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:	Adj 1 The Grove, Trebanos		**Asset Template reference**	BW2303101-SWO.CRAIG Y DUKE TREBANOS SOC-0-Stage 4 - CBA-Neath Port Talbot	
Investigation Type	SOAF (River)				
Year of breach:	*2019*	**Spill Trigger cause:**		*Hydraulic*	
Year of Investigation:	*2019*	**Investigation year performance:**		*96 Spills*	
Population of Asset	*1187*	**Modelled Performance: (DESIGN) / (CALIBRATED)**		*128 Spills*	
Permit Details					
Storm Permit ID:	BW2303101	**Storm Permit Name:**		CRAIG Y DUKE TREBANOS	
Asset NGR:	SN7128502622	**Waterbody ID**		GB110059032180	
Discharge NGR:	SN7128502622	**Water body Discharge location**		Tawe -confluence with Twrch to tidal l	
Brief description of asset *(Screen, PFF flow control, Storage, outfall)*					
Incoming Pipe: 450mm; CSO Type: Stilling Pond; Screening: None; Flow Control: X-Pipe ; PFF Pipe: 150mm; Storage None; Consent: None - Deemed Consent (SOCA - 21 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	Deemed Permit – Meets SocA					
Storage	N/A					
Screening	N/A					
Bespoke/Other	N/A					
SOAF Stage 1 findings						
Primary Cause: Hydraulic Secondary Cause: None Following the hydraulic model assessment, the cause of the high spills at the asset is concluded to be Hydraulic, with no secondary cause of spills. The predicted pass-forward flow exceeds SOCA 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**	**No**	**Catchment Hydraulic**	**Yes**	**Infiltration & IRP required**	**Yes**
Future Operational Management Proposal:	*The primary cause of spills was found to be hydraulic, and as such the asset progressed through to Stage 2 of the SOAF process*					
Operational intervention required:						
SOAF Operational Intervention						
Start Date:	**Month YY**	**Completion Date:**	*Month YY*	**Indicative future annual spill performance** *(less than 40 do not continue to stage 2)*	26	
Intervention Description:						
Proposed Completion Date:	**Jan-00**	**Data years to be excluded from future SOAF triggers calculations**	*YYYY*	**Request to hold stage 2 surveys for environment recovery**		

SOAF STAGE 2					
Receiving Waterbody WFD Status			Moderate		
Stage 2a					
Aesthetic survey:	Spring	2021	**Aesthetic Total score** (inclusive of amenity classification, previous complaints & pollutions)	10	Very Low
	Autumn	2021		5	Very Low
Stage 2b				*Yes / No unable due to culverted watercourse*	

Invertebrate survey:	Spring	2021	**Invertebrate survey score:**	24	Extremely Severe
	Autumn	2021		0	No Impact
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	Y	PFF Increase	N
Equivalent storage volume required	306m3	**Rainscape Cost**		Not Achievable	**CBR**	N/A
Bespoke future trigger agreement	40	**Traditional Storage**		£1,311,540.00	**CBR**	0.7
		Other		N/A	**CBR**	N/A
Key Constraints						
Future Active Management Proposal	*The primary cause of spills was hydraulic and Stage 2 impact assessments have shown that the asset was having a SIGNIFICANT effect on the receiving waterbody, with the waterbody itself requiring improvement to achieve Good or higher status. Assessments of the potential high-level solutions have indicated that the asset passed the SOAF cost benefit threshold for further investigation and as such it is proposed to progress to detailed benefits assessment. Further details are shown below detailing DCWW's plans for storm overflow spill reduction*					

Conclusion and Future Spill Reduction Proposals					
Summary	*Based on the direction from the Welsh Government led Better River Quality Task Force, DCWW Storm overflow spill reduction programme will target the elimination of ecological harm and prevention of adverse ecological impact of any SO. With a large programme of assets requiring improvement priority will be given to CSOs having the greatest impact in the most sensitive receiving waters.* *To ensure that the improvement delivered is long term, the improvements for each site will be based on the expectation that water quality upstream of the discharge meets good or high ecological status (GES) irrespective of the actual status of the water.* *This approach has formed the basis of DCWW's portfolio investment plan for Storm Overflows.* *CRAIG Y DUKE TREBANOS was Shown to have a Severe + Impact therefor as set out above based upon our Long Term Delivery Strategy a spill reduction scheme to eliminate this level of impact is Profiled to be delivered before 2035*				
Asset Prioritisation Level	*Priority 1*			**Delivery Predicted Period**	*AMP8/9*
Asset NEP ID	*DCWW101984a*	**Asset NEP Driver Code**	*W_U_O_IMP1*	**Detailed Design Predicted Period**	*AMP7/8*
Progression to Stage 5 In AMP	*No*	*Proposed Solution yet to be taken through detailed design devloped*			

SOAF AGREEMENT					
	Date	**SOAF STAGE**	**Name**	**Contact Details**	**Location of Output**
DCWW Approval	03/01/2024	*Stage 4 - CBA*	**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	**Y**
Any operation in breach of permit conditions?	**`N**	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?	**Y**	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?	**Y**		
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**		