

# Welsh Affairs Committee Nov 2023

## Follow up questions

**1a. At Q165, Ben Lake MP asked how the environmental harm of sewage spills is evaluated. In your reply, you said that you would be willing to write to the Committee with a full piece on the subject. How is environmental impact measured in the process of setting permit conditions and is this different in Wales from England?**

Environmental permits for storm overflows define the conditions under which an asset can operate. In summary, the permitted flow passed forward limits the operation of a storm overflow. This is a rate of flow that is to be retained in the sewer and passed forward to the Wastewater Treatment Works before a spill can occur from the storm overflow. It must be set at a sufficient level to prevent an overflow discharging in conditions that will lead to unacceptable environmental impact. Permits also contain a screening condition that limits solids released in the discharge.

As a response to increasing concerns in relation to the operation and potential impact of storm overflows NRW is requiring water companies to develop and deliver a programme of investigations for all storm overflows by 2030. We expect companies to investigate in line with our recently issued guidance (i.e. GN066 and GN021) which establishes the methodology for assessing environmental impact, including aesthetic impacts. Where environmental impacts are identified we expect the company to develop improvement plans and to programme delivery based on the severity of impact.

In summary, the approach to assessing environmental impact, in a simple scenario where a single storm overflow discharge located on a river is acting alone, requires:

- two aesthetic site surveys, to assess the number of sewage-derived litter items such as hygiene products, contraceptives, toilet paper, faeces, wet wipes, and earbuds.
- an assessment of incident and complaint records for the asset.
- where possible upstream and downstream benthic invertebrate samples assessed using the River Invertebrate Classification Tool (RICT). The method was developed by the three UK environmental agencies to classify the ecological quality of rivers and is designed to detect impacts due to organic pollution and is also sensitive to toxic pollutants.

Our guidance also establishes criteria where a water quality impact assessment is required. This stage assesses whether the storm overflow is likely to cause an environmental impact using water quality modelling, with a focus on total and un-ionised ammonia, BOD and dissolved oxygen.

GN066 and GN021 specifically apply to the regulation of storm overflows in Wales. In England, separate EA guidance is available on gov.uk. However the underlying methodologies for assessing environmental impact using benthic invertebrate sampling and/or water quality models has been developed on an England and Wales basis, and is consistent.

The method for assessing the environmental impact of storm overflows located in estuaries and coastal waters is under development, and we aim to issue to water companies in 2024.

**1b. What concrete changes are being made to improve the monitoring of the impact of sewage discharges?**

In PR24 we have required water companies to assess all of their storm overflows in line with our guidance, by 2030 (end of AMP8). This investigations programme will provide us with a comprehensive evidence base of the performance and environmental impact of all storm overflow discharges across Wales, which will be used to plan a prioritised programme of investment.

As part of our commitments to the Storm Overflow Action Plan NRW is undertaking an evidence review on storm overflows in Wales, which we aim to finalise in early 2024. This will inform the design and delivery of a strategic water quality monitoring programme for storm overflows. The aim is to improve scientific understanding of the quality of wastewater discharged from storm overflows and the impact on receiving waters. Through our regulatory work, including the annual Water Industry Environmental Performance Assessment and Storm Overflow Spill Data Report, we continue to scrutinise and report publicly on water company performance, with the aim of driving improvements in performance.

**2. The Committee has had sight of Natural Resources Wales' 'Assessing Storm Overflows' guidance and 'Unpermitted Storm Overflow' guidance. Has this guidance fully clarified the criteria for permitted and unpermitted spills, or is there further work to be done in this area?**

Further work is required to establish methodologies for storm overflows discharging to estuaries and coastal waters.

### **3. How does Natural Resources Wales expect the performance rating process to lead to an improvement in Dŵr Cymru's performance?**

The Water Industry Environmental Performance Assessment (EPA) provides an over-arching methodology for measuring the environmental performance of Water & Sewerage Companies (WaSCs) across England & Wales agreed by both Natural Resources Wales and the Environment Agency (EA). The assessment is undertaken and reported annually and is a key opportunity for regulators to influence companies.

