

8<sup>th</sup> April 2014

**Re: Responses to Comments Made About the Air Quality Assessment  
Undertaken to Support the Planning Application for the TAD Facility to be  
Built at Welland Waste Management, near Theddingworth, Leicestershire**

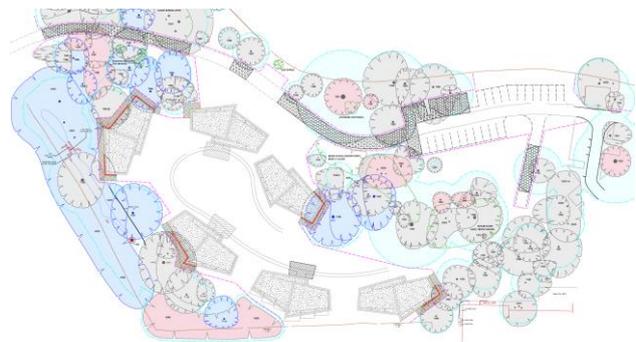
**Introduction**

A planning application was submitted for a Thermophilic Aerobic Digestion (TAD) facility to be built on the Welland Waste Management site near Theddingworth, Leicestershire. GF Environmental Ltd (GFE) undertook a detailed air quality assessment to support the planning application.

Consultation comments have been received from Marrons Planning Ltd on behalf of the owners of Hothorpe Hall, located ~850 metres to the north east of the development site. Included in the consultation comments was a reference to the air quality assessment that was undertaken for the TAD facility. The following document provides a response to those comments made that relate to the air quality assessment for the TAD facility.

**Comment 4. The air quality assessment does not take the impact on the eco-lodges into account.**

Reference is made to the fact that the air quality assessment did not include a number of eco-lodges that are to be built on land adjacent to Hothorpe Hall. Their locations are shown in the figures below.



The air quality assessment for the TAD facility included a number of specific receptor locations, including Hothorpe Hall, to enable the impact of emissions on local air quality could be estimated specifically. As the location of the eco-lodges is ~150 metres to the north-west of Hothorpe Hall, the conclusions from the air quality assessment for Hothorpe Hall are equally valid for the eco-lodges.

Accordingly, annual average nitrogen dioxide concentrations at the eco-lodges are likely to increase by about  $1 \mu\text{g m}^{-3}$ , due to emissions from the TAD facility, which represents a value that is ~2.5% of the AQS objective value. This would be regarded as a **small** increase with a **negligible** impact on local air quality in relation to impact descriptors recommended by Environmental Protection UK.

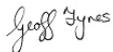
When taken into account with the existing annual average nitrogen dioxide background concentration for the area of  $\sim 10 \mu\text{g m}^{-3}$ , the resulting Predicted Environmental Concentration (Process Contribution plus background) is likely to be  $\sim 11 \mu\text{g m}^{-3}$ , or  $\sim 29\%$  of the AQS objective value and can be screened out as insignificant. Similar conclusions were drawn for other pollutants emitted by the TAD facility.

When considered cumulatively with emissions from a Renewable Energy Generation Facility (REGF) to be built on adjoining land, the resulting annual average nitrogen dioxide concentration, due to emissions from the TAD facility and REGF, may increase by  $\sim 2 \mu\text{g m}^{-3}$ , or  $\sim 5\%$  of the AQS objective value. As before, in terms of impact descriptors recommended by Environmental Protection UK, this represents a **small** increase with a **negligible** impact on local air quality. Similar conclusions were also drawn for other pollutants emitted by the two energy recovery facilities.

Accordingly, emissions from the TAD facility and REGF proposed for development on the Welland Waste Management site near Theddingworth, will not result in an exceedence of air quality standards in the area surrounding the site, and will have a negligible impact on local air quality at the eco-lodges adjacent to Hothorpe Hall.

Reference was also made in the comments received from Marrons Planning Ltd to references made in the air quality assessment about the presence of benzene in the volatile organic compounds (VOCs) that may be released from the chimney of the TAD facility. The air quality assessment stated that benzene would represent a very small proportion of the total VOC emission, and that the assessment was based upon a worst case scenario, assuming that all of the VOCs were present as benzene. This greatly overestimated the significance of the impact of the emissions.

In reality, it is likely that benzene will only be present in the emissions from the TAD facility in trace quantities, if at all, and that resulting ground level concentrations will be considerably lower than the health-based air quality standard of  $5 \mu\text{g m}^{-3}$ . Accordingly, local residents will not be exposed to levels of benzene that would pose a significant risk to their health.



Via e-mail  
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