

Meeting of:	Environment and Regeneration Scrutiny Committee
Date of Meeting:	Tuesday, 16 April 2024
Relevant Scrutiny Committee:	Environment and Regeneration
Report Title:	Bathing water quality at designated bathing beaches in the Vale of Glamorgan.
Purpose of Report:	To provide Committee with an overview of existing issues pertaining to bathing water quality in the Vale of Glamorgan, and to advise of the multi-agency arrangements aimed at improving bathing water quality
Report Owner:	Miles Punter - Director of Environment and Housing
Responsible Officer:	Miles Punter - Director of Environment and Housing
Elected Member and Officer Consultation:	This report will affect all Vale residents and therefore no individual ward member consultation has been undertaken. Committee Reports Finance - Claire James
Policy Framework:	This report is within the Policy Framework and Budget.
<p>Executive Summary:</p> <ul style="list-style-type: none"> • The Council has eight designated bathing beaches within its administrative area. The highest concentration of bathing water beaches in Southeast Wales. • Bathing water quality is a crucial aspect of public health and environmental protection, and the Vale's beaches and coastline plays a key role in supporting the local economy, in particular the thriving tourism industry around Barry Island, in addition to the well-being of local residents who frequent the waters. • Two new beaches were designated for bathing in 2023. Watch House Bay in Barry (Known locally as Watch Tower Bay), and Ogmore by Sea beach. • Natural Resources Wales (NRW) is the regulating body responsible for measuring bathing water quality in Wales. • NRW, began undertaking water quality sampling at these beaches during the 2023 bathing season. 	

- Unfortunately, the sampling results at the two newly designated beaches resulted in a 'Poor' bathing water quality classification for the 2023 bathing period. Worse, these beaches are the only two 'Poor' water quality beaches in Wales.
- This report explains the bathing water classification system and the legislative requirements that now apply.
- Whilst the Vale of Glamorgan Council is not responsible for bathing water quality, it's officers and elected members can have a role working with the regulators NRW and Dwr Cymru to seek improvements over a reasonable time period.
- The report therefore explains the proposed arrangements to assist in improving bathing waters at designated bathing beaches in the Vale of Glamorgan and the Council's role in this.

Recommendation

1. That Committee notes the content of this report and the arrangements proposed to assist in improving bathing waters at designated bathing beaches in the Vale of Glamorgan.

Reason for Recommendation

1. To ensure that elected members are aware of the most recent bathing water classifications at the vale of Glamorgan's designated bathing beaches and to advise of the collaborative arrangements in place to identify pollution sources and measures to improve bathing water quality in the future.

1. Background

- 1.1 Bathing water quality is a crucial aspect of public health and environmental protection. The Vale of Glamorgan prides itself on having a number of designated bathing water beaches and these play a key role in supporting the local economy, in particular the thriving tourism industry around Barry, in addition to the well-being of local residents who frequent the waters.
- 1.2 In Wales, the management and regulation of bathing waters have undergone revisions to ensure enhanced protection for both human health and the environment. The first European bathing water legislation, in the form of the Bathing Water Directive, came into force in 1976. The revised Bathing Water Directive was adopted in 2006, and 2015 was the first year it was fully implemented in the UK. Management and surveillance methods for bathing waters have been changed and new tighter microbiological standards brought in.

Roles and Responsibilities

- 1.3 Since leaving the EU the Bathing Water Directive is now devolved and comes under the Bathing Water Regulations of Welsh Government. The introduction of revised bathing water regulations underscores a commitment to maintaining high standards of water quality and promoting sustainable management practices.
- 1.4 Welsh Government set the policy frameworks and legislative measures to govern bathing water quality.
- 1.5 The Bathing Water Directive 2006/7/EC which put in place a mechanism to identify bathing waters in the UK forms part of retained EU law in Wales. The Bathing Water Regulations 2013 specify the statutory requirements associated with the management of bathing waters in Wales.

