

ASSET INVESTIGATION DETAILS			
SAP Asset Name:	Nant-y-Cafan Dulais Valley		Asset Template reference
Investigation Type	SOAF (River)		BW2904001-NANT Y CAFN SWO DULAIS VALLEY-52372-Stage 1 - OC-Neath Port Talbot
Year of breach:	2018	Spill Trigger cause:	OC Infiltration
Year of Investigation:	2021	Investigation year performance:	125 spills
Population of Asset	1148.27	Modelled Performance: (DESIGN) / (CALIBRATED)	15 / 159 spills
Permit Details			
Storm Permit ID:	BW2904001	Storm Permit Name:	NANT Y CAFARN DULAIS VALLEY
Asset NGR:	SN8082807633	Waterbody ID	GB110058032360
Discharge NGR:	SN8080007610	Water body Discharge location	Dulais - headwaters to confluence with River Ne
Brief description of asset (Screen, PFF flow control, Storage, outfall)			
Incoming Pipe: 675mm; CSO Type: double sided, low-level weirs; Screening: Static Bar Screen; Flow Control: X-Pipe; PFF Pipe: 300mm; Storage Provision: None; Consent: None – Deemed permit			

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	Deemed Permit – Meets SocA				
Storage	N/A				
Screening	Compliant				
Bespoke/Other	N/A				
SOAF Stage 1 findings					
Primary Cause: OC Infiltration Secondary Cause: None					
Following the hydraulic model assessment the cause of the high spills at the asset is concluded to be OC Infiltration, with pass forward flow meeting the SOCA prior to first spill. The model is fit for use, based on the reported spill numbers and telemetry trends. River ingress and ground water infiltration is affecting the Crynant catchment as a whole which results in large volumes of flow and surcharge from the downstream STW.					
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:	Undertake an IRP -This also applies to assets 52364 and 52342				
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:	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:	Oct-28	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	2021	Aesthetic Total score (inclusive of amenity classification, previous complaints & pollutions)	5	Very low
	Autumn	2021		0	No impact
Stage 2b				Yes / No unable due to culverted watercourse	

Invertebrate survey:	Spring	2021	Invertebrate survey score:	14	Severe
	Autumn	2021		0	No impact
Stage 2c Required:				Yes / No	
Stage 2c screening:	-	Progressed through screening?	-	Stage 2c water quality assessment Score:	0

SOAF STAGE 3 - STEP 1-3					
Options assessed			Traditional Storage		PFF Increase
Equivalent storage volume required		Rainscape Cost			CBR
Bespoke future trigger agreement		Traditional Storage			CBR
		Other			CBR
Key Constraints	Note of major factors affecting suitability of solution/pricing details				
Future Active Management Proposal					

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>BRYNDULAIS (SWO 2A) BRYNDULAIS (SWO 2A) was Shown to have a other cause issue resulting in higher spills which are expected to reduce once a resolution has been implemented.</p> <p>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 Assessment Strategy (SOWQAS) in AMP8</p>				
Asset Prioritisation Level	Priority 1		Delivery Predicted Period		AMP8/9
Asset NEP ID	DCWW101986a	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 developed			

SOAF AGREEMENT					
Date	SOAF STAGE	Name	Contact Details	Location of Output	
DCWW Approval	26/10/2023	Stage 1 - OC	Christian Phillips Adams	christian.phillips@dams@dwrcymru.com	Email
Regulator Liaison Date	Click here to enter a date				
CSO Classification					
Satisfactory	N	Unsatisfactory	Y	Sub Standard	Y
		Any operation in dry weather conditions?	Y	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?	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		