

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	BRONINGTON STW
Permit Number	CM0072001
Catchment	Dee
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 5.1 mg/l Site peaks above 10 mg/l on dry days Site not currently meeting backstop
Can the site meet the total Phosphorus in 12 months	No
Explanation	<ul style="list-style-type: none"> There is no suitable point to dose ferric in a conventional manner due to inadequate turbulence Design and installation of additional assets required. Increased footprint required to meet the backstop limit. There is no potable water supply
Primary Extension Category	Nature Based Solution (ARMPHos reedbed)
Secondary Extension Category	Land Purchase Risk
Headline category of solution	Hybrid (NBS with upscaled grey)
Details of proposed solution	<ul style="list-style-type: none"> Refurbish the existing reedbed Installation of ARMPHOS reedbed and all connecting apparatus
Land purchase required	Yes
Planning required	Yes
Protected Area surveys & Ecology approvals	Yes
NBS Candidate	Yes
Partnership / Multi sector scheme candidate	Yes (LPA has requested they utilise our final effluent post treatment to enable a nutrient neutrality NBS after DCWW's permit stops)
Extension Requested	36 months
Date requested on extended permit Improvement Condition	26 th January 2028

Date submitted to NRW

26/04/2024

DCWW senior Signature

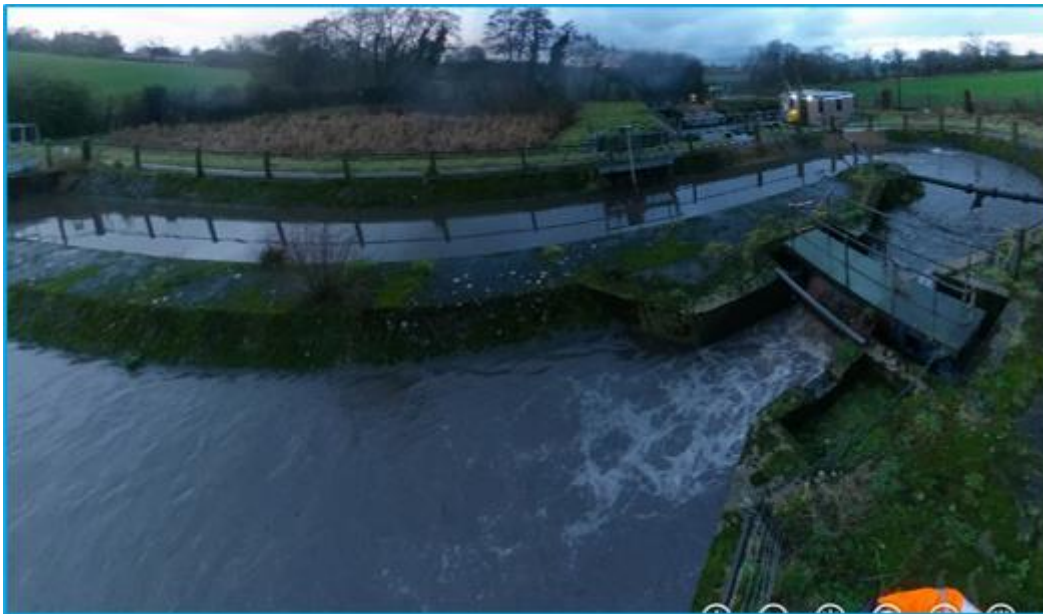
L. Harrell

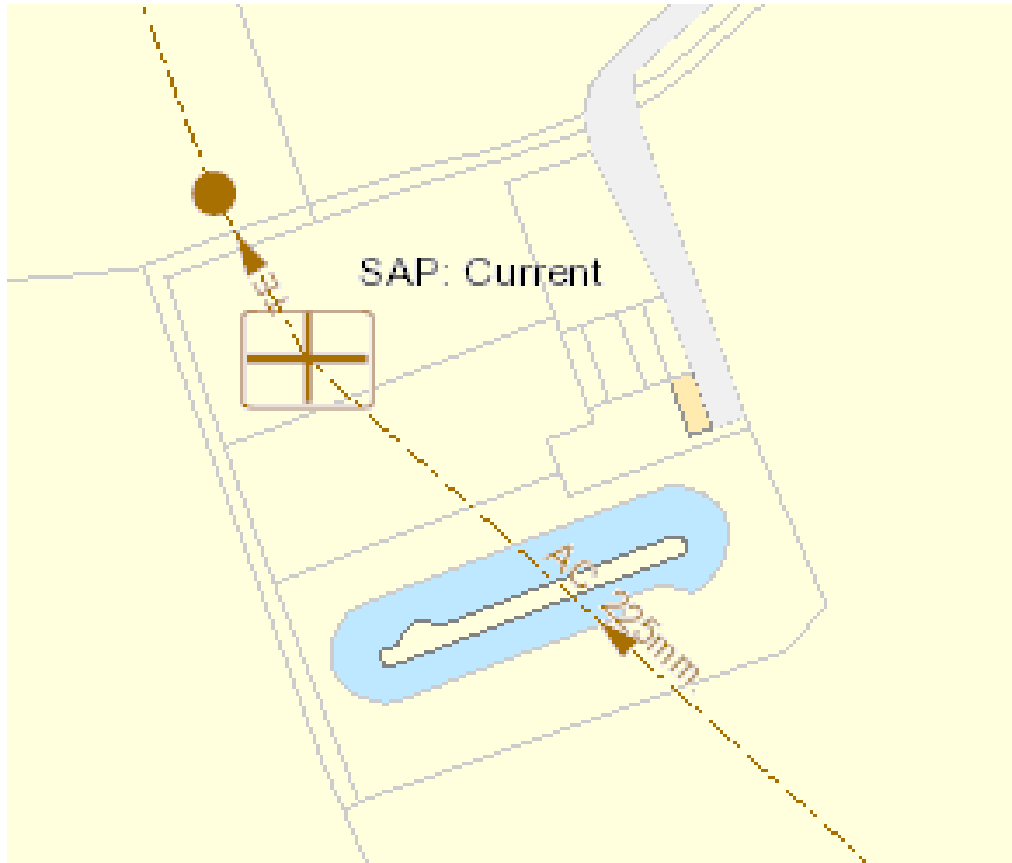
NRW Senior Signature

Appendix

A1.

Photo of current assets on site and surrounding space remaining. And GIS and Aerial image of WwTW, with 'redline boundary' of DCWW's existing landholding. Demonstrating there is no further room to expand without further land purchase, considering the river and tributary on either site of the existing land, and the boarder of mature trees to the west.





A2. Raw sample data

	BOD ATU	Ammo-niacal Nitrogen	Suspended solids	Ortho phosphate	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L
Date	Result Val	Result Val	Result Val	Result Val	Result Val
25/Jan/23 11:45	9	0.52	5	1.28	1.54
09/Feb/23 12:40	8	0.4	5	2.84	3.04
14/Feb/23 08:20				3	3.14
21/Jun/23 07:28				6.75	6.8
28/Jun/23 12:40	6	0.4	10	7.46	7.1
17/Jul/23 09:00	6	0.4	8	6.84	7.12
31/Jul/23 13:20	8	0.4	8	4.44	4.46
11/Aug/23 12:20	19	0.4	16	5.34	5.65
01/Sep/23 12:41				6.29	6.5
08/Sep/23 10:26	21	10.4	27	13.01	13.2
06/Oct/23 10:40	6	0.4	17	4.73	5.04
18/Oct/23 10:40	6	0.4	7	2.74	2.88
26/Oct/23 10:40	6	6.37	7	3.21	3.42
10/Nov/23 09:39				2.53	2.69
10/Nov/23 11:15	6	7.81	7	2.48	2.73