- 1.6** The Regulations require the Welsh Government to annually identify popular bathing areas in Wales. The objective of the Regulations is to protect bathers' health and inform bathers of potential health hazards associated with poor water quality. Bather numbers is the main criteria which the Welsh Government will apply when considering whether it is appropriate to designate a site as a bathing water. Any infrastructure or facilities provided, or other measures taken to promote bathing at the site will also be considered.
- 1.7** Once a bathing water has been designated, the water quality is monitored by Natural Resources Wales (NRW) during the bathing season, which runs from 15 May to 30 September.
- 1.8** The Bathing Water Regulations introduced a classification system with stringent water quality standards and put an emphasis on providing information to the public. Welsh Government has to inform members of the public about bathing water management, bathing water quality, and potential threats to bathing water quality and public health. Waters are classified based on samples taken from the previous four years¹ in order to even out effects of extreme situations.
- 1.9** Designated bathing waters are classified as excellent, good, sufficient or poor depending on water quality sampling results. The bathing water quality classifications are based on two microbiological parameters: intestinal enterococci and E.coli.
- 1.10** NRW is the principal environmental agency in Wales tasked with overseeing various aspects of natural resource management, including water quality. Its roles and responsibilities regarding the bathing water regulations comprise of the following:
- Conducting regular monitoring and assessment of bathing water quality at designated sites.
 - Providing data and analysis to inform decision-making processes related to bathing water management.
 - Implementing measures to mitigate pollution sources and improve water quality where necessary.
 - Collaborating with local authorities, Dŵr Cymru Welsh Water, and other stakeholders to achieve shared objectives in maintaining bathing water standards.
- 1.11** NRW is responsible for monitoring and reporting against the standards in the Regulations. Samples are analysed for two types of bacteria, which indicate

¹ There are no pass/fail standards for individual water samples, instead the classification is based on a statistical measure of all samples, known as a percentile. Percentiles use the range of all samples taken to estimate the probability of higher results occurring. The classification uses either the 95% or 90% percentile depending on the classification. (Further details on the how classifications are determined can found here_ - <https://www.legislation.gov.uk/uksi/2013/1675/schedule/5/made>

pollution from sewage or livestock. Polluted water can have impacts on human health, including causing stomach upsets and diarrhoea if swallowed.

1.12 Local authorities in Wales are responsible for managing and regulating bathing waters within their jurisdictions. Their roles include:

- Designating and managing bathing water sites in accordance with regulatory requirements.
- Implementing pollution prevention measures and addressing sources of contamination within their areas of control.
- Collaborating with NRW, Welsh Government, and other stakeholders to develop local strategies for improving bathing water quality.
- Providing information and guidance to the public regarding safe bathing practices and water quality standards.

1.13 As the primary provider of water and wastewater services in Wales, Dŵr Cymru Welsh Water (DCWW) plays a crucial role in ensuring compliance with bathing water regulations. Its responsibilities include:

- Operating and maintaining wastewater treatment facilities to minimize discharges and pollutants entering bathing waters.
- Implementing infrastructure upgrades and pollution control measures to enhance water quality.
- Collaborating with regulatory authorities and stakeholders to monitor and address issues affecting bathing water quality.
- Engaging in public outreach and education initiatives to promote awareness of water conservation and pollution prevention measures.

1.14 The revised bathing water regulations in Wales signify a concerted effort by government agencies, environmental organizations, and local authorities to uphold stringent standards of water quality and protect public health. Through collaborative efforts and sustained investments in monitoring, enforcement, and pollution control measures, Wales aims to ensure that its bathing waters remain safe, clean, and enjoyable for residents and visitors alike.

2. Key Issues for Consideration

Vale's Bathing Waters and Results

2.1 The Vale of Glamorgan has the highest concentration of designated bathing waters in South-East Wales. There are eight designated bathing waters located within the Vale of Glamorgan, stretching from Penarth in the East to Ogmores-by-sea in the West.

2.2 As noted, the designated bathing water season runs from the 15th May to the 30th September. During the bathing season, NRW monitors bathing water

quality and provides information about possible health risks arising from issues such as short-term pollution episodes. At the end of each year, NRW sends data on bathing water quality and information on management measures to Welsh Government, who then produce an annual report, with the latest report being that for the 2023 season².

