/IE Licence Register Number	Licence holder	Competent body
P0499-01	Bord na Mona Fuels Limited	Environmental Protection Agency

Has the regulated activity commenced at the Installation? Yes

Date of Regulated Activity commencement	01 January 2005
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This information is only required to identify the first relevant reporting year of an installation. If the installation was in operation from the beginning of 2008 and held a Greenhouse Gas Emissions Permit from this point, 1 January 2008 will be used where the actual date of commencement is not readily known.

3. About the Operator

The information about the "Operator" is listed below. The "Operator" is defined as the person who it is proposed will have control over the relevant Regulated Activities in the installation in respect of which this application is being made.

(b) Operator Details

The name of the operator and where applicable the company registration number are detailed below. These details can only be updated by the Environmental Protection Agency.

Operator name	Bord na Móna Fuels Limited
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Company Registration Number	303301
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Operator Legal status

The legal status of the operator is:	Company / Corporate Body
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(c) Company / Corporate Body

Is the trading / business name different to the operator name? No

Details of the individual authorised to submit this application on behalf of the company / corporate body.

Title	Mr
Forename	Yates
Surname	Ray
Position	General Manager

Registered office address

Address Line 1	Main Street
Address Line 2	N/A
City/Town	Newbridge
County	Kildare
Postcode	N/A

Principal office address

Is the principal office address different to the registered office address? Yes

Address Line 1	Bord na Mona Littleton Briquette factory
Address Line 2	Littleton
City/Town	Thurles
County	Tipperary
Postcode	N/A
Company registration number	303301

Holding company

Does the company belong to a holding company? No

(d) Operator Authority

Does the operator named above have the authority and ability to:

a. manage site operations through having day-to-day Yes

control of plant operation including the manner and rate of operation

- | | | |
|----|--|-----|
| b. | ensure that permit conditions are effectively complied with | Yes |
| c. | control monitor and report specified emissions | Yes |
| d. | be responsible for trading in Allowances so that at the end of a reporting period allowances can be balanced against reported emissions. | Yes |

4. Service Contact

e. Service Contact

Name	Mr Martin Conlan
Address / Email Address	Main Street Newbridge Kildare Ireland

5. Installation Activities

f. Installation Description

Below is a description of the installation and its activities, a brief outline description of the site and the installation and the location of the installation on the site. The description also includes a non-technical summary of the activities carried out at the installation briefly describing each activity performed and the technical units used within each activity.

The installation is a Combined Heat and Power (CHP) plant producing heat and electricity. The site is located in a rural area approximately five miles from Littleton village, Thurles, County Tipperary, Ireland.

A site map illustrating the location of the CHP installation is provided with this application. The main purpose of this site is for the manufacture of peat briquettes for the domestic market. The CHP plant is owned and operated by Bord na Mona Fuels Limited and this produces heat and electricity used solely in the manufacturing process.

The plant has an aggregate combustion capacity exceeding 20MW thermal input which constitutes the regulated activity operated by Bord na Mona Fuels Limited. The Peat Fired Boiler has a thermal input capacity of 22.72 MW located centrally on the site.

Peat and coal slack are used in the main boiler. Gas oil is used on start up along with Propane. There is also an Auxiliary Boiler on site with 1.95 MW thermal input capacity which uses gas oil only. Acetylene is used in the workshop and around the plant for maintenance and repair. A gas oil fired steam generator boiler is used to supply steam to a Biomass Research Pilot Plant with 0.712 MW thermal input capacity.

g. Annex 1 Activities

The table below lists the technical details for each Annex 1 activity carried out at the installation.

Note that 'capacity' in this context means:

- Rated thermal input (for combustion installations) which is defined as the rate at which fuel can be burned at the maximum continuous rating of the installation multiplied by the calorific value of the fuel and expressed as megawatts thermal.
- Production capacity for those specified Annex I activities for which production capacity determines ETS eligibility.

Annex 1 Activity	Total Capacity	Capacity units	Specified Emissions
Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)	25.38	MW	Carbon Dioxide

h. Site Diagram

The table below lists attachments (if available) that provide a simple diagram showing emissions sources, source streams, sampling points, and metering/measurement equipment.

Attachment	Description
Littleton Site Plan.doc	Littleton Site Plan

i. Estimated Annual Emissions

Detail of the estimated annual emission of CO₂ equivalent. This information enables categorisation of the installation in accordance with Article 19 of the MRR and is based on the average verified annual emissions of the previous trading period data OR if this data is not available or is inappropriate a conservative estimate of annual average emissions including transferred CO₂ excluding CO₂ from biomass.

Estimated Annual Emissions (tonnes CO _{2(e)})	57156
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6. Emissions Details

j. About your emissions

Annex I of the Monitoring and Reporting Regulations (MRR) requires that monitoring plans include a description of "the installation" and activities to be carried out and monitored including a list of emission sources and source streams. The information provided in this template relates to the Annex I activity(ies) comprised in the installation in question and should relate to a single installation. It includes any activities carried out by the operator and does not include related activities carried out by other operators.

k. Emission Sources

The table below lists all the emission sources at the installation, which may include directly associated activities/excluded activities.

Emission Source Reference	Emission Source Description
S1	Peat Fired Boiler
S2	Auxiliary Boiler
S3	Workshop
S4	R&D Gas oil Boiler

The table below lists the emission sources which are linked to the Regulated Activities at the installation.

