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:	Swansea Pentrepoeth Rd/Treharne Rd Pt 80		**Asset Template reference**	BP0244001-CSO 80 PENTRPOETH RD MORRISTON-0-Stage 1 - OC-Swansea	
Investigation Type	SOAF (River)				
Year of breach:	*2018*	**Spill Trigger cause:**		*OC Telemetry*	
Year of Investigation:	*2019*	**Investigation year performance:**		*15 Spills*	
Population of Asset	*4648*	**Modelled Performance: (DESIGN) / (CALIBRATED)**		*15 Spills*	
Permit Details					
Storm Permit ID:	BP0244001	**Storm Permit Name:**		CSO 80, PENTREPOETH ROAD, MORRISTON, SWANSEA	
Asset NGR:	SS6729098510	**Waterbody ID**		GB110059032180	
Discharge NGR:	SS6729498516	**Water body Discharge location**		Tawe -confluence with Twrch to tidal l	
Brief description of asset *(Screen, PFF flow control, Storage, outfall)*					
Incoming Pipe: 450mm ; Asset Type: CSO; Screening: Static Bar -10mm; Flow Control: X-pipe ; PFF Pipe: 450mm; Storage Provision: None; Consent: 462 l/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).
Permit Compliance	
PFF	Not Compliant - Additional Assessment Required following OC intervention
Storage	N/A
Screening	Compliant
Bespoke/Other	N/A

SOAF Stage 1 findings

Primary Cause: OC Telemetry
Secondary Cause: None

Following the hydraulic model assessment, the cause of the high spills at the asset is concluded to be OC Telemetry, with no secondary cause of spills. The predicted pass-forward flow is less than consent, but higher than SOCA, prior to the first spill. The model is fit for use, based on the reported spill numbers and telemetry trends.

The telemetry data contains numerous spikes with peaks greater than the spill point that are not related to rainfall.

Note: Spill counts have generally been falling since 2018 48 spills (2016), 48 (2017), 44 (2018), 15 (2019), 19 (2020) and 7 (2021).

Cause of spill count :	**Other Cause**	**Yes**	**Catchment Hydraulic**	**No**	**Infiltration & IRP required**	**No**
Future Operational Management Proposal:	*None*					
Operational intervention required:	*Undertake assessment of EDM unit to ascertain probable cause of false spills*					
SOAF Operational Intervention						
Start Date:	**Jan-24**	**Completion Date:**	*TBC*	**Indicative future annual spill performance** *(less than 40 do not continue to stage 2)*	-	
Intervention Description:	**Telemetry has been identified as a factor in excess spills at this asset. Telemetry maintenance has been issued to address this problem. follwoing this work the assets performance and permit will require review.**					
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	-	**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:	-	**Progressed through screening?**	-	**Stage 2c water quality assessment Score:**	Not Required

SOAF STAGE 3 - STEP 1>3						
Options assessed	Rainscape		Traditional Storage	N/A	PFF Increase	N/A
Equivalent storage volume required	Volume m3	**Rainscape Cost**		N/A	**CBR**	N/A
Bespoke future trigger agreement	Number of spills	**Traditional Storage**		N/A	**CBR**	N/A
		Other		N/A	**CBR**	N/A
Key Constraints	*N/A*					
Future Active Management Proposal	*N/A*					

Conclusion and Future Spill Reduction Proposals					
Summary	*CSO 80, PENTREPOETH ROAD, MORRISTON, SWANSEA 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	05/01/2024	*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	**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**
		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?	**-**	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**