

ASSET INVESTIGATION DETAILS			
SAP Asset Name:	Bach Y Gwreiddyn Farm CSO, Pontllw		Asset Template reference
Investigation Type	SOAF (River)		BW2300701-SWO.BACH Y GWREIDDYN FARM PONTLLIW -52300-Stage 4 - Non CBA-Swansea
Year of breach:	2019	Spill Trigger cause:	Hydraulic
Year of Investigation:	2020	Investigation year performance:	222 spills
Population of Asset	2665	Modelled Performance: (DESIGN) / (CALIBRATED)	216 spills
Permit Details			
Storm Permit ID:	BW2300701	Storm Permit Name:	BACHYGWREIDDYN FARM, PONTLLIW
Asset NGR:	SN6067800170	Waterbody ID	GB110059032100
Discharge NGR:	SN6019000190	Water body Discharge location	Lliw - headwaters to confluence with Llan
Brief description of asset (Screen, PFF flow control, Storage, outfall)			
Incoming Pipe: 375mm diameter CSO Type: Single Sided weir; Screening: 16mm 1d vertical bar screen; Flow Control: Sluice ; PFF Pipe: 225mm diameter; Storage Provision: None; Consent: None – Deemed permit			

SOAF STAGE 1						
Details of assessment:		Asset condition surveys supported by hydraulic model assessment of the asset performance against available telemetry information (EDM and radar rainfall datasets). Additional flow and rainfall monitoring was undertaken to improve the baseline model accuracy and assist in defining the root cause of spills.				
Permit Compliance						
PFF	Deemed Permit – N/A					
Storage	N/A					
Screening	Compliant					
Bespoke/Other	N/A					
SOAF Stage 1 findings						
Following the hydraulic model assessment, the cause of the high spills at the asset is concluded to be Hydraulic, with a very minor OC- Maintenance issue as the secondary cause of spills. The model is fit for use, based on the reported spill numbers and telemetry trends.						
Primary Cause: Hydraulic Secondary Cause: OC- Maintenance						
Cause of spill count :	Other Cause	Yes	Catchment Hydraulic	Yes	Infiltration & IRP required	No
Future Operational Management Proposal:	The primary cause of the high spills is hydraulic and as such the asset progresses for Stage 2 and 3 assessments under the worst-case impact scenario of the current performance. However, operational interventions detailed below are required to mitigate excessive spills beyond the design criteria and should be implemented prior to the final Stage 4 decision confirmation.					
Operational intervention required:	Desilt from the asset chamber downstream.					
SOAF Operational Intervention						
Start Date:	Oct-23	Completion Date:	-	Indicative future annual spill performance (less than 40 do not continue to stage 2)		-
Intervention Description:	A continuation restriction due to maintenance has been identified as a factor in excess spills at this asset. A cleanse of the sewerage network is required to restore compliant flows. This asset will be highlighted for future Cyclic Maintenance based upon the review of the post intervention return.					
Proposed Completion Date:	Oct-24	Data years to be excluded from future SOAF triggers calculations	N/A		Request to hold stage 2 surveys for environment recovery	N/A

SOAF STAGE 2					
Receiving Waterbody WFD Status			Moderate		
Stage 2a					
Aesthetic survey:	Spring	2021	Aesthetic Total score (inclusive of amenity classification, previous complaints & pollutions)	45	Moderate
	Autumn	2021		40	Moderate
Stage 2b				Yes / No unable due to culverted watercourse	

Invertebrate survey:	Spring	2021		Invertebrate survey score:	2	Very Low
	Autumn	2021			1	No Impact
Stage 2c Required:					Yes / No	
Stage 2c screening:	Not Required	Progressed through screening?	Not Required	Stage 2c water quality assessment Score:	Not Required	

SOAF STAGE 3 - STEP 1>3						
Options assessed	Rainscape		Traditional Storage	Y	PFF Increase	N
Equivalent storage volume required	2179 m3	Rainscape Cost		Not Achievable	CBR	Not Achievable
Bespoke future trigger agreement	40	Traditional Storage		£5,159,374.00	CBR	0.06
		Other		N/A	CBR	N/A
Key Constraints	N/A					
Future Active Management Proposal	<i>The primary cause of spills was hydraulic and Stage 2 impact assessments have shown that the asset was having a significant effect on the receiving waterbody, with the waterbody itself requiring improvement to achieve Good or higher status. Assessment of the potential high-level solutions have indicated that any solution entailed excessive costs for the benefit it provided and thus the asset does not pass the SOAF Cost Benefit threshold and will not progress to detailed benefits assessment as part of the SOAF process.</i> <i>Further details are shown below detailing DCWW's plans for storm overflow spill reduction</i>					

Conclusion and Future Spill Reduction Proposals					
Summary	<p>Based on the direction from the Welsh Government led Better River Quality Task Force, DCWW Storm overflow spill reduction programme will target the elimination of ecological harm and prevention of adverse ecological impact of any SO.</p> <p>With a large programme of assets requiring improvement priority will be given to CSOs having the greatest impact in the most sensitive receiving waters.</p> <p>To ensure that the improvement delivered is long term, the improvements for each site will be based on the expectation that water quality upstream of the discharge meets good or high ecological status (GES) irrespective of the actual status of the water.</p> <p>This approach has formed the basis of DCWW's portfolio investment plan for Storm Overflows.</p> <p>BACHYGWREIDDYN FARM, PONTLLIW was Shown to have a No / Very low Impact therefore as set out above based upon our Long Term Delivery Strategy a spill reduction scheme to eliminate this level of impact is Profiled to be delivered between 2040-2050</p>				
Asset Prioritisation Level	Priority 5			Delivery Predicted Period	AMP11/12
Asset NEP ID	N/A	Asset NEP Driver Code	N/A	Detailed Design Predicted Period	AMP10/11
Progression to Stage 5 In AMP	No	Proposed Solution yet to be taken through detailed design developed			

SOAF AGREEMENT					
	Date	SOAF STAGE	Name	Contact Details	Location of Output
DCWW Approval	26/10/2023	Stage 4 - Non CBA	Christian Phillips Adams	<a href="mailto:christian.phillipsadams@dwrcymru.com">christian.phillipsadams@dwrcymru.com</a>	Email
Regulator Liaison Date	<a href="#">Click here to enter a date</a>				
CSO Classification					
Satisfactory	N	Unsatisfactory	Y	Sub Standard	Y
		Any operation in dry weather conditions?	N	Does not meet modern standards of engineering and aesthetic control for storm overflow structures set out in the British standard BS EN 752:2017 drain and sewer systems outside buildings	N
		Any operation in breach of permit conditions?	N	Does not have sufficient hydraulic capacity compared to accepted minimum design standards	Y
		Any significant visual or aesthetic impact due to solids or sewage fungus?	Y	Risks becoming unsatisfactory because discharges have increased beyond the original design due to infiltration, growth and urban creep	N
		Cause or significantly contributes to a deterioration in the biological or chemical status of the receiving water?	N		
		Causes or significantly contributes to failures in bathing water quality standards for identified bathing waters?	N/A		
		Causes or significantly contributes to failures in shellfish quality standards for identified shellfish waters	N/A		
		Causes or significantly contribute to failures in water quality standards in coastal and transitional waters?	N/A		
		Causes pollution of groundwater?	N/A		