SOAF Investigation Output Summary

Reference: SOAF.R 00001

Please see Audit Statement Technical Guidance for further information

ASSET INVESTIGATION DETAILS			
SAP Asset Name:	James St Pontardawe	**Asset Template reference**	WQD005714-JAMES STREET CSO-72275-Stage 4 - Non CBA-Neath Port Talbot
Investigation Type	SOAF (River)		
Year of breach:	*2020*	**Spill Trigger cause:**	*Hydraulic*
Year of Investigation:	*2022*	**Investigation year performance:**	*117 Spills*
Population of Asset	*2126.08*	**Modelled Performance: (DESIGN) / (CALIBRATED)**	*115 Spills*
Permit Details			
Storm Permit ID:	WQD005714	**Storm Permit Name:**	James Street CSO, Pontardawe.
Asset NGR:	SN7198404189	**Waterbody ID**	GB110059032190
Discharge NGR:	SN7199304139	**Water body Discharge location**	Upper Clydach - headwaters to confluen
Brief description of asset *(Screen, PFF flow control, Storage, outfall)*			
Incoming Pipe: 300 mm; CSO Type: low-level, single-sided weir; Screening: Static 6mm 2D ; Flow Control: 165mm diameter orifice; PFF Pipe: 300mm; Storage Provision: None; Consent: 40l/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	Compliant					
Storage	N/A					
Screening	Compliant					
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 Hydraulic (which is primarily influence by ingress of clean water from multiple sources), with pass forward flow meeting consent prior to first spill. The model is fit for use, based on the reported spill numbers and telemetry trends. 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 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**	**Yes**	**Catchment Hydraulic**	**Yes**	**Infiltration & IRP required**	**Y**
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:	*Prioritisation should be given to undertaking an IRP before the construction of any capital schemes to address spills as there is a history of ground water infiltration and river ingress within the Trebanos catchment*					
SOAF Operational Intervention						
Start Date:	**Dec-23**	**Completion Date:**	-	**Indicative future annual spill performance** *(less than 40 do not continue to stage 2)*	112	
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:	**Dec-28**	**Data years to be excluded from future SOAF triggers calculations**	*N/A*	**Request to hold stage 2 surveys for environment recovery**		

SOAF STAGE 2					
Receiving Waterbody WFD Status			0		
Stage 2a					
Aesthetic survey:	Spring	0	**Aesthetic Total score** (inclusive of amenity classification, previous complaints & pollutions)	10	Very Low
	Autumn	0		10	Very Low
Stage 2b				*Yes / No unable due to culverted watercourse*	

Invertebrate survey:	Spring	0	**Invertebrate survey score:**	6	Moderate
	Autumn	0		18	Very severe
Stage 2c Required:				*Yes / No*	
Stage 2c screening:	0	**Progressed through screening?**	0	**Stage 2c water quality assessment Score:**	0

SOAF STAGE 3 - STEP 1>3						
Options assessed	Rainscape		Traditional Storage	N	PFF Increase	N
Equivalent storage volume required	108	**Rainscape Cost**		Not Achievable	**CBR**	N/A
Bespoke future trigger agreement	40	**Traditional Storage**		£1,171,427.00	**CBR**	0
		Other		0	**CBR**	-
Key Constraints	*Note of major factors affecting suitability of solution/pricing details*					
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 currently achieving a good or higher status. Assessment of the potential high-level solutions have indicated that any solution entailed excessive costs for the benefit it provided and thus the asset does not pass the SOAF Cost Benefit threshold and will not 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.* *James Street CSO, Pontardawe. 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	*DCWW102011a*	**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	08/12/2023	*Stage 4 - Non 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	**U**
		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**	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?	**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**		