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CAPL/144469/A3/WL/ML

A Ryley Esq
West Northamptonshire Development Corporation
PO Box 355
Franklins Gardens
Northampton
NN5 5WU

Will Lusty BA (Hons) Dip TP MRTPI
E: wlusty@savills.com
DL: +44 (0) 1223 347246
F: +44 (0) 1223 347111

Unex House
132-134 Hills Road
Cambridge CB2 8PA
T: +44 (0) 1223 347 000
savills.com

Dear Andrew

CHANGE OF USE OF EXISTING CONCRETE BAYS / STRUCTURES TO USE AS GREEN WASTE & BIO SOLIDS COMPOSTING FACILITY 09/0041/FULWNC (PLANNING PORTAL REFERENCE PP-00699914)

Thank you for sending through the various third party comments in relation to the above planning application.

Please see below our response to comments made. We have shown third party comments in italics followed by our response.

Northampton Borough Council Environmental Health Officer 30 June 2009

1) *The Environment Agency limits on bio aerosols are quoted as maximum values. The predictions are in the form of maximum mean 8-hour concentrations. Is this compatible or acceptable as an assessment against the standard?*

Cambridge Environmental Research Consultants are able to confirm that:

To mean anything, a "maximum level" has to have an associated averaging time, whether it is a maximum concentration averaged over a second, or an hour, or 24 hours, etc.

The Environment Agency (EA) Position Statement does not specify an averaging time for the maximum bioaerosol levels. The Environment Agency's guidance: "*An Environmental Risk Management Framework for Composting Facilities in England and Wales*" does specify an averaging time, of eight hours.

The above document gives very detailed guidance on how to approach a qualitative assessment of bioaerosols from composting. Naturally, we followed this EA guidance as closely as possible. Annex IV of the document gives an "Example of quantitative risk assessment", i.e. an example dispersion modelling study for bioaerosols from composting. It is here that the averaging time is stated:
"The EA reference level of 1000 Cfu /m^3 (8hr average) (EA 2001. Technical R&D Report P1-315/TR Health Effects of Composting) is used."
"Maximum 8 hourly average concentrations are predicted for all receptors".

2) *Examination of the graphical plots of concentration of bio aerosols would indicate that they are centred on the eastern bay. This implies that emissions from the western bay have not been*

considered. Although the information accompanying the application indicates only the eastern bay will be used for composting, the application is for permission to use both bays and therefore only half the potential emissions have been predicted.

The western bay will only be used for the storage of biosolids as is the case at present. The biosolids stored in the western bay once the composting use is in operation, will be stored there either prior to their composting with green waste or prior to export for agricultural purposes. Therefore the red line for the application was drawn around the western bay and bioaerosol emissions were not assessed in the western bay.

3) *The level of uncertainty of many of the model's input parameters is stated as being significant and this is a concern.*

Cambridge Environmental Research Consultants are able to confirm that:

The aforementioned EA guidance that was followed: *"An Environmental Risk Management Framework for Composting Facilities in England and Wales"*, states that every assessment of bioaerosols from composting must be clear and open about any uncertainties as a matter of course.

As described above this EA guidance document was followed as closely as possible. Specifically, it has the following advice regarding uncertainty:

"-communicate where the greatest uncertainties lie.

- be honest about uncertainties. Use 'what if' questions, to explore the importance of uncertainty to the assessment of risk (sensitivity analysis)."

In our bioaerosol report, for example, we "communicate where the greatest uncertainties lie" as the guidance specifies. This uncertainty in the input data is currently unavoidable, for any similar modelling study, as it simply reflects the current limitations in the guidance, measurement techniques and available data for both bioaerosols and odour. We are simply acknowledging this in the report.

We carefully considered these uncertainties, and addressed them as best we could, with the information and guidance available to us. This involved extensive sensitivity tests ("what-if" questions), and making what we consider to be conservative assumptions, for the input parameters. We then go on to say:

"However, even given these uncertainties, the predicted results suggest that the concentration of bioaerosols at any sensitive receptor, due to the proposed composting facility, will either be within threshold levels or lower than those before the start of the composting process, and hence be within the "appropriate levels" suggested by the Environment Agency position.