Emission Source Reference	Emission Source Description
S1	Peat Fired Boiler
S2	Auxiliary Boiler
S3	Workshop
S4	R&D Gas oil Boiler

l. Emission Points

The table below lists all the emission points at the installation, which may include directly associated activities/excluded activities.

Emission Point Reference	Emission Point Description
EP1-B101	Boiler Stack
EP2-DG101	Auxiliary Boiler Stack
EP3-WG101	Workshop
EP4-DG102	R&D Boiler Stack

m. Source Streams (fuels and/or materials)

The table below lists the source streams which are used in Schedule 1 Activities at the installation.

Source Stream Reference	Source Stream Type	Source Stream Description
F1	Combustion: Solid fuels	Peat
F2	Combustion: Commercial standard fuels	Gas/Diesel Oil
F3	Combustion: Solid fuels	Coal
F4	Combustion: Commercial standard fuels	Propane
F5	Combustion: Other gaseous & liquid fuels	Acetylene

n. Emissions Summary

The table below provides a summary of the emission source and source stream details in the installation.

Source streams (Fuel / Material)	Emission Source Refs.	Emission Point Refs.	Annex 1 Activity
F1	S1	EP1-B101	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)
F2	S1,S2,S4	EP1-B101,EP2-DG101,EP4-DG102	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)
F3	S1	EP1-B101	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)
F4	S1	EP1-B101	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)

Source streams (Fuel / Material)	Emission Source Refs.	Emission Point Refs.	Annex 1 Activity
F5	S3	EP3-WG101	Combustion of fuels in installations with a total rated thermal input exceeding 20 MW (except in installations for the incineration of hazardous or municipal waste)

o. Excluded Activities

Certain activities that result in greenhouse gas emissions may be excluded under the EU ETS Directive for example truly mobile sources such as vehicle emissions.

Do you have any excluded activities which need to be identified in your monitoring plan? No

7. Low Emissions Eligibility

p. Low Emissions Eligibility

The operator may submit a simplified monitoring plan for an installation where no nitrous oxide activities are carried out and it can be demonstrated that:

(a) the average verified annual emissions of the installation during the previous trading period was less than 25 000 tonnes CO_{2(e)} per year or;

(b) where this data is not available or inappropriate a conservative estimate shows that emissions for the next 5 years will be less than 25 000 tonnes CO_{2(e)} per year.

Note: the above data shall include transferred CO₂ but exclude CO₂ stemming from biomass.

Does the installation satisfy the criteria for installations with low emissions (as defined by Article 47 of the MRR)? No

8. Monitoring Approaches

q. Monitoring Approaches

Emissions may be determined using either a calculation based methodology ("calculation") or measurement based methodology ("measurement") except where the use of a specific methodology is mandatory according to the provisions of the MRR. [MRR Article 21].

Note: the operator may subject to competent authority approval combine measurement and calculation for different sources. The operator is required to ensure and demonstrate that neither gaps nor double counting of reportable emissions occurs.

Please specify whether or not you propose to apply the following monitoring approaches. Select all monitoring approaches that are applicable to you. The consecutive sections will become mandatory based on the selected approaches.

Calculation	Yes
Measurement	No
Fall-back approach	No
Monitoring of N ₂ O	No
Monitoring of PFC	No
Monitoring of transferred / inherent CO ₂	No

9. Calculation

r. Approach Description

The calculation approach including formulae used to determine annual CO₂ emissions:

The calculation of CO₂ emissions is determined as follows: CO₂ emissions = activity data * net calorific value * emissions factor * oxidation factor.

F1 : (Peat) Major fuel, Oxidation factor tier 1:

The quantity of milled peat combusted is determined by direct measurement of peat on a calibrated belt weigher. Readings are taken daily and are measured in tonnes. Samples of milled peat are taken manually in accordance with ISO 18283. A weekly composite sample is sent to an accredited lab (ISO 17025) for analysis and determination of Net CV, Ash, Total Moisture, DAF and As Received Carbon Content.

F2 : (Gas oil) Minor fuel, Oxidation factor tier 1:

The consumption is determined by supply and delivery adjusted for opening and closing tank levels less the yard mobile plant usage. Consumption is in litres and converted to tonnes by an average density conversion factor in Kg/Lt given annually by the supplier of gas oil. Net CV and Emissions Factor are determined from Irish National Inventory Standards.

F3 : (Coal Slack) Major fuel, Oxidation factor tier 1:

The consumption is determined by delivery being deemed to be consumption. The deliveries are weighed in over the main weigh bridge LWB-01. Manual sampling is performed in accordance with ISO 18283. A weekly composite sample is sent to an accredited lab (ISO 17025) for analysis and determination of Net CV, Ash, Total Moisture, DAF and As Received Carbon Content. Invoiced amounts are based on the weighbridge dockets.

F4 : (Propane) De minimis Fuel, Oxidation factor tier 1:

Consumption is determined from purchase records of cylinders in Kg. Net CV & Emissions Factor are determined from Irish National Inventory Standards.

F5 : (Acetylene) De minimis Fuel, Oxidation factor tier 1:

Consumption is determined from purchase records of cylinders in Kg. Net CV & Emissions Factor are determined from the EPA website each year.

s. Measurement Devices

Below is a description of the specification and location of the measurement systems used for each source stream where emissions are determined by calculation

Also a description of all measurement devices including sub-meters and meters used to deduct non-Annex I activities to be used for each source and source stream.

