SOAF Investigation Output Summary

Dŵr Cymru Welsh Water

Cyfoeth Naturiol Cymru Natural Resources Wales

Reference: SOAF.R 00001

Please see Audit Statement Technical Guidance for further information

ASSET INVESTIGATION DETAILS					
SAP Asset Name:	Cwmbach Road CSO, Fforestfach		**Asset Template reference**	BP0305201-CWMBACH ROAD CSO COCKETT SWANSEA-70232-Stage 1 - OC-Swansea	
Investigation Type	SOAF (River)				
Year of breach:	*2017*	**Spill Trigger cause:**		*OC Continuation Restriction (Flow Control)*	
Year of Investigation:	*2021*	**Investigation year performance:**		*66*	
Population of Asset	*5528*	**Modelled Performance: (DESIGN) / (CALIBRATED)**		*12 / 58*	
Permit Details					
Storm Permit ID:	BP0305201	**Storm Permit Name:**		Cwmbach Rd CSO, Cockett	
Asset NGR:	SS6262095194	**Waterbody ID**		GB110059032070	
Discharge NGR:	SS6261395213	**Water body Discharge location**		Llan - headwaters to tidal limit	
Brief description of asset *(Screen, PFF flow control, Storage, outfall)*					
Incoming Pipe: 525mm; CSO Type: Low-level, double sided weir ; Screening: 10mm 2d - static screen; Flow Control: hydrobrake ; PFF Pipe: 375mm; Storage Provision: None; Consent: 149l/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	Design Compliant – Operational Intervention required to restore.					
Storage	N/A					
Screening	Compliant					
Bespoke/Other	N/A					
SOAF Stage 1 findings						
Primary Cause: OC Continuation Restriction (Flow Control) - Secondary Cause: OC Continuation Restriction (Maintenance) Following the hydraulic model assessment, the cause of the high spills at the asset is concluded to be OC Continuation Restriction (Flow Control) , with OC Continuation Restriction (Maintenance) as the secondary cause of spills. The predicted pass-forward flow is below consent prior to the first spill. The model is fit for use, based on the reported spill numbers and telemetry trends. According to flow monitor data form downstream of the CSO, the hydrobrake is passing less than consent. The CCTV survey was abandoned 70m downstream of MH 6201 due to debris in the line						
Cause of spill count :	**Other Cause**	**OC Continuation Restriction (Flow Control)**	**Catchment Hydraulic**	**No**	**Infiltration & IRP required**	**No**
Future Operational Management Proposal:	*The primary cause of the spills are operational factors that have been assessed as deliverable in the short term. The asset has been added to the SOAF Intervention programme with the details outlined below*					
Operational intervention required:	*Check hydrobrake is operating correctly. Current model shows flows to be limited to below consent.* *Screens are heavily blinded and require cleaning as does the sewer 70m downstream of MH 6201.*					
SOAF Operational Intervention						
Start Date:	**Jan-24**	**Completion Date:**	*TBC*	**Indicative future annual spill performance** *(less than 40 do not continue to stage 2)*	12	
Intervention Description:	**Flow control Performance has been identified as a factor in excess spills at this asset, the assessment has determined that the flow control setting requires adjustments to achieve PFF.** **Screening Clense**					
Proposed Completion Date:	**Jan-25**	**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	0	**Aesthetic Total score** (inclusive of amenity classification, previous complaints & pollutions)	-	-
	Autumn	0		-	-
Stage 2b				*Yes / No unable due to culverted watercourse*	

Invertebrate survey:	Spring	0	**Invertebrate survey score:**	-	-
	Autumn	0		-	-
Stage 2c Required:				*Yes / No*	
Stage 2c screening:	-	**Progressed through screening?**	-	**Stage 2c water quality assessment Score:**	Not Required

SOAF STAGE 3 - STEP 1>3						
Options assessed	Rainscape		Traditional Storage	N	PFF Increase	N
Equivalent storage volume required	N/A	**Rainscape Cost**		N/A	**CBR**	N/A
Bespoke future trigger agreement	N/A	**Traditional Storage**		N/A	**CBR**	N/A
		Other		N/A	**CBR**	N/A
Key Constraints	*This asset is an OC site with less than 40 spills in the design scenario. Maintenance required.*					
Future Active Management Proposal	*This asset is an OC site with less than 40 spills in the design scenario. Maintenance required.*					

Conclusion and Future Spill Reduction Proposals					
Summary	*Cwmbach Rd CSO, Cockett was Shown to have a other cause issue resulting in higher spills which are expected to reduce once a resolution has been implemented. Once the assets New spill performance is established, if this is shown to still be in excess of 10 the impact of the asset will be established as part of DCWW's Storm Overflow Water Quality Assessment Strategy (SOWQAS) in AMP8*				
Asset Prioritisation Level	-			**Delivery Predicted Period**	-
Asset NEP ID	*N/A*	**Asset NEP Driver Code**	*N/A*	**Detailed Design Predicted Period**	-
Progression to Stage 5 In AMP	*No*	-			

SOAF AGREEMENT					
	Date	**SOAF STAGE**	**Name**	**Contact Details**	**Location of Output**
DCWW Approval	02/01/2024	*Stage 1 - OC*	**Christian Phillips Adams**	christian.phillipsadams@dwrcymru.com	*Email*
Regulator Liaison Date	Click here to enter a dat				

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?	**Y**	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?	**-**	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?	**-**		
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**		