From:	White, Nicola
To:	Hemsley, Tamara
Cc:	Adamus, Aniela; Scott
Subject:	FW: EPR-BX1942IX-V004 Milegate Extension Landfill Site - We need more information about your application
Date:	23 July 2024 12:41:04
Attachments:	image002.png image007.png

Hi Tamara,

Please find below our response in relation to your two queries.

1. **Thermal Input**

We are uncertain as to the inconsistency in values you refer to as the thermal input values are not stated within Table GRA6 (reproduced below). For clarity, the 190 kW under the type of engine in the table refers to the Continuous Power (COP) rating of the proposal plant. The COP is the minimum power the engine can continually operate at, and is not the same as the thermal input of the proposed operations. As stated in our non-duly made response letter of 6 June, The MW thermal input of each engine has been calculated based upon the following equation taken from the Association of Manufacturers of Power Generating Systems (AMPS) method, referenced by Environment Agency guidance:

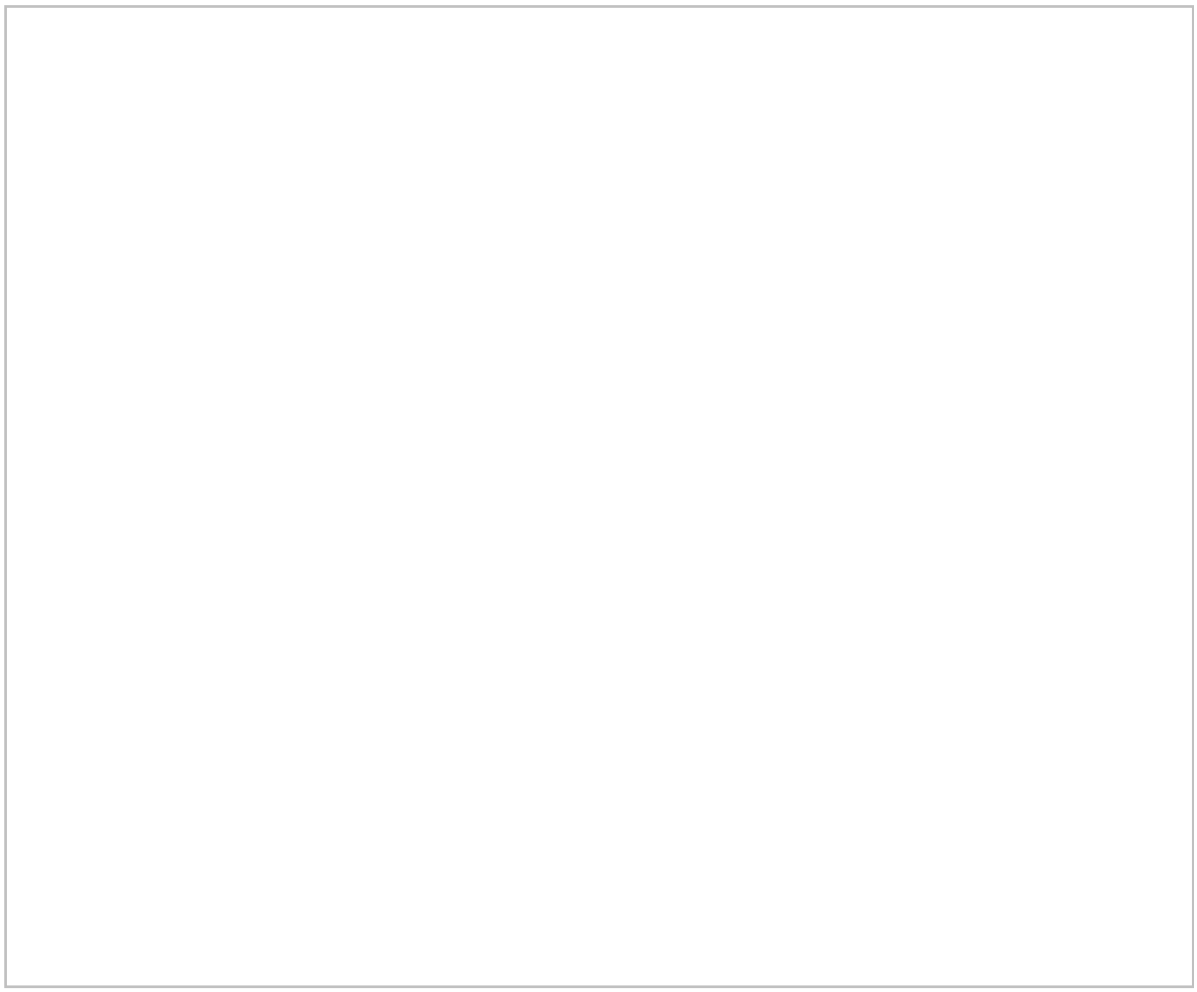
Pth = V*Hg/3.6

Where: Pth is the thermal input power (kW);

V is the micro-generator capacity (m^3/h); and

Hg is the heating value of gas taken from the Digest of UK Energy Statistics (DUKES) produced by the Department for Energy Security & Net Zero (DESNZ) (MJ/h).