- 2.3** Table 1 below provides a summary of the bathing water classifications for 2022 and 2023 for each of the designated bathing water beaches in the Vale of Glamorgan. It is evident that the majority of the designated bathing waters are either classified as Excellent or Good, with only Jackson’s Bay as sufficient and the two newly designated bathing waters of Watch House Bay and Ogmore-by-Sea unfortunately being classified as Poor.

Table 1 - Summary of Vale Bathing Waters 2022-2023

Designated Bathing Water	Classification 2022	Classification 2023
Cold Knap	Excellent	Excellent
Col-Huw Beach (Llantwit Major)	Excellent	Excellent
Jackson’s Bay	Sufficient	Sufficient
Ogmore-by-Sea Beach	N/A	Poor
Penarth	Excellent	Good
Southerndown (Dunraven Bay)	Excellent	Excellent
Watch House Bay	N/A	Poor
Whitmore Bay	Good	Good

As detailed in Table 1 , both Watch House Bay and Ogmore-by-Sea have been classified as Poor for the 2024 Bathing Season. Both beaches were newly designated by Welsh Government for the 2023 season, and therefore the classifications are based on a limited dataset from this initial year only. As noted above the classifications are typically based on four years of bathing water quality data.

- 2.4** At Watch House Bay, four samples out of a total of 20 samples had elevated bacteria levels, and these results all correlated either during, or following, periods of wet weather. Rainfall and river level data for the River Cadoxton showed some correlation of poorer water quality at the bathing water in the days following rainfall.
- 2.5** The impact of these samples on the mean and standard deviation of the data was enough to bring the classification below the threshold for compliance on the *intestinal enterococci* bacteriological determinant, which resulted in the bathing water being classified as ‘poor’ overall.

² <https://naturalresources.wales/media/intoktzi/wales-bathing-water-report-2023-final.pdf>

2.6 At Ogmores-by-Sea, six samples out of a total of 20 samples had elevated levels of bacteria. Rainfall and river level data for the Ogmores and Ewenny Rivers' catchments was assessed against the bathing water sample results. This showed poorer water quality following rainfall and when river levels were elevated.

2.7 The impact of these samples on the mean and standard deviation of the data was enough to bring the classification below the threshold for compliance on the *intestinal enterococci* bacteriological determinant, which resulted in the bathing water being classified as 'poor' overall.

2.8 The water quality data from 2023 from Watch House Bay and Ogmores-by-Sea are summarised in Figure 1 and Figure 2 below.

Figure 1 - Water Quality Data 2023 - Watch House Bay

Annual classification 2023: = poor

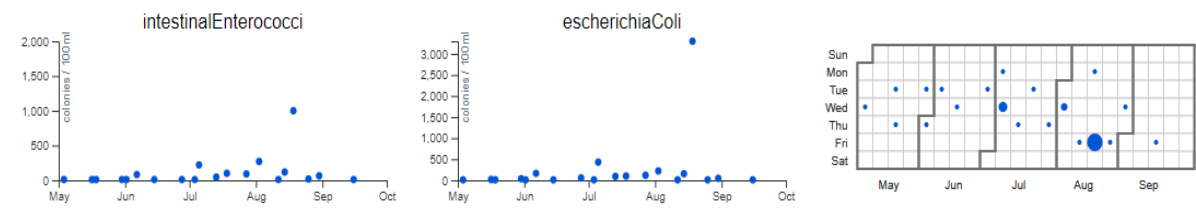
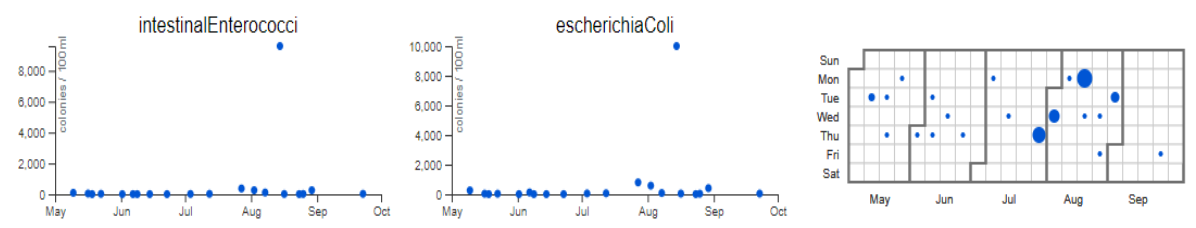


