

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.

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

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

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. Harmer</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