

ASSET INVESTIGATION DETAILS			
SAP Asset Name:	Pontrhydfendgaidd SPS	Asset Template reference	BP0115101-PONTRHYDFENDIGAID PS...70731-Stage 4 - CBA-Ceredigion
Investigation Type	SOAF (River)		
Year of breach:	2019	Spill Trigger cause:	Hydraulic
Year of Investigation:	2021	Investigation year performance:	120
Population of Asset	546.43	Modelled Performance: (DESIGN) / (CALIBRATED)	60 / 112
Permit Details			
Storm Permit ID:	BP0115101	Storm Permit Name:	PONTRHYDFENDIGAID P.S.
Asset NGR:	SN7304766473	Waterbody ID	GB110062043540
Discharge NGR:	SN7304966479	Water body Discharge location	Teifi - headwaters to confluence with Meurig
Brief description of asset (Screen, PFF flow control, Storage, outfall)			
Incoming Pipe: 225mm; CSO Type: Weir Spill to Pumped Overflow; Screening: Bar Screen; Flow Control: Duty/Assist DWF Pumps; PFF Pipe: N/A; Storage Provision: 1.3m3; Consent: Deemed Consent (SocA - 14.97l/s)			

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 – Does not pass SocA					
Storage	N/A					
Screening	N/A					
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 OC Infiltration as the secondary cause of spills. The predicted pass-forward flow is within 16% of the deemed SOC A value prior to the first spill. The model is fit for use, based on the reported spill numbers and telemetry trends.						
Cause of spill count :	Other Cause	OC Infiltration	Catchment Hydraulic	Yes	Infiltration & IRP required	Yes
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:	Infiltration Reduction Plan. Permit compliance to be reviewed on confirmation of overflow settings - notably on screening provision. Regular pump maintenance and servicing on both DWF and Storm pumps - there is evidence of the overflow pumps being overwhelmed by incoming flows. Once these interventions are in place, the hydraulic modelling indicates the asset will be compliant with it's discharge permit.					
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:	Pump Performance has been identified as a potential oppotuniy to reduce excess spills at this asset, the assessment has determined that the pump performance requires a review and implementation of recommendations in order to reduce spills. Infiltration has been identified as a factor in excess spills at this asset. An infiltration reduction plan (IRP) is in the process of development to address the problem. It is recognised in the Storm Overflow Assessment Framework that investigation and resolution of infiltration issues can be difficult and that solutions may be iterative with IRPs potentially only succeeding over the medium to long-term.					
Proposed Completion Date:	Oct-28	Data years to be excluded from future SOAF triggers calculations			Request to hold stage 2 surveys for environment recovery	

SOAF STAGE 2					
Receiving Waterbody WFD Status			Moderate		
Stage 2a					
Aesthetic survey:	Spring	2022	Aesthetic Total score (inclusive of amenity classification, previous complaints & pollutions)	50	Moderate Impact
	Autumn	2022		25	Low Impact
Stage 2b				Yes / No unable due to culverted watercourse	

Invertebrate survey:	Spring	2022		Invertebrate survey score:	4	Low
	Autumn	2022			25	Extremely severe
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	63 m3	Rainscape Cost		Not Achievable	CBR	0
Bespoke future trigger agreement	40	Traditional Storage		£1,000,292.90	CBR	1.24
		Other		N/A	CBR	N/A
Key Constraints	None Identified.					
Future Active Management Proposal	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. Assessments of the potential high-level solutions have indicated that the asset passed the SOAF cost benefit threshold for further investigation and as such it is proposed to progress to detailed benefits assessment. Further details are shown below detailing DCWW's plans for storm overflow spill reduction.					

Conclusion and Future Spill Reduction Proposals					
Summary	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. With a large programme of assets requiring improvement priority will be given to CSOs having the greatest impact in the most sensitive receiving waters. 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. This approach has formed the basis of DCWW's portfolio investment plan for Storm Overflows. PONTRHYDFENDIGAID P.S. was Shown to have a Severe + Impact therefor 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 before 2035				
Asset Prioritisation Level	Priority 1			Delivery Predicted Period	AMP8/9
Asset NEP ID	DCWW101960a	Asset NEP Driver Code	W_U_O_IMP1	Detailed Design Predicted Period	AMP7/8
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	30/10/2023	Stage 4 - CBA	Christian Phillips Adams	christian.phillipsadams@dwrcymru.com	Email
Regulator Liaison Date	Click here to enter a date				
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	Y
		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?	Y		
		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		