Figure 2 - Water Quality Data 2023 – Ogmores-by-Sea

Annual classification 2023: = poor



2.9 Owing to the classification of these two beaches as Poor, Regulation 13 of the Bathing Waters Regulations 2013, requires the Council to issue advice against bathing at these bathing waters, and to take such local authority management measures as it considers adequate, with a view to preventing bathers' exposure to pollution.

2.10 In order to comply with this requirement signage has now been installed at both Watch House Bay and Ogmores-by-Sea beaches advising the public against bathing. However, the beaches remain open for people to enjoy and there is

no prohibition on use of the beach. Figure 3 below shows the sign at Watch House Bay as an example of the signage installed.

Figure 3 - Bathing Water Information Sign Watch House Bay



2.11 Council officers have already brought together key parties to discuss the water quality at Watch House Bay. Representatives of NRW, DCWW and local swimming groups met to discuss the key issues following the installation of signs at this beach. A similar meeting will also be held with user groups for Ogmere-by-Sea, and these are the first steps of ensuring we work collaboratively to address the issues to improve the classifications at these beaches.

2.12 In addition to requirements of Regulation 13 for signage to be installed, Regulation 13 also imposes a duty on the appropriate agency, in this case NRW to....

- i. *Take or cause to be taken appropriate agency management measures at the bathing water to prevent, reduce or eliminate (as appropriate) the causes of pollution;*
- ii. *Take, or cause to be taken appropriate agency management measures at the bathing water as it considers adequate with a view to preventing bathers' exposure to pollution;*
- iii. *Notify the local authority that controls the bathing water; and*

iv. *Identify the reasons why the bathing water failed to achieve a classification of “sufficient”.*

- 2.13** Water discharges in the catchments permitted by NRW under the Environmental Permitting Regulations (2016) will be prioritised for audit in our regulatory compliance work programmes.
- 2.14** Most of the catchment areas are within the public sewer network, though there are some properties in both catchments which have private sewerage arrangements. Some of the public sewerage infrastructure in the catchments have received investment in the past to improve the discharges to meet bathing water standards at the adjacent designated beaches of Southerndown and Whitmore Bay, Jackson’s Bay and Cold Knap bay in Barry.
- 2.15** For example, Pen-y-bont Wastewater Treatment works which is approximately 2.5km from Ogmore-by-Sea beach has tertiary UV disinfection treatment in use to kill bacteria in final treated effluent, before it is discharged to the river. There are also several storm discharges in both catchments which have bathing water trigger permits which means the permit to discharge effluent includes conditions requiring investigation should the storm overflow operate more than the permitted trigger limit.
- 2.16** There is now a legal requirement on the Regulator to seek to improve the quality of bathing water at these beaches, and the Council intends to work in partnership with NRW, Dŵr Cymru and any other organisations discharging waste water into these beaches, to ensure these improvements are made.
- 2.17** The plans to address water quality will commence with initial investigations by NRW in conjunction with DCWW and the Council to try and initially establish the cause(s)/source(s) of the pollution. It must be noted that the wider catchments of both these bathing waters are large and there are likely to be many sources of potential pollutants that could include diffuse pollution from urban drainage, misconnections, rural land use and wildlife. With these wide-ranging potential impacts, identifying remedial measures is not a straightforward exercise.
- 2.18** DCWW has committed to develop a coastal model for Ogmore and enhance the coastal model near Watchhouse Bay. This commitment is reflected in DCWW’s next business plan although development of the project has already begun. The model will provide an evidence platform for NRW, DCWW and this Council.

