

13 February 2023

Kate Thomas
Natural Resources Wales
By Email Only

Our Ref: 416.00798.00038

Your Ref: PAN-018305

Dear Kate,

**RE: POWYS COUNTY COUNCIL – ENVIRONMENTAL PERMIT APPLICATION – SCHEDULE 5
RESPONSE**

We are writing on behalf of Powys County Council (PCC) in response to the request for further information issued on 12th January 2023, in support of the Environmental Permit (EP) application for the North Powys Bulking Facility, Abermule.

For clarity, the questions from Natural Resources Wales (NRW) are listed in the left-hand column with the responses from SLR in the right-hand column.

Yours sincerely,
SLR Consulting Limited



Heather Kerr
Associate Consultant

Cc Viktoria Karagits – WRAP Cymru
Ashley Collins – Powys County Council

Enclosures:
Enclosure 01 Updated Odour Impact Assessment and Odour Management Plan
Enclosure 02 Updated Fire Prevention and Mitigation Plan
Enclosure 03 Correspondence from NRW

1. ODOUR IMPACT ASSESSMENT (OIA)

Reference Number	Detail	Response to Question
<p>The following documents have been included in this response:</p> <p>Updated Odour Impact Assessment '230208.416.00798.00038_North Powys OIA_v1.3.pdf'</p> <p>Updated Odour Management Plan '230208.416.00798.00038_OMP_v1.2.pdf'</p> <p>Supporting documents 'Appendix F - Odour reports.zip'</p> <p>The updated documents are included as Enclosure 01 of this response.</p>		
1.1	<p><i>The sampling reports including full details of the sampling methodology used to carry out odour monitoring of food waste and residual waste at the Rhayader bulking facility in April 2022 and the odour monitoring of Absorbent Hygiene Products (AHP) at the Crymlyn Burrows waste management facility in January 2021.</i></p>	<p>Details of sampling methodology are presented within Section 4.1 of the OIA. For the odour monitoring of area sources, the measured concentration has been converted into an area emission rate by the calculations outlined in BS EN 13725 for the Lindvall hood method. Further details on this are now presented in Appendix E of the OIA. Odour monitoring reports are provided electronically in file 'Odour reports.zip', as outlined in Appendix F.</p>
	<p><i>This should show that the waste that was sampled on both occasions is representative of the waste that will be accepted at the proposed facility and represents a reasonable worst-case scenario (with regards to age, nature, condition of wastes sampled).</i></p>	<p>Details regarding the representativeness of the waste sampled have been added in Section 4.2 of the OIA, and are summarised below:</p> <p><u>Residual and food waste</u></p> <p>Odour monitoring of residual and food waste was undertaken at the Rhayader bulking facility in April 2022 during normal operations.</p>



Reference Number	Detail	Response to Question
		<p>The residual waste received at the Rhayader bulking facility was collected from a catchment area with the same demographics as the area which would be served by the Abermule WTS. The food waste received at the Rhayader bulking facility was collected from the same catchment area as would be served by the Abermule WTS. The odour monitoring was undertaken on 'freshly tipped' residual/food waste (within 1 hour of being deposited from collection vehicles) during a period of mild temperatures.</p> <p>Odour emissions from waste are observed to be significantly elevated following agitation (i.e. through movement of the waste).</p> <p>As such it is determined that the age, nature and condition of the residual and food waste monitored at the Rhayader WTS is considered representative of that which would be received at the Abermule WTS, and reflects a reasonable 'worst-case' scenario.</p> <p><u>Food waste stored within skips</u></p> <p>Odour monitoring of food waste stored within skips was undertaken at the Rhayader bulking facility in April 2022 during normal operations.</p> <p>The food waste received at the Rhayader bulking facility was collected from the same catchment area as would be served by the Abermule WTS.</p> <p>Odour monitoring was undertaken on 'aged' food waste stored at the Rhayader WTS, stored for a period of 24- and 48-hours, as would be the practice at the Abermule WTS.</p>

