

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	RHYDYMWYN STW
Permit Number	AW1001701
Catchment	Dee
Water Body	Dolfechlas Brook
Can the site meet the total Phosphorus backstop limits now	No
Explanation	<ul style="list-style-type: none"> No phosphorus removal processes installed on site currently. Current long-term mean average performance 6 mg/l Ave. (Peak in excess of 8 mg/l)
Can the site meet the total Phosphorus in 12 months	No
Explanation	<ul style="list-style-type: none"> Current on-site assets cannot be optimised further. The current works' assets would not allow for adequate dosing or short term solution to be implemented Design and installation of additional assets required. Currently inadequate footprint on site to host the required additional assets.
Primary Extension Category	Land Purchase Risk
Secondary Extension Category	
Headline category of solution	Scheme solution at optioneering stage
Details of proposed solution	<ul style="list-style-type: none"> Chemical dosing (ferric & alkalinity) Storage kiosk Bunded delivery area TSR (Mecana)
Land purchase required	Yes anticipated, but to be confirmed at detailed design
Planning required	Yes anticipated, but to be confirmed at detailed design
Protected Area surveys & Ecology approvals	Yes
NBS Candidate	No
Partnership / Multi sector scheme candidate	No
Extension Requested	24 months

Date requested on extended
permit Improvement Condition

28th January 2027

Date submitted to NRW

5/7/2024

DCWW senior Signature

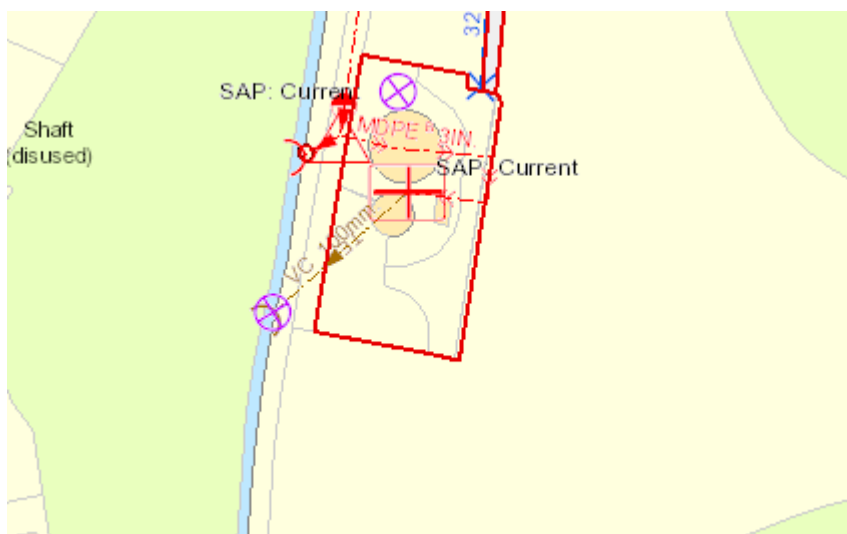
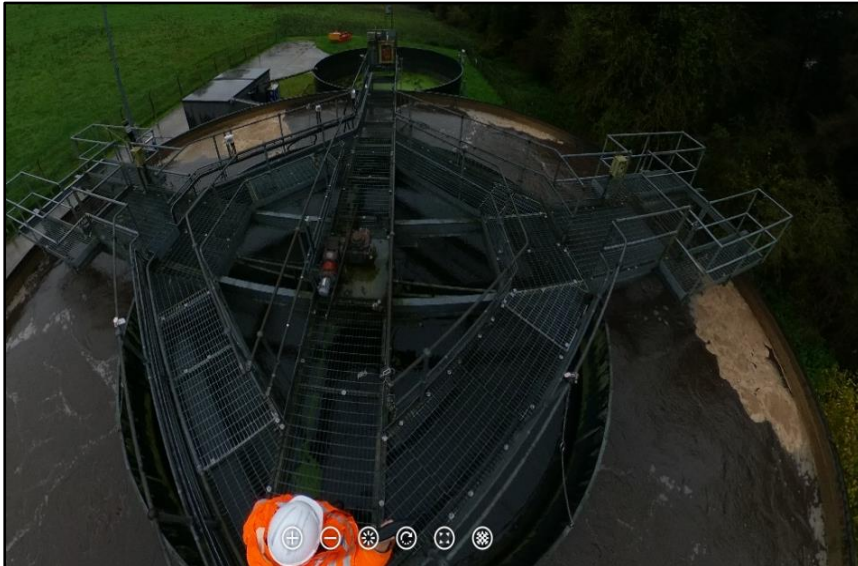
L. Harrell

NRW Senior Signature

Appendix

A1.

Photo of current assets on site and surrounding space remaining. And GIS and Areal image of WwTW, of DCWW's existing landholding. Demonstrating there is no further room to expand without further land purchase, considering boarder of mature trees surrounding the existing perimeter.





A2. Raw sample data

Date	BOD ATU	Ammoniacal Nitrogen	Suspended solids	Ortho phosphate	Total Phosphorus
31/Jan/23 10:25	6	0.4	16	5.26	5.23
07/Feb/23 10:25	8	1.65	19	6.13	6.2
10/Feb/23 08:45	8	6.52	16	5.77	6.23
15/May/23 08:52				8.83	10.3
20/Jun/23 09:55				5.18	5.3
05/Jul/23 15:45	8	0.4	15	8.6	8.69
06/Jul/23 17:25	8	0.4	16	7.64	7.89
07/Jul/23 16:00	8	0.4	27	6.7	7.56
10/Jul/23 17:22	8	0.4	43	4.94	6.34
12/Jul/23 10:30	8	0.4	15	6.79	7.07
15/Jul/23 15:45	8	0.4	42	4.69	6.08
20/Jul/23 10:08				7.56	8.4
25/Jul/23 12:20	8	0.4	29	5.05	5.75
15/Aug/23 12:29				6.91	7.1
01/Sep/23 12:00	8	0.4	8	7.74	7.91
14/Sep/23 11:16	8	0.4	12	7.33	7.11

09/Oct/23 09:08	8	0.4	13	7.84	7.82
14/Nov/23 11:35				0.67	0.86
07/Dec/23 10:48				1.71	1.85
02/Jan/24 12:02				2.6	2.83
02/Feb/24 09:43				3.86	4.13