Pollution Risk Forecasting

- 2.19** In 2023 a partnership project between NRW and the Council commenced to develop a real-time water quality prediction tool to help provide water quality information to bathers at beaches in Barry.

- 2.20** Over the course of the 2023 bathing season, a water sampling program was completed on Jackson and Whitmore, and these results will be used along with meteorological data, such as rainfall, UV radiance and river level data etc to develop statistical models to better understand what is affecting the water quality at the beaches. This will help predict short-term pollution events that could have an impact on Whitmore Bay and Jackson’s Bay.
- 2.21** One of the aims of the models will be to eventually enable information displays to be installed on the beaches so that bathers will be made aware of the predicted water quality at the beaches over the course of a day during the bathing season.
- 2.22** Introducing pollution risk forecasting in Barry will inform beach management decisions and provide timely water quality advice to the public to enable them to make an informed decision whether to swim.
- 2.23** It will also offer resilience to the overall bathing water classifications through discounting of a sample in certain conditions when a warning of predicted poor water quality is given to people, under strict guidelines set in the legislation.
- 2.24** However, members should note that this project has been funded by the Welsh Government via NRW Funds and has been in development for a number of years, and therefore this is not something that can be easily replicated for other beaches in the Vale both in terms of time but also capital investment.

Next Steps

- 2.25** As stated in earlier in this report the Council is committed to working with partner agencies in NRW and DCWW as part of their statutory requirements to investigate and assess the causes of the poor bathing water classifications. In addition, the Council hopes to work further with NRW and DCWW to identify additional measures to help improve bathing water quality at all beaches in the Vale. Our ambition is for all beaches to meet the Excellent standard.
- 2.26** We are keen to continue to work with local user groups as well as local Members in making these improvements to ensure an open and transparent approach is taken. We will ensure that regular meetings take place with the groups to discuss progress.
- 2.27** Officers will report back regularly with the Scrutiny Committee on progress.

3. How do proposals evidence the Five Ways of Working and contribute to our Well-being Objectives?

- 3.1** The Well-being of Future Generations Act requires the Council to underpin decision making by contributing to the seven well-being goals of the Act, following the five ways of working, and consequently undertaking actions that will have a positive impact on people living in the future as well as those living today. Consequently, SRS seeks to work in the following ways:
- Looking to the long term;
 - Taking an integrated approach;
 - Involving a diversity of the population in the decisions affecting them;
 - Working with others in a collaborative way to find shared sustainable solutions;
 - Acting to prevent problems from occurring or getting worse.
- 3.2** It is clear that the by working in partnership with NRW and DCWW the Council is taking a collaborative approach to addressing the Bathing Water Quality issues that have been identified. In addition we are working directly with local water user groups on the two beaches with the Poor classification to ensure that we are open and transparent with these groups.
- 3.3** Furthermore the ambition to improve and enhance the bathing water quality at the beaches within the Vale will ensure that pollution issues are addressed to ensure that future generations can enjoy and have access to the highest standards of bathing waters.

4. Climate Change and Nature Implications

- 4.1** Bathing water quality reporting is highly perceptible to climatic changes, in particular, increased periods of heavy rainfall and with our changing climate, we must be prepared to deal with impacts of longer, heavier bouts of rain on a regular basis. Climate change has the potential to impact coastal ecosystems in multiple ways, altering human exposure to water-related contaminants that can cause illness.
- 4.2** As such it will be imperative to reduce the impacts of stormwater flows in order to reduce the potential pollution impacts on bathing waters. Implementation of Sustainable Urban Drainage solutions will therefore play a vital role in helping to reduce releases of stormwater now and in the future to reduce the long-term impacts of climate change.
- 4.3** The commitment to work with NRW and DCWW as set out in this report will be vital to ensure that long term improvements and reduction in pollution can be implemented in order to ensure the protection and enhancement of bathing waters in the Vale.

5. Resources and Legal Considerations

Financial

5.1 There are no immediate financial implications associated with this report.

Employment

5.2 There are no immediate Employment implications associated with this report.

Legal (Including Equalities)

5.3 There are no immediate legal implications associated with this report.

6. Background Papers

None