Reference Number	Detail	Response to Question
		<p>As such it is determined that the age, nature and condition of the food waste stored within the skips, as monitored at the Rhayader WTS, is considered representative of that which would be received at the Abermule WTS, and reflects a reasonable ‘worst-case’ scenario.</p> <p><u>AHP</u></p> <p>Odour monitoring of AHP was undertaken at the Crymlyn Burrows WTS in January 2022 during normal operations.</p> <p>AHP waste typically comprises nappies, sanitary pads, tampons, adult incontinence products and personal care wipes. As such, AHP waste has a comparatively low organic content, and therefore odour emissions from AHP waste are not considered to vary during periods of elevated temperatures.</p> <p>AHP waste is mostly domestically derived (from the general population), therefore the composition of this waste type across catchments is observed to be relatively uniform.</p> <p>As such it is determined that the age, nature and condition of the AHP waste monitored at the Crymlyn Burrows WTS is considered representative of that which would be received at the Abermule WTS, and reflects a reasonable ‘worst-case’ scenario.</p>
1.2	<i>The accredited laboratory report showing the concentrations measured during their monitoring campaigns.</i>	<p>Laboratory reports for odour analysis are provided electronically in file ‘Odour reports.zip’.</p> <p>Appendix F has been added within the OIA to provide further details.</p>

Reference Number	Detail	Response to Question
1.3	<i>The odour emission rate and odour concentration calculations for the sources included in tables 6-2 & 6-3 of the OIA.</i>	<p>Details of sampling methodology are presented within Section 4.1 of the OIA. For the odour monitoring of area sources, the measured concentration has been converted into an area emission rate by the calculations outlined in BS EN 13725 for the Lindvall hood method as outlined in Section 4.1. Further details on this are also presented in Appendix E of the OIA.</p> <p>The odour emission rates (ou_E/s) presented in Tables 6-2 and 6-3 have been calculated as follows:</p> <ul style="list-style-type: none"> • Area odour emission rate ($ou_E/m^2/s$) x source surface area (m^2); and • odour concentration (ou_E/m^3) x airflow rate (m^3/s). <p>All of these parameters are presented in Table 6-2 and Table 6-3.</p> <p>As presented in the footnotes of Table 6-3, a small amount of further data extrapolation (continuation of the observed trends in the monitoring data) was undertaken, as described.</p> <p>The 'data source' columns in tables 6-2 and 6-3 within the OIA have been updated to clearly signpost to the source data presented in appendix E.</p>
1.4	<i>Consideration of how odour could accumulate overnight and on the weekends within the bulking facility when the facility is not operational (no fans), and how this could impact the nearby sensitive receptors when the fans are turned on at the start of each day.</i>	<p>The ventilation system <i>would</i> be active outside of operational hours. Between the hours of 6pm and 7am the ventilation system would be in operation at a reduced rate. Therefore, there would be no 'accumulation of odours' within the building overnight.</p>

Reference Number	Detail	Response to Question
		Section 3.2 of the OIA and section 2.1 of the OMP have been updated to reflect this.
1.5	<i>A document control table including relevant details such as document revision status, author, reviewer etc.</i>	A document control table has been added on second page of the OIA and OMP.
1.6	<i>Full details as to how fugitive emissions are going to be minimised during the day-to-day operations, this should include the ventilation strategy for the building and the frequency/duration that the roller shutter doors will be open etc.</i>	Section 3.2 of the OIA has been updated to highlight the additional measures, complementary to the ventilation system, which would be adopted to minimise fugitive emissions from the building (transposed from Section 3.1 of the OMP). Details on the ventilation system are presented in section 3.2 of the OIA and section 2.1 of the OMP.
1.7	<i>Details on how the impact assessment & odour management strategy has considered how odour emissions may vary with increased temperatures over the summer months and provide an updated OIA to include how this will be mitigated to ensure it will not result in increased impacts at receptors over the summer period.</i>	The odour emissions from waste types which contain a significant proportion of organic materials can vary depending on temperature. This variation in odour potential is as a result of the influence of temperature upon biological activity within the waste. An increase in temperature can result in a corresponding increase in biological activity, and therefore elevated odour emissions from the waste. Residual waste and food waste typically comprises a significant proportion of organic material. AHP waste and rags/textiles typically have a comparatively low organic content. As such, odour emissions from AHP waste and rags/textiles are not considered to vary during the summer months.

