

ASSET INVESTIGATION DETAILS						
SAP Asset Name:	Dalar Wen CSO			Asset Template reference	CM0172201-DALAR WEN SPS DALAR WEN DENBIGH-71880-Stage 4 - CBA-Denbighshire	
Investigation Type	SOAF (River)					
Year of breach:	2020	Spill Trigger cause:		Hydraulic		
Year of Investigation:	2023	Investigation year performance:		47		
Population of Asset	1837	Modelled Performance: (DESIGN) / (CALIBRATED)		49 / 49		
Permit Details						
Storm Permit ID:	CM0172201	Storm Permit Name:		Dalar Wen Sewage Pumping Station		
Asset NGR:	SJ0645066656	Waterbody ID		GB41001G202100		
Discharge NGR:	SJ0645366644	Water body Discharge location		0		
Brief description of asset (Screen, PFF flow control, Storage, outfall)						
<p>Incoming line:225 mm gravity; CSO type: High level Double-sided, broad-crested weir; Screening: Static wave screen - 6mm2d; Flow Control: Pump ; PFF Pipe: Rising Main; PFF Consent: 38 l/s; SocA: 33.3 l/s.</p>						
SOAF STAGE 1						
Details of assessment:	<p>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.</p>					
Permit Compliance						
PFF	Compliant					
Storage	Not compliant – further investigation required					
Screening	Compliant					
Bespoke/Other	N/A					
SOAF Stage 1 findings						
<p>Following the hydraulic model assessment, the cause of the high spills at the asset is concluded to be hydraulic, with no definitive as the secondary cause of spills. The predicted pass-forward flow (42.4l/s) is greater than of consent (38 l/s) prior to the first spill.</p> <p>The model is fit for use, based on the reported spill numbers and telemetry trends.</p> <p>The asset serves as a relief point to the downstream pump station (1115), a storage of 95m3 is mentioned in the permit document however details of this storage are not provided. The storage in the wet well alone is significantly less than this therefore further investigation regarding the storage is necessary.</p>						
Cause of spill count :	Other Cause	No	Catchment Hydraulic	Yes	Infiltration & IRP required	No
Future Operational Management Proposal:	<p>The primary cause of spills was found to be hydraulic, and as such the asset progressed through to Stage 2 of the SOAF process.</p>					
Operational intervention required:	<p>The system is operating as designed and no additional maintenance changes are required to improve the operation of the asset.</p>					
SOAF Operational Intervention						
Start Date:	-	Completion Date:	-	Indicative future annual spill performance (less than 40 do not continue to stage 2)		49

Intervention Description:					
Target Completion by Date:	Jan-00	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	2024	Aesthetic Total score (inclusive of amenity classification, previous complaints & pollutions)	20	Low
	Autumn	2024		30	Moderate
Stage 2b				Yes / No, unable due to culverted watercourse	
Invertebrate survey:	Spring	UTC	Invertebrate survey score:	UTC	UTC
	Autumn	UTC		UTC	UTC
Stage 2c Required:				Yes / No	
Stage 2c screening:	Required	Progressed through screening?	Yes	Stage 2c water quality assessment Score:	0 - No Impact

SOAF STAGE 3 - STEP 1>3						
Options assessed	Rainscape		Traditional Storage	Y	PFF Increase	N
Equivalent storage volume required	8,74134m3	Rainscape Cost		£409,445.00	CBR	0.8
Bespoke future trigger agreement	40	Traditional Storage		£83,044.67	CBR	3.7
		Other		-	CBR	-
Key Constraints	None identified					
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	<p>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.</p> <p>With a large programme of assets requiring improvement priority will be given to CSOs having the greatest impact in the most sensitive receiving waters.</p> <p>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.</p> <p>This approach has formed the basis of DCWW's portfolio investment plan for Storm Overflows.</p> <p>Dalar Wen Sewage Pumping Station was shown to have a No / Very low Impact therefore 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 between 2040-2050</p>			
Asset Prioritisation Level	Priority 5		Delivery Predicted Period	AMP11/12
Asset NEP ID	N/A	Asset NEP Driver Code	N/A	Detailed Design Predicted Period
Progression to Stage 5 In AMP	No	Proposed Solution yet to be taken through detailed design developed		

SOAF AGREEMENT						
	Date	SOAF STAGE		Name	Contact Details	Location of Output
DCWW Approval	01/10/2024	Stage 4 - CBA		Christian Phillips Adams	christian.phillipsadams@dwrcymru.com	Email
Regulator Liaison Date	Click here to enter a date					
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?	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?	N		
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		