Based upon the micro-generator capacity of up to 114 m^3/h from the engine specification (stated as the maximum of the range in table GRA6), and heating value of 19-23 MJ/m3, the estimated MW thermal input for each engine would be between 0.602 and 0.728 MW, therefore the combined MW thermal input for the two engines would be between 1.204 and 1.456 MW. These two values are stated within the MCP spreadsheet as the range of thermal input.



2. Habitats

Thank you for providing details of the additional SPA, the Greater Wash, which we have considered the potential impacts to from the site operations. It is noted that this habitat lies 6.8 km to the east of the site, beyond the Hornsea Mere SPA which is 3.8 km to the east. The already assessed impacts of the site operations on Hornsea Mere are therefore bounding of (and would be greater than) impacts on the Greater Wash.

The Gas Risk Assessment assesses the impact on air quality from the Habitats within 10 km of the site, including Hornsea Mere (and therefore considered to be valid for the Greater Wash too). It has been completed in line with the EA guidance '*Air emissions risk assessment for your environmental permit*', and includes the required Tier 1 air quality screening assessment and Tier 2 Atmospheric Dispersion Modelling for emissions from the landfill surface, engines and flare, calculating Predicted Environmental Conceptrations (PEC) for comparison with air quality standards.

Given the location of the Greater Wash, at greater distance from the site that Hornsea Mere, we consider the following conclusions also applicable for the Greater Wash SPA as stated in section 5.6 of the GRA:

'AQTAG014 (Guidance on identifying 'relevance' for assessment under the Habitats Regulations for PPC installations with combustion processes) provides supplementary

criteria based on the size of the combustion process and distance to European sites to identify those requiring detailed assessment. AQTAG014 concludes that installations where the size of the individual combustion process is less than 5 $MW_{thermal}$ do not require an assessment. The maximum volume of combusted landfill gas in 2036 has modelled to be 527 m^3/h (95%ile). Assuming conservatively a CH_4 content of 70% the resulting maximum CH_4 flow to flare is 368 m^3/h. Assuming further a CH_4 density of 0.73 kg/m^3 and a net calorific CH_4 value of 13.6 kWh/kg (https://www.gov.uk/government/ publications/greenhouse-gas-reporting-conversion-factors-2020) this translates into a net calorific flaring input of 3.7 $MW_{thermal}$ at the maximum modelled flow rate. The combustion process is therefore not considered 'relevant' for assessment under the EA's procedures which cover the Conservation (Natural Habitats &c.) Regulations 1994 (Habitats Regulations) and no detailed assessment of the effect of the releases from the Site's flaring is required.'

The emissions from the landfill surface, engines and flares will be subject to the monitoring regime outlined in the Gas Management and Monitoring Plan, and therefore it is considered that the potential risks to the SPAs have been appropriately addressed in the documents already provided.

We trust that the above addresses your queries and we look forward to the duly-making of the Permit Application.

Kind Regards
Nicola

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My working hours are Tuesday to Thursday 9.00 to 17.30
Upcoming extended leave: 26th July to 3rd September incl.

From: Hemsley, Tamara <tamara.hemsley@environment-agency.gov.uk>
Sent: Tuesday, July 16, 2024 10:59 AM
To: White, Nicola <nicola.white@wsp.com>
Subject: EPR-BX1942IX-V004 Milegate Extension Landfill Site - We need more information about your application

Nicola,

Thank you for the additional information submitted by email on 09/07/2024.

Please note that there is no additional charge to pay for the MCP engines as this is already covered by the substantial variation charge. However, we do require additional information as follows before your application can be duly made:

1. **Thermal Input**
   There is a discrepancy between the thermal input values quoted in the plant list spreadsheet and the Table GRA6: Modelled Flare and Engine Characteristics (pg 13, Landfill Gas Risk Assessment.) Please can you clarify the correct values.

2. **Habitats**
   An additional SPA (Greater Wash) was found to be within the 10km screening distance, and therefore any potential impacts need to be assessed for this site. Please update the relevant documents, paying particular attention to the Landfill Gas Management and Monitoring Plan, ref 20148978.641/A.0. Guidance can be found here: Air emissions risk assessment for your environmental permit - GOV.UK (www.gov.uk)

Please respond by 23 July 2024.

Kind regards

Tamara

Tamara Hemsley BSc (Hons) MSc
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