

ASSET INVESTIGATION DETAILS			
SAP Asset Name:	ONLLWYN	Asset Template reference	BP0135001-DYFFRYN CELLWEN-52116-Stage 1 - OC-Neath Port Talbot
Investigation Type	SOAF (River)		
Year of breach:	2018	Spill Trigger cause:	OC Infiltration
Year of Investigation:	2021	Investigation year performance:	104
Population of Asset	798	Modelled Performance: (DESIGN) / (CALIBRATED)	95
Permit Details			
Storm Permit ID:	BP0135001	Storm Permit Name:	DYFFRYN CELLWEN PUMPING STATION, Heol Gaer Onllwyn
Asset NGR:	SN8538410231	Waterbody ID	GB110058032370
Discharge NGR:	SN8558610280	Water body Discharge location	Pyrdin - headwaters to conf with Nedd Fechan
Brief description of asset (Screen, PFF flow control, Storage, outfall)			
Incoming Pipe: 450mm; CSO Type: Hole in wall of wet well; Screening: 2d 6mm static screen; Flow Control: Pump capacity ; PFF Pipe: Rising Main; Storage 25m3; Consent: 20/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). 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	Design Compliant – Operational Intervention required to restore.					
Storage	Compliant					
Screening	Compliant					
Bespoke/Other	N/A					
SOAF Stage 1 findings						
<p>Primary Cause: OC Infiltration Secondary Cause: OC Continuation Restriction (Flow Control)</p> <p>Following the hydraulic model assessment, the cause of the high spills at the asset is concluded to be OC Infiltration, with OC Continuation Restriction (Flow Control) as the secondary cause of spills. The predicted pass-forward flow is not within 10% of consent prior to the first spill. The model is fit for use, based on the reported spill numbers and telemetry trends.</p> <p>The pump rate varies over time but averages at between 14 and 15/s which is 5/s below the consented rate. Design model spills 44 times. This reduced to 13 spills with the GI acceptability test undertaken on the design model.</p>						
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:	IRP Increase capacity of pumps to ensure consent is achieved					
SOAF Operational Intervention						
Start Date:	Jan-24	Completion Date:	TBC	Indicative future annual spill performance (less than 40 do not continue to stage 2)	0	
Intervention Description:	<p>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.</p> <p>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.</p> <p>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.</p>					
Proposed Completion Date:	Jan-29	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			Good			
Stage 2a						

Aesthetic survey:	Spring	2021	Aesthetic Total score (inclusive of amenity classification, previous complaints & pollutions)	15	Low
	Autumn	2021		5	Very Low
Stage 2b				Yes / No unable due to culverted watercourse	
Invertebrate survey:	Spring	2021	Invertebrate survey score:	0	No Impact
	Autumn	2021		4	Low
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/N	PFF Increase	Y/N
Equivalent storage volume required	Volume m3	Rainscape Cost		-	CBR	-
Bespoke future trigger agreement	Number of spills	Traditional Storage		-	CBR	-
		Other		-	CBR	-
Key Constraints	-					
Future Active Management Proposal	-					

Conclusion and Future Spill Reduction Proposals					
Summary	<p>DYFFRYN CELLWEN PUMPING STATION, Heol Gaer Onllwyn 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 4			Delivery Predicted Period	AMP10/11
Asset NEP ID	DCWW102107a	Asset NEP Driver Code	W_U_O_IMP1	Detailed Design Predicted Period	AMP9/10
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	04/01/2024	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	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?	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