Source Stream Refs.	Emission Source Refs.	Measurement Device Ref.	Type of Measurement Device	Measurement Range	Metering Range Units	Specified Uncertainty (+/- %)	Location
F1	S1	LBW-03	Belt weigher	0 - 200	tonnes	1.25	Boiler Feed Belt
F2	S1,S2,S4	Supply delivery notes	Rotary meter	0 - 20,000	liters	1	Second Floor Oil Station
F3	S1	LWB-01	Weighbridge	20 - 50,000	kg	1	Adjacent to factory gate
F2	S2	LOM-01	Rotary meter	0 - 200	Liters	2.5	Gas Oil Storage Bund
F2	S1,S2,S4	Stock take	Tank dip	0-20,000	litres	2.5	Main tank farm
F4	S1	Purchase records	N/A	N/A	N/A	N/A	Stores
F5	S3	Purchasing records	N/A	N/A	N/A	N/A	Stores

Source Stream Refs.	Measurement Device Ref.	Determination Method	Instrument Under Control Of	Conditions Of Article 29(1) Satisfied	Invoices Used To Determine Amount Of Fuel Or Material	Trade Partner And Operator Independent
F1	LBW-03	Continual	Operator	N/A	N/A	N/A
F2	Supply delivery notes	Batch	Trade partner	Yes	Yes	Yes
F3	LWB-01	Batch	Operator	N/A	N/A	N/A
F2	LOM-01	Continual	Operator	N/A	N/A	N/A
F2	Stock take	Batch	Operator	N/A	N/A	N/A
F4	Purchase records	Batch	Operator	N/A	N/A	N/A

Source Stream Refs.	Measurement Device Ref.	Determination Method	Instrument Under Control Of	Conditions Of Article 29(1) Satisfied	Invoices Used To Determine Amount Of Fuel Or Material	Trade Partner And Operator Independent
F5	Purchasing records	Batch	Operator	N/A	N/A	N/A

t. Applied Tiers

The table below identifies the tiers applied against the relevant input data for each source stream and confirms whether a standard (MRR Article 24) or mass balance (MRR Article 25) approach is applied.

(i) The highest tiers as defined in Annex II of the MRR should be used by Category B and C installations to determine the activity data and each calculation factor (except the oxidation factor and conversion factor) for each major source stream. Category A installations should apply as a minimum the tiers listed in Annex V.

(ii) Operators may apply a tier one level lower than those referred to in sub paragraph (i) above for Category C installations and up to two levels lower for Category A and B installations with a minimum of tier 1 if the operator can demonstrate to the satisfaction of the competent authority that this is not technically feasible or would lead to unreasonable cost to apply the higher tier. The justification for not applying the higher tier should be recorded when completing the tier table.

(iii) The competent authority may allow an operator to apply even lower tiers than those referred to in the sub paragraph (ii) with a minimum of tier 1 for a transition period of up to three years if the operator can demonstrate to the satisfaction of the competent authority that this is not technically feasible or would lead to unreasonable cost to apply the higher tier and provides an improvement plan detailing how and by when at least the tier referred to in sub paragraph (ii) will be achieved. The improvement plan should be referenced in subsequent table and provided to the competent authority at the time of submission of this plan.

(iv) For minor source streams operators shall apply the highest tier which is technically feasible and will not lead to unreasonable costs with a minimum of tier 1 for activity data and each calculation factor. For de-minimis source streams operators may use conservative estimations rather than tiers unless a defined tier can be achieved without additional effort (MRR Article 26(2)).

(v) Installations with low emissions as identified in section 6(d) may apply as a minimum tier 1 for determining activity data and calculation factors for all source streams unless higher accuracy is achievable without additional effort.

* Note 1: For commercial standard fuels the minimum tiers listed in Annex V of the MRR may be applied for all activities in all installations.

* Note 2: If you are intending to apply a fall-back approach please complete the table below and select "n/a" for the tiers to be applied for each source stream where a fall-back approach is used. Section 10 "Fall-back" must also be completed for these source streams.

* Note 3: For biomass or mixed fuels the emission factor is the preliminary emission factor as defined in Definition 35 Article 3 of the MRR.

Source Stream Refs.	Emission Source Refs.	Measurement Device Refs.	Overall Metering Uncertainty (less than +/- %)	Applied Monitoring Approach	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied	Estimated Emissions tCO _{2(e)}	% of Total Estimated Emissions	Source Category	Highest Tiers Applied	Justification for not applying the highest tiers	Improvement Plan Reference (where applicable)
F1	S1	LBW-03	<1.5%	Standard	4	3	3	N/A	1	N/A	N/A	48954.16	85.95	Major	Yes	n/a	n/a
F2	S1,S2,S4	Supply delivery notes	<2.5%	Standard	3	2a	2a	N/A	1	N/A	N/A	1714.68	3.01	Minor	Yes	n/a	n/a
F3	S1	LWB-01	<1.5%	Standard	4	3	3	N/A	1	N/A	N/A	6287.16	11.04	Major	Yes	n/a	n/a
F4	S1	Purchase records	N/A	Standard	No tier	2a	2a	N/A	1	N/A	N/A	0.2	0	De-minimis	N/A	n/a	n/a
F5	S3	Purchasing records	N/A	Standard	No tier	1	1	N/A	1	N/A	N/A	0.2	0	De-minimis	N/A	n/a	n/a

Total Estimated Emissions for Calculation (tonnes CO_{2(e)})

56956.4

u. Uncertainty Calculations

The table below lists evidence attached to the application that demonstrates compliance with the applied tiers in accordance with Article 12 of the MRR.

