| | |
|---|---|
| **From:** | Jason Pene |
| **To:** | Sean Mooney |
| **Cc:** | Andrea Brabant |
| **Subject:** | HPE CM: RE: HPE CM: Application CRC185584 - Tegel Response to PDP Review of Protein Recovery Odour Management System and Update to Proposed Ventilation Upgrade |
| **Date:** | Wednesday, 23 October 2019 4:25:06 PM |
| **Attachments:** | image001.png<br>image002.png<br>image003.png<br>1003371-Biofilter Design Parameter Review Update Oct 2019-Update to Appendix B of PWP Response.pdf |

Hi Sean

The 0.9m depth and dimension details (2 beds of 25m x 40m) referred to in Appendix B of our response to PDP's review (dated 7 October 2019) were based on the original biofilter design. I've now confirmed the actual dimensions of the biofilter as it stands with Tegel and the depth is 1.2m and dimensions of the beds are 20m x 38m. Attached is an updated version of Appendix B of the response based on the dimensions.

The modifications to bed dimensions in Appendix B (smaller bed area but slightly larger bed volume) do not change conclusions of the response that the biofilter is adequately sized to treat the increased extraction flow proposed as part of the PRP ventilation upgrade.

I hope that clarifies things.

Nga Mihi | Kind regards,
**Jason Pene | Senior Environmental Engineer**
**Tonkin + Taylor - *Exceptional thinking together***
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**From:** Sean Mooney <Sean.Mooney@ecan.govt.nz>
**Sent:** Wednesday, 23 October 2019 1:59 PM
**To:** Jason Pene <JPene@tonkintaylor.co.nz>
**Subject:** RE: HPE CM: Application CRC185584 - Tegel Response to PDP Review of Protein Recovery Odour Management System and Update to Proposed Ventilation Upgrade

Jason,

I just had a phone call from PDP, they are finalising their review but had one point of clarity the wanted me to run past you.

In the AEE and the response you supplied below, the has been two different depths of the biofilter referred too (0.6 m and 0.9 m). Can you confirm that the correct depth of the biofilter is 0.9 metres?

Regards

Sean

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**From:** Jason Pene <JPene@tonkintaylor.co.nz>
**Sent:** Tuesday, 8 October 2019 3:21 PM
**To:** Sean Mooney <Sean.Mooney@ecan.govt.nz>
**Cc:** Andrea Brabant <ABrabant@tonkintaylor.co.nz>; Robyn Marshall <robyn.marshall@tegel.co.nz>
**Subject:** HPE CM: Application CRC185584 - Tegel Response to PDP Review of Protein Recovery Odour Management System and Update to Proposed Ventilation Upgrade

Hi Sean

As discussed in relation the above consent application, please find attached a response on behalf of Tegel Foods Ltd to the review of the protein recovery plant (PRP) odour extraction and treatment system conducted by PDP, dated 12 June 2019.

Thanks for the opportunity to respond to the issues raised in the PRP review. The attached document also describes modifications to the proposed upgrade of the PRP extraction system.

Let us know if you require anything else to continue the application process or have any questions.

Nga Mihi | Kind regards,
**Jason Pene | Senior Environmental Engineer**
**Tonkin + Taylor - *Exceptional thinking together***
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Tegel Christchurch Processing Plant Updated Biofilter Design Parameters

| Flows | Value | Unit | Comment |
|---|---|---|---|
| Existing airflow | 7.4 | m3/s | 2017 Active Refrigeration design report |
| = | 26640 | m3/hour | |
| Proposed airflow | 12.6 | m3/s | Updated PRP ventilation upgrade plan |
| = | 45360 | m3/hour | |
| | | | |
| Bed Dimensions | | | |
| Beds | 2 | | |
| Width | 20 | m | |
| Length | 38 | m | |
| Depth | 1.2 | m | |
| Total bed area | 1520 | m2 | |
| Total bed volume | 1824 | m3 | |
| | | | |
| Existing design parameters | | | |
| Gas volume to bed area ratio | 17.5 | m3/m2/h | Well below 50 m3/m2/h recommended by ARC |
| EBRT | 246 | s | Well above 30 s recommended by EPA Victoria |
| | | | |
| Proposed design parameters | | | |
| Gas volume to bed area ratio | 29.8 | m3/m2/h | Well below 50 m3/m2/h recommended by ARC |
| EBRT | 145 | s | Well above 30 s recommended by EPA Victoria |
| | | | |
| Guideline design parameters | | | |
| TP 152 Gas volume to bed area ratio | 50 | m3/m2/h | ARC TP 152* |
| Equivalent EBRT at 1m depth | 72 | s | ARC TP 152* |
| EBRT | 30 | s | EPA Victoria** |

*Auckland Regional Council. 2002. "Assessing Discharges of Contaminants into Air - (Draft)". Technical Publication 152.
** EPA Victoria. 2017. "Selected scheduled premises prompt sheets". Publication 1659, Sheet D02 Rendering, Recommended biofilter design