Reference Number	Detail	Response to Question
		<p>Odour emissions from residual and food waste do have the potential to vary during the summer months. Odour monitoring of residual and food waste was undertaken at Rhayader in April, during mild conditions; daily temperatures over the week preceding the monitoring, were between 14°C and 17°C. Whilst it is noted that daily temperatures exceed this for periods within the summer months, it is important to consider that a highly precautionary approach has been adopted for the derivation of odour emission rates from this monitoring data (as applied within the modelling), as detailed further below.</p> <p>As detailed in Section 3.2 of the OMP, Waste Acceptance Procedures (WAP) would be adopted, thus ensuring that waste received is in a suitable condition (i.e. not in an advanced state of decomposition and/or excessively odorous).</p> <p>It is also important to consider that odour emissions from waste are observed to be significantly elevated following agitation (i.e. through movement of the waste). When waste is left undisturbed, odour emissions from that waste are observed to steadily decrease.</p>



Reference Number	Detail	Response to Question
		<p>The odour monitoring at Rhayader was undertaken on ‘freshly tipped’ residual and food waste (within 1 hour of being deposited from collection vehicles). As such, the monitoring data represents the elevated odour emission rate following agitation. This elevated emission rate measured following agitation has then been applied within the modelling for all residual and food waste stored at the site. This represents a precautionary approach, it is anticipated that (under normal operations) waste stored at the Site would be left undisturbed for an extended period following tipping/handling operations in the morning.</p> <p>The odour emission rate measured at Rhayader in April during mild conditions has been applied within the dispersion modelling during the winter months, when temperatures (and therefore potential odour emissions) may be lower.</p> <p>Sensitivity analysis has been undertaken to establish the ‘worst-case’ modelling approach. As detailed in Appendix C, modelling of waste as uncovered area sources results in greater predicted odour concentrations surrounding the site than consideration of the containment provided by the building and ventilation system. As such, the results presented within Section 7 of the OIA are in consideration of the worst-case modelling approach (i.e. uncovered area sources).</p>



Reference Number	Detail	Response to Question
		<p>As detailed above, the odour modelling assessment has been undertaken in consideration of odour emission rates from residual/food waste in consideration of a precautionary approach (i.e. odour monitoring during mild conditions on recently agitated waste). Odour emissions from AHP waste and rags/textiles would not significantly vary during warmer temperatures. A suitably precautionary approach has also been adopted within the dispersion modelling approach (i.e. no reduction factor applied over the winter months, odour emission rate following agitation applied at all times, and sensitivity analysis has been conducted). As such, any potential variation in odour emissions from residual/food waste over the summer months (above that measured during mild conditions in April 2022) would be covered within the already highly precautionary assessment approach adopted within the OIA provided.</p> <p>Sections 4.2 and 6.2 of the OIA have been updated (where relevant) to present the additional information provided above.</p>

2. FIRE PREVENTION AND MITIGATION PLAN (FPMP)

Reference Number	Detail	Response to Question
The updated Fire Prevention and Mitigation Plan has been included as Enclosure 02 of this response.		
2.1	<i>Detailed measures that will be in place to demonstrate that the FRS will have immediate access to the water in the tank and that this will not be infringed in any way, including how the FRS will access the water from the tank.</i>	Section 3.6.2 of the FPMP has been updated to describe the measures in place to ensure that the FRS will have immediate access to water in the tank.
2.2	<i>Procedures in place to ensure that the water tank remains full.</i>	Section 3.6.2 of the FPMP has been updated to include the measures implemented on site to ensure that the water tank remains full.
2.3	<i>Procedures in place to monitor the water level in the tank and subsequent action taken if water level decreases.</i>	Section 3.6.2 of the FPMP has been updated to include that site operatives will monitor water levels in the tank daily, with remedial action taken immediately should levels drop.
2.4	<i>Procedures in place to ensure the effective maintenance of the tank.</i>	Procedures in place to ensure effective maintenance of the tank, have been included within Section 3.6.2 of the FPMP.
2.5	<i>Procedures in place to ensure that the water is safe to use by the FRS (i.e. the water has not been left there for so long that it becomes stagnant and therefore potentially contaminated)</i>	Procedures in place to ensure that the water is safe to use by the FRS and does not become stagnant and potentially contaminated are included within Section 3.6.2 of the FPMP.



3. ACCIDENT MANAGEMENT PLAN (EMS.S6.01)

Reference Number	Detail	Response to Question
3.1	<i>The steps that will be taken to minimise any impact if flooding does occur.</i>	Following email correspondence between SLR and NRW, it was agreed that this question was not required. The email correspondence is included as Enclosure 03 of this response.
3.2	<i>Confirmation that the site is registered with Flood Warning Direct.</i>	Following email correspondence between SLR and NRW, it was agreed that this question was not required. The email correspondence is included as Enclosure 03 of this response.