Attachment	Description
Belt-Way Brochure 2012.pdf	Belt- Way Specs
Belt Weigher 2% Uncertainty.pdf	Belt Weigher 2% Uncertainty
Littleton Weigh Bridge 1% Uncertainty.doc	Littleton Weigh Bridge 1% Uncertainty
Belt Weigher +- 1.25% Uncertainty.pdf	Belt Weigher +- 1.25% Uncertainty
BnM Littleton Example Uncertainty Calculations v3.xls	Littleton Oil Uncertainty

v. Applied tiers

Applied tiers for each source stream

Source Stream Ref.	Emission Source Refs.	Activity Data Tier Applied	Net Calorific Value Tier Applied	Emission Factor Tier Applied	Carbon Content Tier Applied	Oxidation Factor Tier Applied	Conversion Factor Tier Applied	Biomass Fraction Tier Applied
F1	S1	4	3	3	N/A	1	N/A	N/A
F2	S1,S2,S4	3	2a	2a	N/A	1	N/A	N/A
F3	S1	4	3	3	N/A	1	N/A	N/A
F4	S1	No tier	2a	2a	N/A	1	N/A	N/A
F5	S3	No tier	1	1	N/A	1	N/A	N/A

w. Justification for Applied tiers

Justifications for the applied tiers for each major source stream where highest tiers are not currently achieved.

Source Stream Ref.	Emission Source Refs.	Justification for the applied tier	Improvement Plan Reference (where applicable)
N/A	N/A	N/A	N/A

10. Calculation Factors

x. Default Values

The table below lists, for each parameter, where default values are to be used for calculation factors.

Source Stream Refs.	Emission Source Refs.	Parameter	Reference Source	Default Value applied (where appropriate)
F2,F4,F5	S1,S2,S3,S4	NCV & EF	From the EPA website each year.	N/A
F1,F2,F3,F4,F5	S1,S2,S3,S4	OxF	MRR Annex II section 2.3	1

Sampling and Analysis

Do you undertake sampling and analysis of any of the parameters used in the calculation of your CO₂ emissions? Yes

y. Analysis

The table below lists, for each source stream, where calculation factors are to be determined by analysis.

Source Stream Refs.	Emission Source Refs.	Parameter	Method of Analysis	Frequency	Laboratory Name	Laboratory ISO17025 Accredited	Evidence Reference
F1,F3	S1	NCV	Documented In-House Method. No CA 11 based on ISO 1928:2009	Weekly	TES Bretby (www.esg.co.uk)	Yes	n/a
F1,F3	S1	EF	Documented In-House Method CA 9 by instrument analysis using an Exeter Analytical CE	Weekly	TES Bretby (www.esg.co.uk)	Yes	n/a

Source Stream Refs.	Emission Source Refs.	Parameter	Method of Analysis	Frequency	Laboratory Name	Laboratory ISO17025 Accredited	Evidence Reference
			440 Analyser.				
F1,F3	S1	Moisture Content	Documented In-House Method G/86 on ISO 589-2008 (Gravimetric)	Weekly	Bord na Mona Environmental Ltd trading as ANUA	Yes	n/a

Detail about the written procedures for the above analysis.

Where a number of procedures are used details of an overarching procedure which covers the quality assurance of analyses methods and links together individual analytical methods is listed.

Title of procedure	Emissions Procedures Document
Reference for procedure	LI 5.4.1.8 - Analysis: Calorific Value, EF & Moisture Content Ref 4.5
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	Under Article 34 of the MRR. -NCV is a Documented In-House Method by TES Bretby (www.esg.co.uk) CA 11 based on ISO 1928:2009 -EF is Documented In-House Method by TES Bretby (www.esg.co.uk) CA 9 based by instrumental analysis using an Exeter Analytical CE 440 Analyser. -Moisture Content is an In-House Method by Bord na Mona Environmental Ltd trading as ANUA, operating procedure SOP L001. The method of analysis is In-House G/86 based on ISO 589-2003.
Post or department responsible for the procedure and for any data generated	Bord na Mona Environmental Ltd trading as ANUA.
Location where records are kept	Administrative Building, Littleton Briquette Factory.
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008 --- ISO 589-2008 --- ISO/ENC 17025:2005

z. Sampling Plan

Details about the procedure covering the sampling plan for the analysis table above.

The procedure below covers the elements of a sampling plan as required by Article 33 of the MRR. Where a number of procedures are used, details of an overarching procedure which covers the sampling methods and links together individual sampling methods are listed.

