

Wales Bathing Water Report 2024

This report presents the results of the 2024 bathing water season.

Executive Summary

Good quality bathing waters are very important for coastal communities, visitors and the economy in Wales. In 2024, 108 out of the 110 designated Welsh bathing waters met the standards set by the Bathing Water Regulations. Of the 110 bathing waters assessed in Wales, 75 were of an Excellent standard, 28 achieved a Good standard and 5 were classified as the minimum, Sufficient, standard. 2 bathing waters failed to achieve the standard and were assessed as Poor.

The Bathing Water Regulations introduces a classification system with stringent water quality standards and puts an emphasis on providing information to the public. Welsh Government must 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 years to even out effects of extreme situations.

Natural Resources Wales are taking actions, together with Dŵr Cymru, Local Authorities, farming organisations and landowners to improve water quality. Improvements are being made locally, such as sewerage and outfall improvements; and more broadly, such as reducing diffuse water pollution from farmland in the wider countryside.

Natural Resources Wales is responsible for monitoring and reporting against the standards in the Regulations. Samples are analysed for two types of bacteria, which indicate pollution from sewage or livestock. Polluted water can have impacts on human health, including causing stomach upsets and diarrhoea if swallowed.

This report presents the results of the 2024 bathing water monitoring programme. Our challenge is to protect and enhance our natural resources and so maintain the high standards achieved this year at our bathing waters.

Bathing waters in Wales

Bathing waters are valuable for the recreational opportunities they provide to the people of Wales, the local economy and tourism. The <u>Wales Marine Evidence Report</u> recorded that over 60% of the population of Wales live and work on the coast where growing coastal tourism is estimated to be worth £602 million (2013). The Wales Coast Path – another world first for Wales – runs for 870 miles and has provided an economic boost of £23.6 million.

Several of Wales's beaches such as Barafundle Bay are regularly voted among Britain's best. Swimming, surfing, angling and rock pooling are popular activities all around the coastline. When the Wales Coastal Path opened in 2012, Lonely Planet named Wales' coastline the top region to visit in the world.

The competitiveness of the Welsh tourism industry is dependent on the quality of tourist destinations, including the quality of bathing water. European water policy has played an important role in protecting water resources, and the quality of Welsh bathing sites is a good example of this.

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. More detail on the differences between the original and revised Bathing Water Directives can be found in the <u>Wales Bathing Waters Report 2014</u>. Since leaving the EU the Bathing Water Directive is now devolved and comes under the Bathing Water Regulations of Welsh Government.

Provision of information to the public is a key part of the regulations. Profiles must be prepared and published for all bathing waters and made freely available. These profiles describe the physical and hydrological conditions of bathing areas and analyse potential impacts on (and potential threats to) their water quality. The bathing water profiles are both a source of information for citizens and a management tool.

In Wales, Natural Resources Wales is responsible for monitoring bathing waters and communicating the results to the public. All information, including the profiles is communicated to the public via the <u>Bathing Water Data Explorer</u>.

The bathing season begins in May and lasts until the end of September. During the bathing season, Natural Resources Wales 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, Natural Resources Wales sends data on bathing water quality and information on management measures to Welsh Government.

Bathing water quality in 2024

In Wales, 110 designated bathing waters were sampled and classified during the 2024 bathing season.

108 out of the 110 designated bathing waters met the minimum water quality standards:

- 75 achieved the highest classification of Excellent
- 28 achieved Good
- 5 achieved Sufficient
- 2 were classified as Poor

These results show that the overall water quality has remained fairly consistent compared with the classifications at the end of the 2023 season.

The Bathing Water Regulations classification in 2024 are based on two microbiological parameters: Escherichia coli (E.coli) and intestinal enterococci. They are calculated from four years of sample data (2021-2024).

Class	2024 - no. of bathing waters in class	2023 - no. of bathing waters in class
Excellent	75	80
Good	28	20
Sufficient	5	7
Poor	2	2
Total compliant	108	107
Total bathing waters	110	109

The Warren, Hay On Wye

On the 20th of June 2024 the Deputy First Minister informed NRW that The Warren, Hay on Wye was now subject to the same requirements as other designated bathing waters in Wales with the expectation that a statutory monitoring programme would commence in May 2025. The Minister acknowledged that NRW would not be able to complete a full statutory monitoring programme in 2024 and therefore a bathing water classification would not be possible in 2024.

