

Cabinet Meeting: Monday, 06 October 2025

Question from: Keith Woodhouse

Question to: Councillor Durrans, Cabinet Member with responsibility for Public Services and Communities

QUESTION

In CVSH's application they clearly state that the Incinerator will be fuelled by Refuse Derived Fuel at one tonne per hour with a maximum RDF Calorific Value 10 MJ/kg

The calorific value of Refuse-Derived Fuel (RDF) is typically between 8 and 30 MJ/kg, but can vary significantly based on the specific waste composition, moisture content, and processing method used to create the fuel. Lower-quality RDF with more moisture may have a lower heating value, around 8-15 MJ/kg, while higher-quality, processed RDF can reach values of 25 MJ/kg. Understanding the specific composition and processing of RDF is crucial for determining its potential as an energy source.

The i8 1000 has a maximum capacity of 600kg of acceptable RDF and the MJ/kg is variable due to the nature of the skip waste being burnt.

My understanding is that the gas exiting from the flu must be maintained at a constant temperature of 300 degrees to ensure that dioxins and furans are destroyed before entering the atmosphere. Due to bulk loading of fuel into the Incinerator and the variable nature of the RDF it will have a direct effect on the exit gasses reducing it down to around 200 degrees which is a temperature which will not destroy the dangerous Dioxins and Furans entering the atmosphere and presenting a real risk to the general public to both the employees and general public of Sowerby Bridge.

Response

The RDF burnt, is done so in the primary chamber at temperatures of up to 1300 degrees. The gas resulting from the co-incineration of waste enters a secondary chamber and must be raised in a controlled and homogeneous fashion even under the most unfavourable conditions, to a temperature of at least 850 °C for at least two seconds. It is this process that results in the destruction of pollutants such as dioxins and furans.

It is true that dioxins and furans can re-form further downstream during the cooling of flue gases if they pass too slowly through the 200–450°C range, particularly in the presence of fine particulates and trace metals.

To manage this, the I8-1000 system is designed for controlled and rapid cooling of gases, alongside optional flue gas treatment stages (e.g. activated carbon dosing, filtration), ensuring emissions remain compliant.