NRW currently assesses Dŵr Cymru Welsh Water's performance using the same methodology as the EA, and this allows us to benchmark their performance against nine WaSCs in England. We use the same method for Hafren Dyfrdwy, but do not apply the red/amber/green status or star rating due to their significantly smaller dataset.

The EPA helps drive improvements in water company performance, because:

- It is a sector level annual assessment for the water industry across England & Wales, and provides an independent and transparent comparison of sector performance.
- As a non-statutory reporting tool, it provides an additional reputational incentive for companies to improve environmental performance.
- It allows the regulator to challenge poor performance strategically and provides clear criteria for targeting improvements and delivering better outcomes for the environment over the AMP period. Annual performance meetings at Director level are also attended by Welsh Government and Ofwat.
- The EPA approach is adaptable, with thresholds reviewed at the end of every AMP period.
- EPA star ratings influence company credit ratings.

Ofwat also use the EPA data to assess and report on company performance and have adopted two of the EPA metrics and targets (i.e. total pollution incidents and permit compliance) within their own regulatory framework, hence they attract additional financial incentives/penalties.

The annual EPA reports for Dŵr Cymru Welsh Water and Hafren Dyfrdwy can be found here: [Natural Resources Wales / Water reports](#)

#### **a. Over what time period does Natural Resources Wales expect Dŵr Cymru's performance to improve? What are the milestones along the route to improved performance?**

Our Environmental Performance Assessment (EPA) methodology includes targets and milestones over five years for reducing total pollution incidents and serious incidents and improving self-reporting. The red, amber and green thresholds for metrics are set out in our EPA methodology v10, available [here](#).

- For total pollution incidents our methodology sets a glide path for the five years of AMP7, aiming for less than, or equal to 19 incidents per 10 000km sewer by 2025 (year 5).
- For serious pollution incidents our methodology sets a glide path for the five years of AMP7, the target is zero by 2025.
- For self-reporting of incidents the target is equal to or greater than 80% and greater than, or equal to 90% for Pumping Stations and WwTW combined.

The EPA metric thresholds are reviewed every five years to continually drive improvements. The changes to the metrics ensure we continue to press the water companies to meet their statutory obligations and ensure our expectation for the water companies to continue to push for improvement are clear.

We expect all companies with a two-star rating to put in place measures to improve poor performance with immediate effect.

In Wales, the PR24 Forum's strategic steer to DCWW establishes the wider environmental ambition for AMP8 (2025-30), including:

- We expect DCWW to reduce the use of Storm Overflows (SOs) prioritised on the basis of delivering the maximum improvement to the environment in terms of reducing harm. This also applies to currently unpermitted SOs.
- We expect DCWW to seek a more stretching target for pollution incidents and do not want to see the biggest water company in Wales falling behind the rest of the industry. Forum members have concerns over declining performance and DCWW ambition to reduce pollution incidents over PR24.
- We expect pollution reduction to be firmly embedded in the values and operational practice of the company.

**4. On the issue of metal mine water pollution, how has Natural Resources Wales selected which metal mines to prioritise for remedial action and what work has been done to address the problems that have been identified?**

The Metal Mine Programme is founded on an extensive body of strategic studies, including the *Metal Mine Failing Waterbodies Assessment* (2020), which quantified steady-state impacts on the environment associated with legacy metal mines in Wales. This identified c.1,300 abandoned metal mines, polluting more than 700km of surface waters. Our programme scope currently includes 129 sites considered certain or highly likely to be causing failures of water quality criteria, and 140 sites potentially causing impacts. Where mines are proximate to one another, or hydraulically linked / within the same catchment, they may be grouped under a common remediation “project.” Each remediation project begins with verification of the impacts, and priorities are set in the light of the work cited above and in the light of evidence from site investigations, water flow and load monitoring and laboratory analysis.