NRW were also requested to begin sampling, and for the data to be published appropriately. NRW began sampling on 10th July 2024, a total of 6 monitoring visits were undertaken throughout the remainder of the bathing water season and results were published on the NRW Bathing Water Explorer website.

The Warren, Hay On Wye sampling data

Sampling date	Ecoli (cfu)/100ml	IE (cfu)/100ml
10/07/2024	6600	1818
24/07/2024	370	99
09/08/2024	180	45

Sampling date	Ecoli (cfu)/100ml	IE (cfu)/100ml
23/08/2024	670	570
06/09/2024	865	440
20/09/2024	189	90

Non-compliant bathing waters

Ogmore by Sea and Rhyl EC are the non-compliant bathing waters in 2024. Ogmore By Sea was also Poor in 2023 when it was newly designated. Rhyl EC has dropped to Poor from Sufficient.

Ogmore by Sea

This is the second year of designation for Ogmore by Sea as a bathing water. The poor results from 2023 meant it was unlikely that the bathing water would improve classification this year. Generally, the sample results were better in the 2024 season despite the catchment receiving above average rainfall.

The location of the bathing water at the mouth of the Ogmore estuary means it is influenced by the wider Ogmore and Ewenny river catchments, and consequently water quality is likely to vary with hydrological and tidal conditions. Samples were taken over a range of conditions and tidal states. Six out of twenty samples taken this year gave results of elevated faecal indicator organisms (FIO) following periods of wet weather. These results along with the results from 2023 brought the classification below the threshold for compliance for Intestinal Enterococci meaning the bathing water is classified as 'Poor' overall.

Limited catchment monitoring was undertaken this year in conjunction with the bathing water samples. This data shows generally that elevated levels of FIO in the rivers do not always correspond to poor bathing water sample results. However, with such a small bathing water dataset these additional results will be used to build catchment knowledge and any patterns in data should be treated with caution at this stage.

Usually four years' worth of data would be used for classification. It takes time to investigate catchments which have not previously been managed for bathing, to determine the key sources of microbial contamination and overall bathing water quality.

The wider catchment is large and there are likely to be many sources of pollutants, such as diffuse pollution from urban drainage, misconnections, rural land use, and wildlife, as well as sewage inputs.

We aim to carry out further catchment monitoring in 2025 to give us a better understanding of the catchment characteristics and potential sources of microbial contamination in the surrounding catchments.

Regulated water discharges in the catchment including treated sewage discharges, storm overflows, trade and private discharges permitted by NRW under the Environmental Permitting Regulations (2016) will be prioritised for audit through our regulatory compliance work programmes. We are also exploring options for further resource to focus on the Ogmore catchment.

An investigation is also due to be conducted for Ogmore by Sea bathing water catchment by Dŵr Cymru during the next water company investment cycle which is called AMP 8 and is due to start in 2025 for a 5-year period. The findings of this investigation should then inform any future investment in public sewerage.

Whilst disappointing, the classification at Ogmore by Sea reflects the water quality measured at the bathing water and provides information of the potential water quality risks when bathing. The signs advising against bathing at Ogmore by Sea will remain in place. Advice against bathing is different to a bathing prohibition, which means swimming is prohibited. NRW will continue to work with the Vale of Glamorgan Council, Shared Regulatory Services and Dŵr Cymru to investigate the reasons behind the failure and to work towards improving the classification in future years.

Rhyl EC

Rhyl EC Bathing Water (also known as Rhyl High Street) is one of three bathing waters (along with Rhyl East and Marine Lake) in the town of Rhyl, and the only one that has failed to meet the minimum water quality standards as required under the bathing waters directive. This bathing water is located approximately 400-500 metres to the East of the Afon Clwyd Estuary.

The Afon Clwyd is known to impact Rhyl High Street especially with increased bacteria loading following increased rainfall in the catchment (from urban run-off, farming and sewage inputs). The greatest impact occurs at times when the routine compliance sample is taken on the incoming tide. The reason for this is that the initial push of the tide backs the fresh water that carries bacteria from the Clwyd onto the beach, before diluting and pushing this away with the increased tidal flow that follows.