Attachment	Description
Littleton Sampling Plan.doc	Littleton Sampling Plan
Littleton Sampling Plan 12 Feb 2014.doc	Littleton Sampling Plan Feb 2014

Title of procedure	Emissions Procedures Document
Reference for procedure	LI 5.4.1.8 - Sampling Plan Ref 4.3
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	Under Article 33 of the MRR. Peat and coal slack (if used) are manually sampled once per shift in accordance with ISO 18238. At the end of each

week the daily samples are compiled into a composite sample using cone and quarter method as per the BS Standard. The sealed samples are then dispatched to Bord na Mona Environmental Ltd and taken in under process intake Lims S.O.P L001. The samples are tested for moisture content (Bord na Mona is accredited with ISO 17025). Further analysis including NCV, Ash, DAF and as received carbon are performed in TES Bretby also accredited with ISO 17025. All results are sent back to Bord na Mona Environmental Ltd (ANUA) where they are compiled and approved.

Post or department responsible for the procedure and for any data generated	Bord na Mona Environmental Ltd trading as ANUA.
Location where records are kept	Administrative Building, Littleton Briquette Factory.
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008---- ISO/ENC 17025:2005----ISO 18238---Lims S.O.P L001

aa. Sampling Plan Appropriateness

The procedure to be used to revise the appropriateness of the sampling plan.

Title of procedure	Emissions Procedures Document
Reference for procedure	LI 5.4.1.8 - Sampling Plan Appropriateness Ref 15
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	The requirements for Corrective & Preventative action form an integral part of the ISO 9001 Management System currently in operation on site. As the monitoring & reporting of greenhouse gas emissions from the site is incorporated into the 9001 Management System, corrective action in relation to any aspect of this procedure will be dealt with in accordance with procedure LI 5.2.2.1 Corrective & Preventative Action.

Peat and coal (if used) are manually sampled once per shift in accordance with ISO 18238. At the end of each week the daily samples are compiled into a composite sample using cone and quarter method as per the BS Standard. The sealed samples are then dispatched to Bord na Mona Environmental Ltd and taken in under process intake Lims S.O.P L001. The samples are tested for moisture content (Bord na Mona is accredited with ISO 17025). Further analysis including NCV, Ash, DAF and as received carbon are performed in TES Bretby also accredited with ISO 17025. All results are sent back to Bord na Mona Environmental Ltd (ANUA) where they are compiled and approved.

Post or department responsible for the procedure and for any data generated	Quality Department Littleton Works.
Location where records are kept	Administrative Building, Littleton Briquette Factory.

Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008---- ISO/ENC 17025:2005----ISO 18238- ---Lims S.O.P L001
Are stock estimates carried out as part of the emission calculations?	Yes

bb. Year-end reconciliations

The procedure to be used to estimate stocks at the beginning/end of a reporting period where applicable. This should include any source streams monitored using batch metering e.g. where invoices are used.

Title of procedure	Emissions Procedures Document
Reference for procedure	LI 5.4.1.8 - Year End Reconciliation Ref 4.2
Diagram reference	Appendix 5
Brief description of procedure.	Gas Oil is determined by supply and delivery adjusted for opening and closing tank levels less the yard mobile plant usage. Consumption is in litres and converted to tonnes by an average density conversion factor in Kg/Lt given annually by the supplier of gas oil. Net CV and Emissions Factor are determined from Irish National Inventory Standards.
	Stores personnel carry out weekly tank dips and record all information on manual logs for year end reconciliation.
	Coal slack used is determined by delivery being deemed to be consumption. The deliveries are weighed in over the main weigh bridge LWB-01. Manual sampling is performed in accordance with ISO 18283. A weekly composite sample is sent to an accredited lab (ISO 17025) for analysis and determination of Net CV, Ash, Total Moisture, DAF and As Received Carbon Content.
	Propane and Acetylene use is determined from purchase records by stores personnel and factors from Irish National Inventory Standards.
Post or department responsible for the procedure and for any data generated	Stores, Littleton Works.
Location where records are kept	Stores, Littleton Works.
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008---- ISO/ENC 17025:2005----ISO 18238- ---Lims S.O.P L001

cc. Tracking Instruments

The procedure used to keep track of instruments installed in the installation used for determining activity data.

Title of procedure	Emissions Procedures Document
Reference for procedure	LI 5.4.1.8 - Tracking Instruments Ref 13, 13.1
Diagram reference	Appendix 4
Brief description of procedure.	<p>The procedure calls for the calibration of the weigh bridge scales (LWB-01) to be calibrated every 2 years in accordance with NSAI standards. The certificate is held and a record of all calibrations recorded on the Littleton Briquette Factory Calibration Log.</p> <p>The calibration of the boiler belt weigher LWB-03 is required every six months. This is carried out by an Irish company called Mechtronics who issue a certificate of conformity. This is also held and a record of all calibrations recorded on the Littleton Briquette Factory Calibration Log.</p>
Post or department responsible for the procedure and for any data generated	Quality Department Littleton Works.
Location where records are kept	Administrative Building, Littleton Briquette Factory
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008---NSAI standards ISO 14001.

11. Management

dd. Monitoring and Reporting Responsibilities

Responsibilities for monitoring and reporting emissions from the installation are listed below:

Relevant job titles/posts and provide a succinct summary of their role relevant to monitoring and reporting are listed below.

Job Title / Post	Responsibilities
General Manager	The General Manager has the responsibility of the day to day running and operation of the plant. The General Manager monitors the effectiveness of staff in relation activity data compilation and updated training if required. The Organisational Chart shows the line of responsibility with regard to operations and monitoring and reporting
Process Engineering	Process Engineering liaises with the Agency on all issues regarding the EUETS system. This responsibility also includes the preparation of all documentation and the cross checks on data through out the year.
Quality Assistant	The Quality Assistant is responsible for the collection and preparation of all samples on site in accordance with ISO 18238.