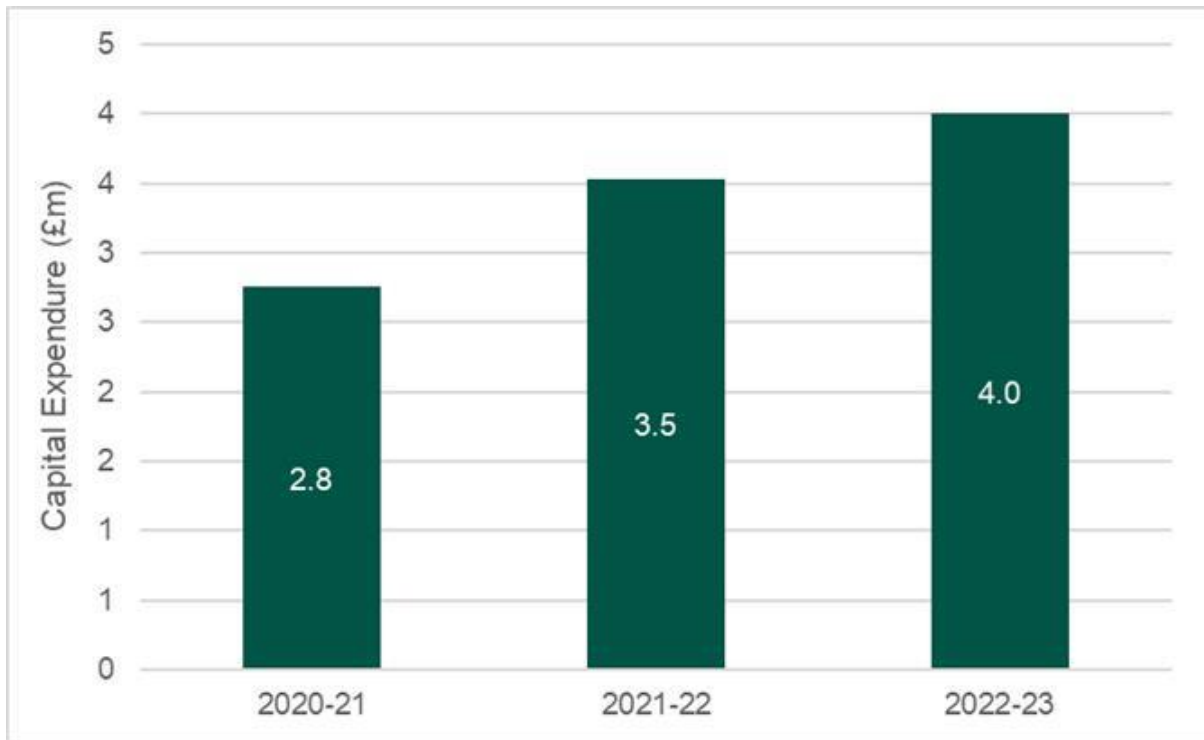
Working with the Coal Authority, NRW has undertaken work to address pollution and other mine hazards since 2016 when we undertook an assessment of the risk of a blow-out from Cwm Rheidol Adit No.9.

In 2019 NRW commissioned the Coal Authority to undertake:

- A hydro scheme assessment at Dylife.
- Feasibility studies at multiple sites.
- Benefits assessments at multiple sites.
- Blow-out Potential Appraisals at six sites.
- Blow-out early warning system design at Cwm Rheidol Adit No.9.
- Design of planning of blow-out prevention measures at Cwm Rheidol Adit No.9.
- Surface water inflow appraisals at three sites.
- Mine Hazards Assessment at sites on the Welsh Government Woodlands Estate.
- Design of ongoing monitoring (water chemistry and flow) at six sites.
- Preparation of a 15-year metal mine remedial programme.
- Appraisal of waterbodies in Wales failing Water Framework Directive standards due to mines.
- Geotechnical and ground investigations.
- Topographic surveys.

Blow-out prevention measures are currently in their construction phase at Cwm Rheidol. This is part of an extensive, multi-year programme of works, formally established in 2020 and being delivered collaboratively by NRW and the Coal Authority.

Effort and outputs have been increasing year on year with capital expenditure of £10.3m over the last three years.



In 2022-23 our Metal Mines Programme set out to deliver 14 preliminary mine site assessments; 8 outline designs; 5 detailed designs; 1 research, development and innovation trial and construction of 15 assets. 40 of these 43 outputs (93%) were achieved. In 2023-24 expenditure is forecast at £5m, delivering 40 outputs including site assessments, enabling works, designs, the construction of assets and two research and development trials - across a total of 25 in-flight projects.

**January 2024**