


Our ref: PT/MTW/GM10710/001

Date: 3<sup>rd</sup> May 2022

Your ref:

  
Gladman Developments Ltd  
Gladman House  
Alexandria Way  
Congleton  
CW12 1LB

Dear Paul,

### **Review of the Peer Review Comments from Phlorum – Odour, Land at Hempsted Lane, Gloucester**

Further to your email dated 5<sup>th</sup> April 2022, we have undertaken a detailed review of the Peer Review Comments provided to you via email dated 5<sup>th</sup> April 2022, from Ms Joann Meneaud at Gloucester County Council (GCC) in response to the odour assessment submitted for the proposed development at Land at Hempsted Lane, Gloucester.

Phlorum have previously modelled odour emissions from the Netheridge Waste water Treatment Works (WwTW) as part of the Cordon Sanitaire report written on behalf of GCC in September 2019. The detailed odour modelling assessment undertaken by Wardell Armstrong in June 2021 as part of the planning application for the proposed development, predominantly used odour emission rate data from within the Phlorum report. Detailed and extensive discussion was also undertaken with Severn Trent (ST), the operator of the Netheridge WwTW, to discuss the upgrades that have taken place at the WwTW since Phlorums assessment report in 2019. As a result of this consultation, emission rates for two sources; the Primary Settlement Tanks (PSTs) and the Final Settlement Tanks (FSTs), were reduced from those used within the Phlorum report.

Following submission of the planning application, it is understood that GCC instructed Phlorum to then undertake a peer review of Wardell Armstrong's odour assessment report.



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The main argument put forward by Phlorum in their review of the Wardell Armstrong odour assessment, is that the use of the reduced odour emission rates for the PSTs and FSTs is not robust. Phlorum state that our assessment should have applied ‘the precautionary principle’ and used the higher emission rates used in their report. Extensive consultation was undertaken with ST to discuss and agree the emission rates used in our assessment, in order to make them more representative of current conditions at the WwTW. Phlorum counter this argument by stating they also undertook consultation with ST and agreed that the higher emission rates were more applicable. However, later in their comments they explain that this consultation was undertaken when they were preparing their 2019 cordon sanitaire assessment and report – i.e. before any upgrades took place at the WwTW. Therefore, it is logical that ST would agree higher emission rates at this time (as this would have been representative of odour emissions from the WwTW at that time) and so we consider this point to be invalid. Also, as new information was available to us that indicated the emission rates at these sources would be reduced, it seems counter-intuitive to then ignore this and still apply worst-case emission rates as this simply over estimates the odour impact of the WwTW. The use of the reduced emission rates in our assessment was based on extensive consultation with ST and our professional judgment.

Phlorum state that as ST ‘likely do not carry out their own Olfactometric Sampling’ at the WwTW, they ‘might not be able to offer an empirically evidenced response as to how the plant upgrades have influenced odour emission rates’. Whilst Phlorum are correct that ST do not undertake odour sampling themselves, our consultation was undertaken with senior process and design engineers, as well as the site manager of the Netheridge WwTW, who will be best placed to advise on odour conditions at the WwTW and how any potential upgrades or changes to the plant have/will impact/change odour levels. We were informed that upgrades to the PSTs and FSTs, and changes to the sludge treatment processes, have resulted in reduced emissions. Therefore, in the absence of odour sampling data from these sources, it is logical to then apply reduced emission rates from library values, as we have done in our assessment.

Wardell Armstrong were not able to obtain information on the new sludge building Odour Control Unit (OCU) in order to accurately model emissions within the assessment. Instead, the higher emission rates from the untreated air stream of the sludge thickening building (taken from the 2019 Phlorum report) were used in our assessment in order to be robust. Phlorum have argued that as OCU’s release their emissions from tall stacks at much higher velocities, our assessment has underestimated the potential for this OCU to increase odour impact off site. Whilst it is true that many OCU’s do emit treated air streams from tall stacks,



this is not always the case and we do not have any information on the size of the stack used at the Netheridge WwTW for this OCU. However, as this new OCU is currently in use, this would mean the air released to atmosphere would be much less odorous than the unabated emissions previously emitted from the building vents (that we have used in our assessment). It is acknowledged that higher velocities from the OCU stack have the potential to disperse odours over a wider area, however the odour emissions will likely be significantly reduced as they have been treated before release to atmosphere.

Phlorum state that the measured emission rate of the existing OCU on site was a 'much higher' emission rate than we used for the sludge building vents. Whilst this is true, the emission rate used in the 2019 Phlorum report for the existing OCU is taken from a combined odour source that uses treatment methods (picket fence thickeners) that are no longer used at the Netheridge WwTW. The 2019 Phlorum report states that these emissions given for this OCU are likely to be worst case for this reason, and therefore we consider these emission rates are not representative of current conditions at the WwTW.

Phlorum argue that existing complaint data shows that odour impact is evident at large distances from the WwTW and therefore odours would also be detected at similar distances at the proposed development. We do not consider this to be accurate as 11 of the 12 odour complainants are located to the south of the WwTW and therefore this indicates there is potential for odour impact in this area (the proposed development is located to the north east). The assessment undertaken by Wardell Armstrong included several site visits and used NWP met data. The site visits and data both suggest that odour impact at the proposed development will be not significant.

## **Conclusions**

A review of the comments made by Phlorum on behalf of GCC, in relation to the odour assessment undertaken in support of the planning application for the proposed development at Land at Hempsted Lane, Gloucester has been undertaken.

It is considered the points raised by the Phlorum have already been given appropriate consideration within the odour assessment, and any decisions made within the assessment are based on extensive consultation with Severn Trent and professional judgement. It is considered that the odour assessment undertaken by Wardell Armstrong is robust and demonstrates that the risk of odour impact within the proposed development site is not significant.



We trust the above is clear however, please let us know if you require any further information.

**Yours sincerely**  
**for Wardell Armstrong LLP**