Attachment	Description
Organisational Chart Littleton.doc	Organisational Chart Littleton

ee. Assignment of Responsibilities

Details of the procedure used for managing the assignment of responsibilities for monitoring and reporting within the installation and for managing the competencies of responsible personnel in accordance with Article 58(3)(c) of the MRR:

This procedure identifies how the monitoring and reporting responsibilities for the roles identified above are assigned and how training and reviews are undertaken.

Title of procedure	Emissions procedures document
Reference for procedure	LI 5.4.1.8 - Assignment of Responsibilities Ref 12
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	The General Manager has the responsibility of the day to day running and operation of the plant. The General Manager monitors the effectiveness of staff in relation activity data compilation and updated training if required. Bord na Mona operates an integrated Management System which includes accreditation to ISO 9001 under which the competence of staff involved in the monitoring and reporting of all emissions from the site have been demonstrated. As part of ISO 9001 Bord na Mona staff are trained internally and externally when required as part of the annual review of the EU ETS.
Post or department responsible for the procedure and for any data generated	Administration Building Littleton Works.
Location where records are kept	Administration Building Littleton Works.
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008

ff. Monitoring Plan Appropriateness

Details of the procedure used for regular evaluation of the monitoring plan's appropriateness covering in particular any potential measures for the improvement of the monitoring methodology:

Title of procedure	Emissions procedures document
Reference for procedure	LI 5.4.1.8 - Monitoring Plan Appropriateness Ref 14 & Annex I C i,ii,iii
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	Internal Quality Audit annually to review and update procedures. All EU ETS staff carry out daily checks on emission sources and source streams to ensure effective control of the installation. Improvement opportunities are

Post or department responsible for the procedure and for any data generated	noted and assessed for annual review. Quality Department Littleton Works.
Location where records are kept	Quality Department Littleton Works.
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008

gg. Data Flow Activities

Details of the procedures used to manage data flow activities in accordance with Article 57 of the MRR:

Title of procedure	Emissions procedures document
Reference for procedure	LI 5.4.1.8 - Data Flow Activities Ref 16.1
Diagram reference	Appendix 7
Brief description of procedure. The description should cover the essential parameters and operations performed	Information gathered and entered as part of the process data flow outlined in 16.1 Data Flow Activities & appendix 7. The flow activities are shown from source data collection to final collation along with assigned responsibilities.
Post or department responsible for the procedure and for any data generated	Quality Department Littleton Works.
Location where records are kept	Quality Department Littleton Works.
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008
List of primary data sources	Peat measured across belt weigher (LBW-03). Coal slack measured across weigh bridge (LWB-01). Analysis for NCV and EF of coal slack and peat are received from TES Bretby. Yard mobile plant diesel measured across meter LOM-01. Gas Oil - Based on deliveries & adjusted for opening and closing stock minus yard diesel with average yearly density being obtained from the supplier.
Description of the relevant processing steps for each specific data flow activity.	All other relevant factors for gas oil are taken from the Irish National Inventory Standards. The amount of Propane and Acetylene used on site is obtained from purchase records and factors are taken from the Irish National Inventory Standards. The calculation of CO ₂ emissions is determined as follows: CO ₂ emissions = activity data * net calorific value * emissions factor * oxidation factor.
Identify each step in the data flow and include the formulas and data used to determine emissions from the primary data. Include details of any relevant electronic data processing and storage systems and other inputs (including manual inputs) and confirm how outputs of data flow activities are recorded	Peat to boiler measured in tonnes by belt weigher LBW-03. Tonnes are recorded daily (imputed manually on Standardized Windows XP system with composite packages for each business section) and a composite weekly sample taken by the quality department is sent for analysis of NCV,

Ash, Total Moisture, DAF and as received carbon.

Coal slack measured in kg across the main weigh bridge LWB-01. Kg recorded daily (imputed manually on Standardized Windows XP system with composite packages for each business section) and a composite weekly sample taken by the quality department is sent for analysis of NCV, Ash, Total Moisture, DAF and as received carbon.

Yard mobile plant consumption measured in litres at LOM-01 (imputed manually on Standardized Windows XP system with composite packages for each business section).

Gas Oil is measured by supply and delivery records adjusted for opening and closing stock less yard mobile plant (imputed manually on Standardized Windows XP system with composite packages for each business section).

The amount of Propane and Acetylene used on site is obtained from purchase records and factors are taken from the EPA website each year.

Submit relevant documents to record data flow activities

Attachment	Description
Littleton Data Flow.doc	Littleton Data Flow
Littleton Data Flow Feb 12, 2014.docx	Littleton Data Flow Feb 2014
Littleton Data Flow Sep 02,2015.docx	Littleton Data Flow updated Sep 02, 2015

hh. Assessing and Controlling Risks

Details of the procedures used to assess inherent risks and control risks in accordance with Article 58 of the MRR:

Title of procedure	Emissions procedures document
Reference for procedure	LI 5.4.1.8 - Accessing & Controlling Risks Ref 16.2
Diagram reference	Appendix 8
Brief description of procedure. The description should cover the essential parameters and operations performed	Risk assessment procedure covers category, hazards, consequences, control measures and risk in relation to EUETS Monitoring and Reporting. Whenever the control system is found to be ineffective or not commensurate with the risks identified, the operator shall seek to improve the control system and update the monitoring plan or the underlying written procedures for data flow activities, risk assessments and control activities as appropriate.

