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:	Ystradgynlais Cwmtwrch		**Asset Template reference**	BW0601101-CWMTWRCH SWO YSTRADGYNLAIS YSTRADGY-0-Stage 1 - OC-Neath Port Talbot	
Investigation Type	SOAF (River)				
Year of breach:	*2016*	**Spill Trigger cause:**	*OC Continuation Restriction (Structural)*		
Year of Investigation:	*2022*	**Investigation year performance:**	*100*		
Population of Asset	*1934*	**Modelled Performance: (DESIGN) / (CALIBRATED)**	*19 / 118*		
Permit Details					
Storm Permit ID:	BW0601101	**Storm Permit Name:**	CWMTWRCH SWO YSTRADGYNLAIS SEWERAGE SYSTEM		
Asset NGR:	SN7577010920	**Waterbody ID**	GB110059032210		
Discharge NGR:	SN7576910917	**Water body Discharge location**	Twrch - conf with Nant Gwys to conf wi		
Brief description of asset *(Screen, PFF flow control, Storage, outfall)*					
Incoming Pipe: 525mm; CSO Type: High-level Weir; Screening: None; Flow Control: None (Downstream Network); PFF Pipe: 225mm; Storage Provision: None; Consent: PFF Permit 119l/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	Not Compliant					
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 OC Structural, with OC Maintenance as the secondary cause of spills. The predicted pass-forward flow is 38% of consent 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 Continuation Restriction**	**Catchment Hydraulic**	**No**	**Infiltration & IRP required**	**Yes**
Future Operational Management Proposal:	*The primary cause of the spills are operational factors that have been assessed as requiring longer term (1+ year) intervention programmes. Given the scale of the issue, the asset will progress under a bespoke intervention programme with details to be supplied to the regulator and other stakeholders outside of the normal SOAF processes*					
Operational intervention required:	*Downstream network requires upsizing to allow pass forward flow to be compliant with permit.* *Increased cleanse schedule of network downstream of asset. The section between SN75107905 and SN75108801 is deemed to be the worst affected section.* *Infiltration Reduction Plan (discrete infiltration surveyed at SN75107905, surrounding network should be checked).* *Following maintenance activities, the asset will continue to not be compliant with the permit and investigation of the appropriateness of the current discharge permit/design set up will be required.*					
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:	**This asset has been identified as requiring some structural alteration in order to improve its performance related to;** **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.** **Given the signficant nature of the resolution required, a bespoke plan is to be agreed with NRW and a review of the permit to be undertaken.**					
Proposed Completion Date:	**Oct-28**	**Data years to be excluded from future SOAF triggers calculations**	*TBC*	**Request to hold stage 2 surveys for environment recovery**		

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

Invertebrate survey:	Spring	-	**Invertebrate survey score:**	-	-
	Autumn	-		-	-
Stage 2c Required:				*Yes / No*	
Stage 2c screening:	Not Required	**Progressed through screening?**	N/A	**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	-	**Rainscape Cost**		-	**CBR**	-
Bespoke future trigger agreement	40	**Traditional Storage**		-	**CBR**	-
		Other		-	**CBR**	-
Key Constraints	-					
Future Active Management Proposal	-					

Conclusion and Future Spill Reduction Proposals					
Summary	*CWMTWRCH SWO YSTRADGYNLAIS SEWERAGE SYSTEM 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 Assement 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	31/10/2023	*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	**N**

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/A**
Any operation in breach of permit conditions?	**Y**	Does not have sufficient hydraulic capacity compared to accepted minimum design standards	**N**
Any significant visual or aesthetic impact due to solids or sewage fungus?	**N/A**	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/A**		
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**		