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:	Rear Lane, Godfrey Avenue, Glynneath CSO		**Asset Template reference**	BP0319301-REAR GODFREY AVENUE GLYNNEATH NPT-72090-Stage 1 - OC-Neath Port Talbot	
Investigation Type	SOAF (River)				
Year of breach:	*2018*	**Spill Trigger cause:**		*OC Continuation Restriction (Flow Control)*	
Year of Investigation:	*2021*	**Investigation year performance:**		*50 Spills*	
Population of Asset	*3413*	**Modelled Performance: (DESIGN) / (CALIBRATED)**		*43 Spills*	
Permit Details					
Storm Permit ID:	BP0319301	**Storm Permit Name:**		rear of Godfrey Avenue CSO, Glynneath	
Asset NGR:	SN8736205909	**Waterbody ID**		GB110058032430	
Discharge NGR:	SN8738505876	**Water body Discharge location**		Neath - conf with Nedd Fechan and Mellte to TL	

Brief description of asset
(Screen, PFF flow control, Storage, outfall)

Incoming Pipe: 375mm; CSO Type: mechanical screened spill weir and a secondary emergency unscreened weir spill; Screening: mechanically screened; Flow Control: Orifice plate with diameter of 220mm; PFF Pipe: 70l/s; Storage Provision: N/A; Consent: 88l/s; Spill flows from both sides of the orifice enter a dedicated 300mm outfall system that discharges to the River Neath.

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	Compliant					
Bespoke/Other	N/A					
SOAF Stage 1 findings						
The root cause of spills is OC Continuation Restriction (Flow Control) with a secondary cause of OC Continuation Restriction (Maintenance). PFF flows are constrained by the orifice plate diameter which is not able to pass forward the consent flow rate (70l/s calibrated model vs 88l/s consented). The downstream pipe capacity also further constrains the PFF with the consent still not being met in the design model, however this is within 10% of the consented value (85l/s design model vs 88l/s consented).						
Cause of spill count :	**Other Cause**	**Yes**	**Catchment Hydraulic**	**No**	**Infiltration & IRP required**	**No**
Future Operational Management Proposal:	*Primary OC Minor.* *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:	*Investigate orifice plate setting. A significant reduction in spills at this site can be achieved by upsizing plate opening from 220mm to 375mm. The spill count can also be reduced further by cutting the roots entering conduit SN87052870.1 downstream of the asset and causing a blockage highlighted in the November 2021 surveys .*					
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:	**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.** **A continuation restriction due to maintenance has been identified as a factor in excess spills at this asset. A cleanse of the sewerage network is required to restore compliant flows. This asset will be highlighted for future Cyclic Maintenance based upon the review of the post intervention return.** **The Assets performance will then be reviewed based upon the outcomes of the planned work.**					
Proposed Completion Date:	**Oct-24**	**Data years to be excluded from future SOAF triggers calculations**	*TBC*	**Request to hold stage 2 surveys for environment recovery**	*N/A*	

SOAF STAGE 2					
Receiving Waterbody WFD Status			Good		
Stage 2a					
Aesthetic survey:	Spring	Not Required	**Aesthetic Total score** (inclusive of amenity classification, previous complaints & pollutions)	Not Required	Not Required
	Autumn	Not Required		Not Required	Not Required
Stage 2b				*Yes / No unable due to culverted watercourse*	

Invertebrate survey:	Spring	Not Required	**Invertebrate survey score:**	Not Required	Not Required
	Autumn	Not Required		Not Required	Not Required
Stage 2c Required:				*Yes / No*	
Stage 2c screening:	Not Required	**Progressed through screening?**	No	**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	*N/A*					
Future Active Management Proposal	*This asset is an OC site with less than 40 spills in the design scenario.*					

Conclusion and Future Spill Reduction Proposals					
Summary	*rear of Godfrey Avenue CSO, Glynneath 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	26/10/2023	*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**
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**		