Post or department responsible for the procedure and for any data generated	Quality Department Littleton Works.
Location where records are kept	Quality Department Littleton Works.
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008

ii. Quality Assurance of Metering / Measuring Equipment

Details of the procedures used to ensure quality assurance of measuring equipment in accordance with Article 58 and 59 of the MRR.

Title of procedure	Emissions procedures document
Reference for procedure	LI 5.4.1.8 - Quality Assurance of Metering/Measuring Equipment Ref 16.3,16.2
Diagram reference	Appendix 4 & 5
Brief description of procedure. The description should cover the essential parameters and operations performed	Calibration records for weighbridge scales are recorded on the Calibration Logs (Appendix 4). Calibration is undertaken every 2 years. Health checks on the bridge are performed every year but the seals are not broken unless the bridge is in non compliance. If a non compliance was found then the bridge would be calibrated immediately.
	Boiler belt scales are calibrated twice yearly and details are recorded on the calibration logs (Appendix 4). If there is a non compliance then the belt weigher is calibrated immediately. Daily readings and experience of trained staff allow for minimal disruption to activities.
	Gas oil is determined by supply delivery notes adjusted for opening closing stocks less yard mobile plant (meter recorded). Oil dip logs are recorded (Appendix 5) to cross check with delivery and avoid non compliance.
	Propane & Acetylene are De-minimis and determined from purchase records of cylinders.
Post or department responsible for the procedure and for any data generated	Quality Department Littleton Works.
Location where records are kept	Quality Department Littleton Works.
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008

jj. Quality Assurance of Information Technology used for Data Flow Activities

Details of the procedures used to ensure quality assurance of information technology used for data flow activities in accordance with Article 58 and 60 of the MRR:

Title of procedure	Emissions procedures document
Reference for procedure	LI 5.4.1.8 - Quality Assurance of Information Technology Ref 16, 16.2 & 16.4
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	Activity data is stored on secured hard drives with back up servers recording all information and data during the day. If any data is lost on a particular day, it can be recovered by contacting the IT section. Encoded memory sticks are used to hold the same information off site when data is collected for analysis. Access is controlled to trained EUETS personnel who hold independent security codes.
	Under Article 58 & 60 of the MRR. The operator will ensure the quality of the information technology system used for data flow activities, including process control computer technology. The operator will also ensure that the information technology system is designed, documented, tested, implemented, controlled and maintained in a way to process reliable, accurate and timely data in accordance with the risks identified.
Post or department responsible for the procedure and for any data generated	Quality Department Littleton Works.
Location where records are kept	Quality Department Littleton Works.
Name of IT system used	Standardized Windows XP system with composite packages for each business section.
List of EN or other standards applied	I.S. EN ISO 9001:2008

kk. Review and Validation of Data

Details of the procedures used to ensure regular internal reviews and validation of data in accordance with Articles 58 and 62 of the MRR.

Title of procedure	Emissions procedures document
Reference for procedure	LI 5.4.1.8 - Internal Reviews Ref 14.1,14,16.1 & 16.2
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	Review of currently reported emissions and monitoring data is carried out as part of the ISO 9001 Management System. This review includes a comparison of data from previous years and a cross check with other in-house records to validate data. Recorded fuel consumption is cross checked with purchase records.
	Activity data is stored on secured hard drives with back up servers recording all information and data during the day. Encoded memory sticks are used to hold the same information off site when data is collected for analysis.
Post or department responsible for the procedure and for any data generated	Quality Department Littleton Works.

Location where records are kept	Quality Department Littleton Works.
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008

II. Corrections and Corrective Actions

Details of the procedures used to handle corrections and corrective actions in accordance with Articles 58 and 63 of the MRR:

Title of procedure	Emissions procedures document
Reference for procedure	LI 5.4.1.8 - Corrections and Corrective Actions Ref 15.1,15.2 & 16.2
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	The requirement for Corrective & Preventative action form an integral part of the ISO 9001 Management System currently in operation. Corrective action plan LI 5.2.2.1.

Daily readings and experience of trained staff allow for validity of outputs to be assessed and appropriate actions to be taken if anomalies in data flow are detected. The cause of any error is noted and in the case of a belt weighing system the manufacturer will be contacted immediately. With oil flow meters the Engineering Department are contacted and readings of recent oil flow are recorded to ensure data consistency. If samples are lost or out of range analysis is detected then a back up sample is sent for analysis. In the case of a missing sample, a check procedure is carried out to address the cause of the error.

Post or department responsible for the procedure and for any data generated	Quality Department Littleton Works.
Location where records are kept	Quality Department Littleton Works.
Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008

mm. Control of Outsourced Activities

Details of the procedures used to control outsourced processes in accordance with Articles 59 and 64 of the MRR.

