

## 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>	LLANARMON YN IAL STW
<b>Permit Number</b>	CM0001201
<b>Catchment</b>	Dee
<b>Water Body</b>	Alyn - upstream Dolfechlas Brook
<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 mean average long-term performance 5.3 mg/l (Peak in excess of 7.9 mg/l in 2023)</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 on-site assets cannot be optimised further.</li> <li>Design and installation of additional assets required.</li> <li>Currently no footprint on site to host the required additional assets.</li> <li>Substantial investment and increased footprint required to meet the backstop limit.</li> </ul>
<b>Primary Extension Category</b>	Land Purchase Risk
<b>Secondary Extension Category</b>	Nature Based Solution (reedbed)
<b>Headline category of solution</b>	NBS
<b>Details of proposed solution</b>	<ul style="list-style-type: none"> <li>Upgrades Inlet Screens (6mm 2D), c/w launder and skip</li> <li>ARM Phos reedbed</li> <li>ARM Phos feed pumps + wetwell</li> </ul>
<b>Land purchase required</b>	Yes
<b>Planning required</b>	Yes
<b>Protected Area surveys &amp; Ecology approvals</b>	Yes
<b>NBS Candidate</b>	Yes
<b>Partnership / Multi sector scheme candidate</b>	No
<b>Extension Requested</b>	36 months
<b>Date requested on extended permit Improvement Condition</b>	26 <sup>th</sup> January 2028
<b>Date submitted to NRW</b>	19/04/2024

DCWW senior Signature

*K. Hamill*

NRW Senior Signature

## Appendix

### Appendix 1

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.





**Appendix 2 Raw Sample Data**

Date	BOD ATU	Ammoniacal Nitrogen	Suspended solids	Orthophosphate	Total Phosphorus
07/Feb/23 11:25	8	3.52	15	6.09	6.34
10/Feb/23 09:40	11	3.04	16	6.55	7.14
06/Apr/23 08:34				3.99	4.6
23/May/23 08:26				7.65	7.9
08/Jun/23 08:46				9.17	9.2
12/Jul/23 08:50	8	1.15	11	3.2	3.58
25/Jul/23 10:55	6	0.49	9	2.41	2.72
26/Jul/23 11:38				3.86	3.93
25/Aug/23 08:15	14	1.78	12	6.35	6.68
25/Aug/23 10:57				6.38	6.9
01/Sep/23 12:51	14	1.28	19	5.24	5.85
14/Sep/23 09:51				4.69	4.82
02/Oct/23 12:08	8	1.1	9	1.4	1.75

26/Oct/23 09:17				2	2.27
29/Nov/23 12:00				1.28	1.57
11/Dec/23 10:51				0.89	1.16