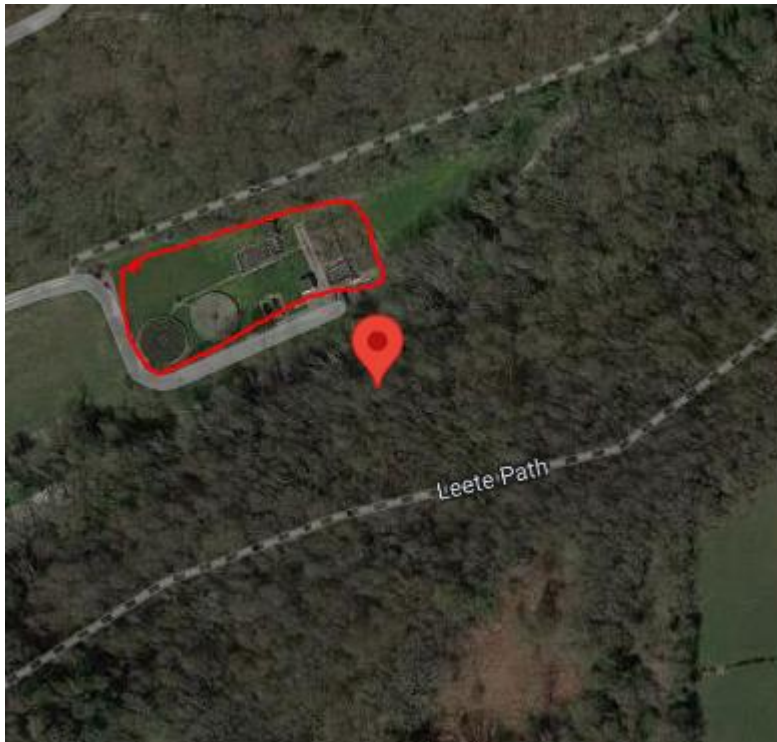


Backstop Improvement Condition Extension Report

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	CILCAIN PANTYMWYN STW
Permit Number	CM0024401
Catchment	Dee
Water Body	Alyn - upstream Dolfechlas Brook
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 6.4 mg/l average 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. Additional drivers for site mean most effective solution is pump away for long term benefit. No suitable location to effectively dose chemical, no suitable mixing point, required turbulence not available at suitable point of application.
Primary Extension Category	Complex reconfiguration of site
Secondary Extension Category	Land Access
Headline category of solution	Conventional: Pump Away
Details of proposed solution	<ul style="list-style-type: none"> Design and installation of pipework, pumps and new pumping station Upgrades to reception/balance chamber at the receiving works (Mold WwTW). Exact route to be confirmed in detailed design, but circa 4km to Mold via part of existing rising main network Upgrade at receiving works to be confirmed in detailed design
Land purchase required	Yes
Planning required	Yes
Protected Area surveys & Ecology approvals	Yes



Appendix 2 Raw Sample Data

Date	BOD ATU	Ammoniacal Nitrogen	Suspended solids	Orthophosphate	Total Phosphorus
10/Mar/22 12:00	19	13.6	43	6.16	6.89
25/Mar/22 10:20	11	9.27	16	6.82	7.4
04/Apr/22 11:05	23	9.3	31	5.65	6.5
19/Apr/22 09:55	15	9.22	19	7.59	8.09
04/May/22 10:15	34	12.6	58	7.56	8.76
06/Jun/22 10:05	8	5.13	11	6.05	6.35
23/Jun/22 09:35	18	1.62	33	7.34	7.71
06/Jul/22 10:20	16	4.41	16	6.28	6.62
21/Jul/22 09:00	16	1.55	17	7.69	7.75
05/Aug/22 09:30	8	1.04	24	6.71	7.25
19/Aug/22 09:30	19	1.07	28	7.13	7.49
30/Aug/22 10:05	17	2.86	41	6.89	7.72
16/Sep/22 08:45	14	2.82	32	6.65	7.22
30/Sep/22 09:00	9	1.28	5	4.37	4.68
12/Oct/22 09:40	8	6.94	19	4.72	5.16
26/Oct/22 11:40	10	5.81	24	5.95	6.44
10/Nov/22 11:05	6	3.99	13	4.65	5.09
01/Dec/22 09:25	32	19.4	35	4.96	6.19
13/Dec/22 11:55	27	23.8	58	4.83	6.93
05/Jan/23 12:50	54	31.7	54	4.52	6.2
16/Jan/23 11:10	11	7.16	18	4.08	4.76

02/Feb/23 09:35	14	8.65	19	5.43	6
02/Feb/23 09:55	8	0.4	5	0.1	0.05
20/Feb/23 12:30	16	8.61	25	6.49	7.17
27/Feb/23 10:10	8	8.98	16	6.02	6.77
17/May/23 10:00	19	1.54	30	5.89	6.54
20/Aug/23 09:28				5.98	6
11/Dec/23 11:50				3.82	4.29