Title of procedure	Laboratory Information Management Information System (LIMS)
Reference for procedure	Control of Outsourced Activities Ref 16.6,16.3,16.5 & LIMS SOP L001
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	Peat & Coal samples are sampled in accordance with ISO 18238 and sent to Bord na Mona Laboratories in Newbridge for testing of moisture content. These Laboratories are accredited with INAB ISO 17025 accreditation. Further analysis including NCV, Ash, DAF and as received carbon are performed in TES Bretby (ISO 17025). All samples for analysis are entered under the Laboratory Information Management System (LIMS S.O.P L001). This system allows for all data to be tracked and a cross check to ensure quality of resulting information (TES Bretby).
Post or department responsible for the procedure and for any data generated	The main weigh bridge (LWB-01) is given a health check once a year with a full calibration and certification to NSAI standards every two years. The calibration of the boiler belt weigher (LWB-03) is carried out on a twice yearly basis and a certificate of conformity issued. All calibration details are recorded on the calibration log.
Location where records are kept	Quality Department Bord na Mona Labs Newbridge.
Name of IT system used	Quality Department Bord na Mona Labs Newbridge. Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008---- ISO/ENC 17025:2005----ISO 18238- ---Lims S.O.P L001----NSAI standards

nn. Record Keeping and Documentation

Details of the procedures used to manage record keeping and documentation:

Title of procedure	Emissions procedures document
Reference for procedure	LI 5.4.1.8 - Record Keeping and Documentation Ref 17
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	The operator shall keep records of all relevant data and information, including information as listed in Annex IX, for at least 10 years. MRR guidelines and any other guidance approved by the agency for the purpose of implementing the Directive and/or Regulations. A hard copy of all data and correspondence with the competent authority is held on site. The information spans back from inception of the EU ETS. Verification details of CO2 emissions are held on file with additional back up electronic data held on secured networks off site.
Post or department responsible for the procedure and for any data generated	Quality Department Littleton Works.
Location where records are kept	Quality Department Littleton Works.

Name of IT system used	Standardized Windows XP system with composite packages for each business section
List of EN or other standards applied	I.S. EN ISO 9001:2008

oo. Risk Assessment

The results of a risk assessment that demonstrates that the control activities and procedures are commensurate with the risks identified:

Attachment	Description
Littleton Risk Assessment.doc	Littleton Risk Assessment
Littleton Risk Assessmen Feb 12-2014.docx	Littleton Risk Assessment Feb 2014

pp. Environmental Management System

Does your organisation have a documented Environmental Management System? Yes

Is the Environmental Management System certified by an accredited organisation? No

12. Changes in Operation**qq. Changes in Operation**

Article 24(1) of Commission Decision 2011/278/EC requires that Member States must ensure that all relevant information about any planned or effective changes to the capacity activity level and operation of an installation is submitted by the operator to the competent authority by 31 December each year. Article 12(3) of the MRR further provides that Member States may require information to be included in the monitoring plan of an installation for the purposes of meeting these requirements.

Details of the procedure used to ensure regular reviews are carried out to identify any planned or effective changes to the capacity activity level and operation of the installation that have an impact on the installation's allocation:

The procedure specified below cover the following:

- planning and carrying out regular checks to determine whether any planned or effective changes to the capacity activity level and operation of an installation are relevant under Commission Decision 2011/278/EC; and
- Procedures to ensure such information is submitted to the competent authority by 31 December of each year.

Title of procedure	Emissions procedures document
Reference for procedure	LI 5.4.1.8 - Changes in Operation Ref 7.9, 7
Diagram reference	n/a
Brief description of procedure. The description should cover the essential parameters and operations performed	No changes in the nature of the operation, functioning or capacity of the installation will be carried out without the prior written agreement of the agency. This includes the use of fuels and the range of activities. The verification process cross checks this procedure twice yearly. The operator will submit any such information to the Agency by the 31 December of each year.
Post or department responsible for the procedure and for any data generated	Quality Department Littleton Works.
Location where records are kept	Administrative Building Littleton Works.
Name of IT system used	Standardized Windows XP system with composite packages for each business section

13. Abbreviations

rr. Abbreviations Acronyms or definitions

Abbreviations acronyms or definitions that have been used in this monitoring plan:

Abbreviation	Definition
N/A	N/A

14. Additional Information

Any other information:

Attachment	Description
Littleton Emissions Procedures.doc.4.doc	Littleton Emissions Procedures (Referenced through out the Document).

Attachment	Description
Uncertainty Letter looking at Carbon Content.doc	Uncertainty Letter looking at Carbon Content
Sampling frequency calculator carbon.xls	Sample frequency calculator carbon
Littleton Emissions Procedures.doc.5.doc	Littleton Emissions Procedures V5
Littleton Emissions Procedures.doc.8.doc	Littleton Emissions Procedures Aug 2015

15. Confidentiality

ss. Confidentiality Statement

It is the Environmental Protection Agency's policy to make information received by it in the course of its work open to inspection by any person on request. This is in accordance with the provisions of the European Communities (Access to Information on the Environment) Regulations 2007 to 2011.

In the event that you considered that some of the information being submitted of a confidential nature, then the nature of this information and the reasons why it should be considered confidential, with reference to the European Communities (Access to Information on the Environment) Regulations 2007 to 2011 and any amendments must be explicitly requested using the facility below. The Board of the Environmental Protection Agency will consider the requests and if the information can be deemed as confidential and necessary.

Notwithstanding any request for confidentiality, the Environmental Protection Agency explicitly reserves the right to release data to the Commission, including emissions and allocations to the public, on the basis that the data will be used for the purposes foreseen in Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

Please tick this box if you consider that any part of your form should be treated as commercially confidential/sensitive: ☐ false

END of Appendix I.