

ASSET INVESTIGATION DETAILS						
SAP Asset Name:	Tregaron WwTW		Asset Template reference		BH0057901-TREGARON WWTW TREGARON CEREDIGION-51658-Stage 1 - OC-Ceredigion	
Investigation Type	SOAF (River)					
Year of breach:	2019	Spill Trigger cause:		OC Infiltration		
Year of Investigation:	2022	Investigation year performance:		109		
Population of Asset	1035	Modelled Performance: (DESIGN) / (CALIBRATED)		15 / 110		
Permit Details						
Storm Permit ID:	BH0057901	Storm Permit Name:		TREGARON WASTEWATER TREATMENT WORKS		
Asset NGR:	SN6720059200	Waterbody ID		GB110062043562		
Discharge NGR:	SN6726159165	Water body Discharge location		Teifi - Camddwr conf to Nant Wern-macwydd conf		
Brief description of asset (Screen, PFF flow control, Storage, outfall)						
<p>Inlet works CSO Incoming line: 150 mm gravity & 100 mm Rising main; CSO Type: High level Weir; Screening: Haige Ace Compactor Screen 6mm 1D; Flow Control: N/A ; FFT Pipe: 250 mm; Consent: 15 l/s; SocA: 24.1 l/s.</p> <p>Storm Tank Volume: 55.7 m3; Spill level: Storm tank 1- 161.651mAOD, Storm tank 2- 161.661 mAOD; Tank emptying philosophy: Unknown ; Tank emptying Rate: Unknown</p> <p>Supporting text Flow enters the works and passes through the powered Haigh screen to the inlet balance tank. If the incoming flow exceed FFT, the level in the balance tank rises, passes through the bellmouth and begins to fill the 2nd storm tank simultaneously. If storm conditions continue, the level in the storm tanks rise and spill flows pass over the weir of the storm tanks to the common storm outlet channel, which discharges to the outfall chamber. <u>Flow passes from the balance tank to the treatment process through the PST to the pre filter feed tank. If the incoming flow exceeds the capacity of the downstream treatment process, the level in the pre filter feed</u></p>						
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			Compliant			
Storage			Compliant			
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 OC Infiltration. The predicted pass-forward flow is 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>						
Cause of spill count :	Other Cause	IRP	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:	Infiltration Reduction Plan required.					
SOAF Operational Intervention						
Start Date:	Apr-24	Completion Date:	TBC	Indicative future annual spill performance (less than 40 do not continue to stage 2)		15

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.			
Target Completion by Date:	Apr-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			Status at time of assessment		
Stage 2a					
Aesthetic survey:	Spring	-	Aesthetic Total score (inclusive of amenity classification, previous complaints & pollutions)	-	-
	Autumn	-		-	-
Stage 2b				Yes / No unable due to culverted watercourse	
Invertebrate survey:	Spring	-	Invertebrate survey score:	-	-
	Autumn	-		-	-
Stage 2c Required:				Yes / No	
Stage 2c screening:	Required	Progressed through screening?	Progress Yes / No	Stage 2c water quality assessment Score:	N/A

SOAF STAGE 3 - STEP 1>3						
Options assessed	Rainscape		Traditional Storage	N	PFF Increase	Y/N
Equivalent storage volume required	-	Rainscape Cost		-	CBR	-
Bespoke future trigger agreement	40	Traditional Storage		-	CBR	-
		Other		£ Cost	CBR	Update if required
Key Constraints						
Future Active Management Proposal						

Conclusion and Future Spill Reduction Proposals					
Summary	<p>TREGARON WASTEWATER TREATMENT WORKS 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>TREGARON WASTEWATER TREATMENT WORKS was shown to have an other cause issue resulting in higher spills which are expected to reduce once a resolution has been implemented.</p> <p>The asset will under take classification as part of DCWW's GN066 in AMP6, to establish any impact that there might be.</p>				
Asset Prioritisation Level	-		Delivery Predicted Period	-	
Asset NEP ID	N/A	Asset NEP Driver Code	N/A	Detailed Design Predicted Period	-
Progression to Stage 5 In AMP	No				

SOAF AGREEMENT					
Date	SOAF STAGE	Name	Contact Details	Location of Output	
DCWW Approval	01/05/2024	Stage 1 - OC	Christian Phillips Adams	christian.phillipsadams@dwrcymru.com	Email
Regulator Liaison Date	Click here to enter a date				
CSO Classification					
Satisfactory	N	Unsatisfactory	N	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	N

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?	U	Risks becoming unsatisfactory because discharges have increased beyond the original design due to infiltration, growth and urban creep	UTC
Cause or significantly contributes to a deterioration in the biological or chemical status of the receiving water?	U		
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		