Dŵr Cymru Welsh Water

SOAF Investigation Output Summary

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:	SOUTHSEA ROLLERS ARMS		**Asset Template reference**		CM0176501-SOUTHSEA ROLLERS ARMS - CSO-71836-Stage 1 - OC-Flintshire & Wrexham
Investigation Type	SOAF (River)				
Year of breach:	*2020*	**Spill Trigger cause:**		*OC Infiltration*	
Year of Investigation:	*2022*	**Investigation year performance:**		*58*	
Population of Asset	*4443*	**Modelled Performance: (DESIGN) / (CALIBRATED)**		*43 / 43*	
Permit Details					
Storm Permit ID:	CM0176501	**Storm Permit Name:**		SOUTHSEA ROLLERS ARMS CSO, TANYFRON ROAD, SOUTHSEA, WREXHAM	
Asset NGR:	SJ3013751954	**Waterbody ID**		GB111067051730	
Discharge NGR:	SJ3018051896	**Water body Discharge location**		Gwenfro	
Brief description of asset *(Screen, PFF flow control, Storage, outfall)*					
Incoming Pipe: 300mm; CSO Type: Single sided high level weir; Screening: 6x6mm; Flow Control: Hydrobrake ; PFF Pipe: 300mm; Storage Provision: None; Consent: 45l/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	Compliant					
Storage	N/A					
Screening	Compliant					
Bespoke/Other	N/A					
SOAF Stage 1 findings						
Primary Cause: Infiltration Secondary Cause: N/A Following the hydraulic model assessment, the cause of the high spills at the asset is concluded to be infiltration, with no identified secondary cause of spills. The predicted pass-forward flow is within 1% of consent prior to the first spill. The model is fit for use, based on the reported spill numbers and telemetry trends.- Infiltration was applied in close proximity to the asset, suggesting localised issues requiring investigation as the flow survey was conducted in February and incoming monitors did not identify the flow arising in the outgoing monitor.						
Cause of spill count :	**Other Cause**	**Yes**	**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 with the regulator and other stakeholders outside of the normal SOAF processes.*					
Operational intervention required:	*Winter CCTV Survey to identify areas of infiltration. This will include Identification of point sources of infiltration upstream. IRP Plan required.*					
SOAF Operational Intervention						
Start Date:	**Nov-23**	**Completion Date:**	-	**Indicative future annual spill performance** *(less than 40 do not continue to stage 2)*		4
Intervention Description:	**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:	**Nov-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		**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:**	

SOAF STAGE 3 - STEP 1>3						
Options assessed	Rainscape		Traditional Storage	N	PFF Increase	N
Equivalent storage volume required	0	**Rainscape Cost**		£0.00	**CBR**	N/A
Bespoke future trigger agreement	40	**Traditional Storage**		£0.00	**CBR**	N/A
		Other		0	**CBR**	-
Key Constraints						
Future Active Management Proposal						

Conclusion and Future Spill Reduction Proposals					
Summary	*SOUTHSEA ROLLERS ARMS CSO, TANYFRON ROAD, SOUTHSEA, WREXHAM 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	29/11/2023	*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	**N**	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?	**N/A**	Risks becoming unsatisfactory because discharges have increased beyond the original design due to infiltration, growth and urban creep	**Y**
		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**		