

Backstop Improvement Condition Extension Report

This document has been submitted to explain and evidence the need for an extension to the 12-month Backstop Improvement Condition, which has been issued to Dŵr Cymru as part of the Review of Permits process, and the subsequent investment programme of works.

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| WwTW Name | PRENTEG STW |
| Permit Number | CG0015001 |
| Catchment | Meir |
| Water Body | Glaslyn - tidal to Afon Croesor |
| Can the site meet the total phosphorus backstop limit now | No |
| Explanation | <ul style="list-style-type: none"> • No phosphorus removal processes currently installed on site. • Current long-term performance 5.7 mg/l average, peaks of above 11mg/l in dry months • Not achieving P Backstop. |
| Can the site meet the backstop in 12 months | No |
| Explanation | <ul style="list-style-type: none"> • Current on-site assets and process cannot be optimised further. • Investment and increased footprint required to adequately address the backstop limit. • No suitable dose point upstream of Primary tanks to allow required mixing and retention/settlement time for flocs. No suitably turbulent areas to dose effectively. • Limitations with humus settlement • Very limited land available at site. |
| Primary Extension Category | Complex reconfiguration of site |
| Secondary Extension Category | Land Access |
| Headline category of solution | Conventional: Dosing, RBC and additional site installation |
| Details of proposed solution | <ul style="list-style-type: none"> • New ferric dosing package plant • New alkalinity dosing package plant • New safety shower • Repair existing sludge storage capacity • New humus tank • New filter bed • Recirculation P/S and pipework |
| Land purchase required | Yes expected to be needed, to be confirmed at detailed design |
| Planning required | Yes expected to be needed, to be confirmed at detailed design |

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| Protected Area surveys & Ecology approvals | Yes |
| NBS Candidate | No |
| Partnership / Multi sector scheme candidate | No |

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|---|-------------------|
| Indicative timeline of scheme completion | 24 months |
| Date requested on extended permit Improvement Condition | 28th January 2027 |
| Date submitted to NRW | 06/06/2024 |
| DCWW senior Signature | <i>L. Harrell</i> |
| NRW Senior Signature | |

Appendix

Appendix 1

GIS and Aerial image of WwTW, with 'redline boundary' of DCWW's existing landholding. Additional access required and land required to enable solution. In addition to the highly sensitive and protected habitat surrounding the site, including mature trees to the Eastern side of our current land parcel.





Appendix 2 Raw Sample Data

| Date | BOD ATU | Ammoniacal Nitrogen | Suspended solids | Orthophosphate | Total Phosphorus |
|-----------------|---------|---------------------|------------------|----------------|------------------|
| 17/Sep/12 13:25 | | | 26 | | 3.54 |
| 07/Mar/23 09:35 | 11 | 2.56 | 24 | 3.77 | 4.35 |
| 28/Mar/23 09:25 | 8 | 1.19 | 22 | 1.24 | 1.67 |
| 19/Apr/23 10:25 | 14 | 6.52 | 28 | 2.36 | 2.9 |
| 17/May/23 10:30 | 28 | 16.3 | 50 | 6.74 | 7.43 |
| 25/May/23 09:45 | | 25.5 | 47 | 7.53 | 8.59 |
| 01/Jun/23 11:55 | 47 | 49.7 | | 10.5 | 11.86 |
| 12/Jun/23 08:35 | 25 | 28.6 | 44 | 10.08 | 10.75 |
| 28/Jun/23 10:55 | 25 | 25.4 | 56 | 7.92 | 8.65 |
| 12/Jul/23 10:05 | 22 | 21.3 | 31 | 6.86 | 7.64 |
| 20/Jul/23 10:10 | 22 | 17.6 | 43 | 5.54 | 6.15 |
| 08/Aug/23 11:00 | 112 | 51.9 | 112 | 7.1 | 7.9 |
| 14/Aug/23 09:25 | 57 | 24.5 | 162 | 4.18 | 6.77 |
| 29/Sep/23 10:40 | 6 | 3.89 | 15 | 1.44 | 1.93 |
| 03/Oct/23 09:35 | 8 | 3.28 | 14 | 0.89 | 1.21 |
| 12/Oct/23 10:25 | 6 | 4.72 | 19 | 0.92 | 1.29 |