

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	The Bryn STW
Permit Number	AA0017501
Catchment	Usk
Water Body	Usk - conf R Gavenny to conf Olway Bk
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 7.9 mg/l Ave. (Peak in excess of 9 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	Nature Based Solution (ARM Phos 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"> Installation of pumping station Installation of ARM Phos reedbed Installation of connecting reedbed apparatus
Land purchase required	Yes
Planning required	Yes
Protected Area surveys & Ecology approvals	Yes
NBS Candidate	Yes
Partnership / Multi sector scheme candidate	No
Extension Requested	24 months
Date requested on extended permit Improvement Condition	28 th January 2028
Date submitted to NRW	25 th June 2024

DCWW senior Signature

K. Hamill

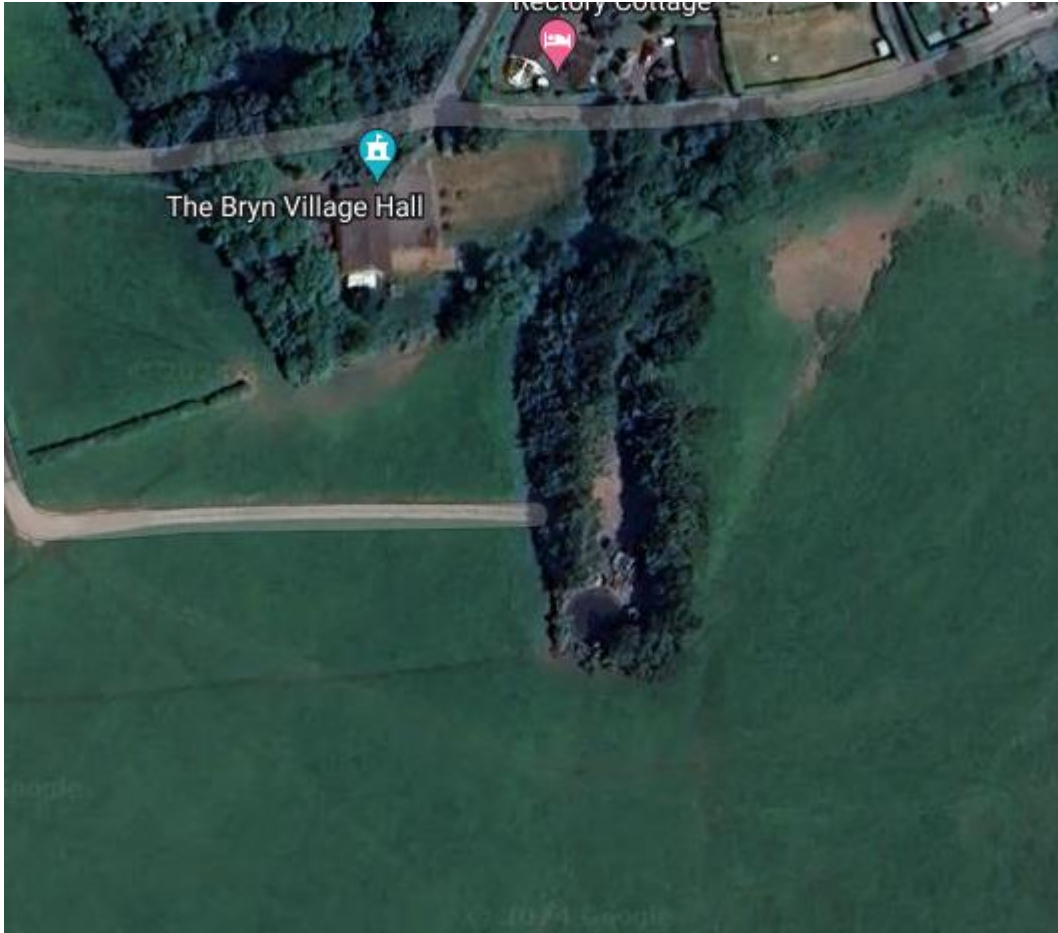
NRW Senior Signature

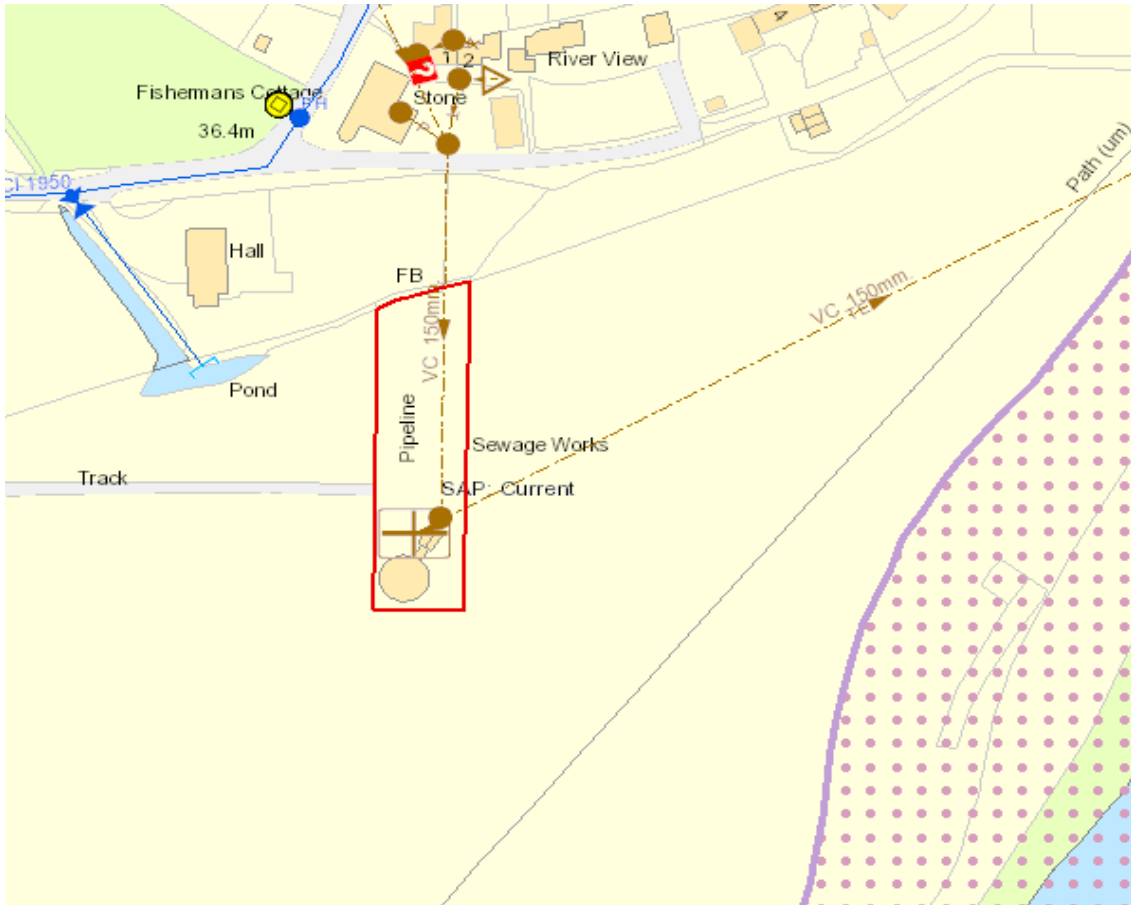
Appendix

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
18/May/23 10:55	9	2.34	10	8.13	8.1
12/Jun/23 12:03			112	8.04	9.24
15/Jun/23 10:56			23	9.44	9.15
19/Jun/23 12:13	16	2.69	18	8.94	9.09
20/Jun/23 08:28			28	9.33	9.28
29/Jun/23 10:06	8	0.43	15	8.34	8.23
05/Jul/23 11:47	8	0.98	14	7.98	8.2
09/Aug/23 11:04				7.72	7.8
04/Sep/23 13:21	11	3.11	17	7.85	7.86
20/Sep/23 10:29	12	3.31	17	6.37	6.69
27/Sep/23 10:10	8	2.91	12	7.19	7.5
09/Oct/23 11:55	10	2.12	15	7.84	8.06
23/Jan/24 12:24	24	8.8	35	6.04	6.5
19/Feb/24 10:46				7.18	7.6
19/Feb/24 12:37	8	4.3	15	7.23	7.67
03/Apr/24 11:37	8	2.68	16	6.61	6.87
22/Mar/24 11:05	9	3.4	24	8.51	9.05
04/Mar/24 13:37	8	5.3	11	6.68	6.9