

## 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.*

<b>WwTW Name</b>	DOLYWERN STW
<b>Permit Number</b>	CM0007901
<b>Catchment</b>	Dee
<b>Water Body</b>	Ceiriog - confluence Dee to Teirw
<b>Can the site meet the total Phosphorus backstop limits now</b>	No
<b>Explanation</b>	<ul style="list-style-type: none"> <li>No phosphorus removal processes installed on site currently.</li> <li>Current long-term mean average performance is 5.6mg/l</li> <li>Site peak's above 8.7 on dry sample days</li> </ul>
<b>Can the site meet the total Phosphorus in 12 months</b>	No
<b>Explanation</b>	<ul style="list-style-type: none"> <li>Current works cannot host a dosing unit because there is inadequate turbulence on site without further investment and upgrade of existing assets</li> <li>No suitable dose point on site as no point available upstream of PST to introduce mixing and allow flocculation and settlement</li> <li>Current asset cannot be optimised further.</li> </ul>
<b>Primary Extension Category</b>	Land Purchase Risk
<b>Secondary Extension Category</b>	Nature Based Solution
<b>Headline category of solution</b>	Nature Based Solution <b>or</b> Pump away
<b>Details of proposed solution</b>	<p>Final Solution to be confirmed at detailed optioneering stage. Either of the 2 shortlisted possible options, will require an extension:</p> <p>Solutions are either:</p> <ol style="list-style-type: none"> <li>Pump away as a joint scheme with Pontfadog and Glyn Ceiriog</li> <li><b>Or</b> on-site reconfiguration: <ul style="list-style-type: none"> <li>Improve and scale up existing biofilter</li> <li>Installation of new ARM-Phos feed P/S also fitted with recirc pumps</li> <li>ARM-Phos reed bed</li> <li>New sample chamber installation</li> <li>New outfall headwall</li> <li>Additional fencing</li> </ul> </li> </ol>

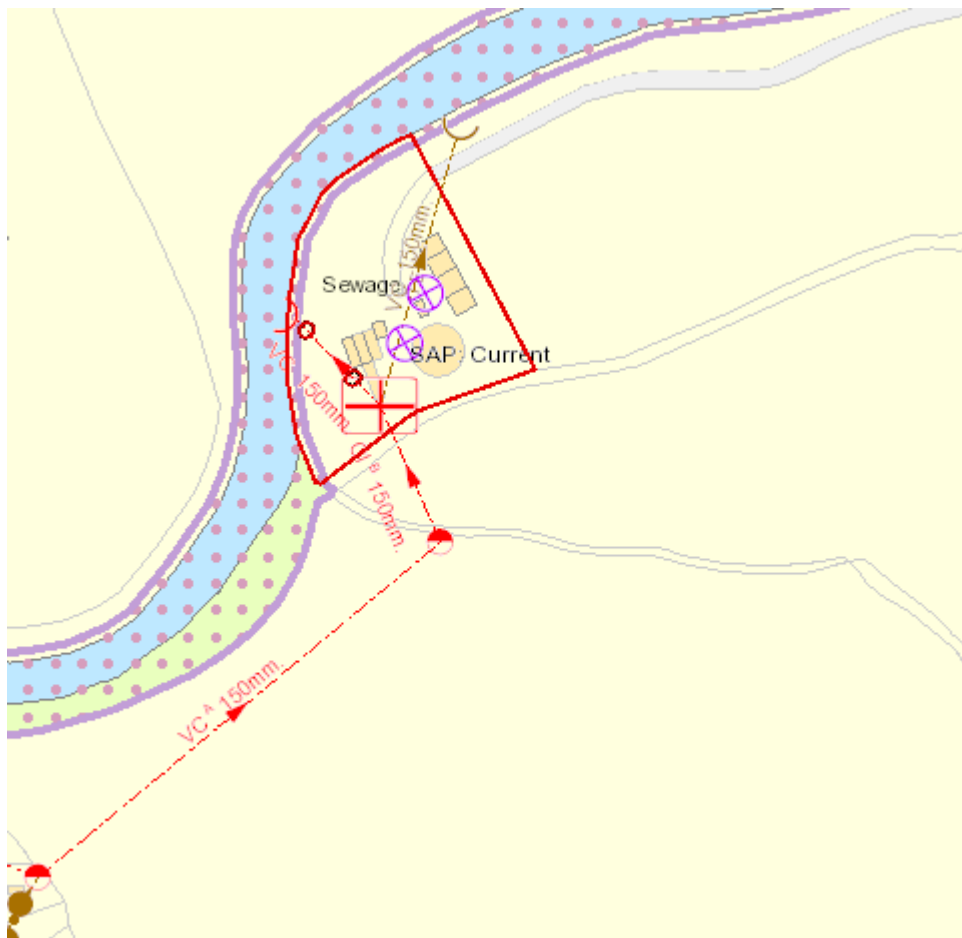
Land purchase required	Yes
Planning required	Likely
Protected Area surveys & Ecology approvals	Yes
NBS Candidate	Yes
Partnership / Multi sector scheme candidate	No

Extension Requested	36 months
Date requested on extended permit Improvement Condition	26 <sup>th</sup> January 2028
Date submitted to NRW	06/06/2024
DCWW senior Signature	<i>L. Harrell</i>
NRW Senior Signature	

## Appendix

### A1.

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 side of the existing land, and the boarder of mature trees to the west.



## A2. Raw sample data

	BOD ATU	Ammoniacal 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
01/Feb/23 09:35	30	2.95	41	5.26	5.94
07/Feb/23 10:30	22	9.29	55	5.81	6.84
19/Jun/23 07:39				4.99	5.6
28/Jun/23 10:20	16	4.78	30	6.23	6.64
17/Jul/23 10:30	19	2.27	24	5.06	5.81
31/Jul/23 10:13				6.93	7.3
31/Jul/23 11:50	22	4.19	29	6.98	7.42
11/Aug/23 10:30	22	3.76	34	6.25	6.75
31/Aug/23 14:18				7.28	8.2
08/Sep/23 08:19	28	1.7	38	8.05	8.72
12/Sep/23 13:45				5.69	6.1
06/Oct/23 08:21	18	2.54	44	6.74	7.23
13/Oct/23 09:45	28	14.2	52	1.91	2.92
16/Oct/23 11:04				4.4	4.98
18/Oct/23 11:40	19	2.65	29	5.65	5.87
11/Dec/23 09:10				0.82	1.21
22/Jan/24 10:30				1.48	1.97
09/Feb/24 07:52				1.33	1.86