In other words we consider that we have addressed the unavoidable uncertainty in the *input data*, in order to improve the reliability of the *results*.

CLEAN 3 July 2009, Billing Parish Council 6 July 2009, Ecton Parish Council 4 July 2009 and Cogenhoe & Wishton 6 July 2009

4) *It is also notable that the 2005 odour concentration plot made by CERC for Anglian Water in the current planning application is very different from and does not spread nearly as far as the 2005 odour concentration plot for Anglian Water's previous planning application, made by Mott Macdonald. Both of these plots are meant to show odour concentrations from Anglian Water's sewage works and represent the same year and the same location.*

The Mott Macdonald odour concentration plot which CLEAN would like the planners to examine (see Appendix 1) is from the previous planning application and is supposed to reflect the proposed benefits of ferric chloride dosing and the more frequent removal of biosolids from Anglian Water's site. It is incredible in comparing the two plots that the CERC plot shows contours that are many orders of magnitude lower than the other plot, with no obvious explanation and suggests that the data as plotted by CERC for the present planning application is mistaken and not reliable.

It is entirely irrelevant to compare these two plots. It is expected and logical that the two plots give different values and contour shapes, because they do not represent the same situation at all– the two were never intended to be comparable. The situation modelled in both the Mott MacDonald modelling and the CERC modelling is clearly set out in each report.

The CERC modelling does not take into account the non-composting related odour emissions (i.e. the water treatment works odour emissions). The Mott MacDonald modelling does.

There is an "obvious explanation" for the differences, then, in that it is repeatedly and clearly stated that the CERC modelling scenario represents ONLY the composting and associated stored biosolids emissions:

"Note that, in order to focus on the impact of the proposed composting facility, only sources relating to the either the biosolids storage or composting facility were considered in this modelling study; no other potential sources of odour were investigated."

This approach was considered to be the fairest way of demonstrating the effect of the composting operations.

5) *"Anglian Water state that the new facility will "not exacerbate existing odours", but the data they supply is for the year 2007 and this predates the planning conditions imposed in the previous planning application. To accept Anglian Water's baseline for odours as 2007 is to accept the level that both Ofwat and the Jacobs report deemed unacceptable and which was shown to demonstrate bad site management."*

Cambridge Environmental Research Consultants are able to confirm that:

It is not clear what the "2007" refers to in this excerpt from Billing Parish Council's letter. The CERC odour dispersion modelling study doesn't attempt to set an overall odour "baseline". The odour modelling input data does not represent emissions from the WwTW, except for biosolids storage. The modelling simply models a before and after situation that concentrates only on what would change if composting were implemented (i.e. biosolids storage would be replaced by composting and limited remaining biosolids storage).

Perhaps it is this biosolids storage emission rate that is being referred to above, as it was taken from the 2007 Mott MacDonald odour study report. This value is an estimate of a typical odour emission rate from the stored biosolids. The CERC odour dispersion modelling report describes how an investigation of biosolids storage emission rates, including consideration of study reviewing over a hundred measurements at similar sites, was carried out to ensure that the emission rate used in the dispersion modelling was representative.

6) *"It is incredible in comparing the two plots that the CERC plot shows contours that are many orders of magnitude lower than the other plot, with no obvious explanation and suggests that the data as plotted by CERC for the present planning application is mistaken and not reliable."*

Cambridge Environmental Research Consultants are able to confirm that:

As noted previously, it is entirely irrelevant to compare these two plots directly and expect them to have similar patterns and values, as the water treatment works odour emissions are not included in the modelling.

That said, these two plots represent two valid (if different) situations, and can be properly considered in context with the scenarios that they represent, so it is important to be clear on their interpretation. As a difference of a single order of magnitude denotes a ten-fold difference, there is clearly not a difference of "many orders of magnitude" between the two.

We now look forward to determination of the application, which we understand is currently programmed to be considered by Committee on Tuesday 29 September.

Should you have any questions or should you require anything further in determining the application, please contact me.

Yours sincerely

Will Lusty BA (Hons) Dip TP MRTPI
Associate

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