16 routine compliance samples were taken during the 2024 season, with 4 having elevated levles for intestinal enterococci, 1 of these also exceeded the standard for E.Coli.

Due to the impact from the Clwyd during heavy rainfall, Rhyl High Street operates under a prediction and discounting model (see the 'Short-term pollution, prediction and discounting' section below). Without this model being in place, Rhyl High Street would have dropped to 'poor' during previous years.

The model predicted a total of 31 poor water quality events (Poor Risk Forecast) during the 2024 season. Where a poor prediction is issued, the local authority will place signage out to raise awareness of the predicted poor water quality, advising against bathing.

Of the 31 poor water quality predictions made by the model, 3 of these coincided with routine compliance samples being taken. Of these 3 predictions, 1 resulted in the sample analysis showing an exceedance for intestinal enterococci, with the other 2 results showing good water quality (10col/100ml).

The model has been shown to work in previous years by keeping Rhyl High Street from dropping to 'poor' classification, but the reliability of this has reduced in recent years with a review of the model now needed. The reduced reliability is evident with three of the ten exceedances in the latest four-year assessment period not predicted as 'Poor' when the previous day had received a 'Poor' prediction.

The current model uses data up to 2013, with the more recent rainfall and bacteria levels data not currently being used by to predict the poor water quality events. A review of the current model to include the latest data is being raised by the local area teams, to the Water Quality policy team, with the hope that this will deliver a short to medium term improvement in the reliability of the model. The effectiveness of any changes won't be known until a review of the model is carried out. The current model works from predicted and actual rainfall radar data in a specified catchment (currently the Gele). A longer-term solution would be for the model to be overhauled to include more parameters, such as wind direction, tidal conditions and CSO discharges.

Work is continuing in the Clwyd catchment to reduce bacteria inputs through audits and inspections of DCWW assets, Farm compliance inspections and project work with landowners to remove cattle access to watercourses through fencing and planting hedging. In the previous financial year, this has delivered over 5.5km of fencing, 115m of hedge planted, 805 hedgerow trees, 27 drinking water troughs, 4 gravity watering systems, along with 2 pond habitat protection schemes. This has resulted in the creation of protected riparian zones approximately 13,192m3. In recent years (2018 onwards) NRW have invested over £200k on schemes to reduce agricultural bacteria inputs from stock access to watercourses.

There is great sense of disappointment within the local community following the announcement of the drop in classification at Rhyl High Street from 'sufficient' to 'poor', but a strong determination to work with stakeholders to drive the changes needed to improve the situation going forward.

We are disappointed that these bathing waters did not reach the water quality standards this year. The classifications do reflect the water quality and will be used to provide information to the public prior to the next season as to the risks when bathing.

There will be signs advising against bathing at Ogmore by Sea and Rhyl. These signs will be on display to provide information to protect bathers' health. Advice against bathing is different to a bathing prohibition, which means swimming is prohibited.

Monitoring and classification in 2024

Monitoring

In Wales the bathing season runs from 15 May to 30 September. Monitoring begins from 1 May as each bathing water has one pre-season sample taken. There may also be a preseason inspection to identify any issues. Throughout the bathing season, Natural Resources Wales collects water samples at designated bathing sites. The samples are analysed for two types of bacteria, Escherichia coli (E.coli) and intestinal enterococci. Samples are taken according to a monitoring calendar set out in advance of the season. Each sample must be taken on the specified date or up to four days afterwards or the sampling opportunity is lost because samples taken outside that five-day window do not count for the compliance dataset.

Abnormal Situations

The monitoring calendar can be suspended if abnormal situations occur which could affect bathing water quality.

An abnormal situation is defined by the Bathing Water Regulations as an event or combination of events impacting on bathing water quality at the location concerned and not expected to occur on average more than once every four years. They are usually declared when we become aware of an unusual pollution source that could impact on the bathing water. The relevant bodies are then required to inform the public of the situation and advise them against bathing. Any routine bathing water samples will still be taken, but the sample results do not have to be included in the sample data set used to classify the beach.

During the 2024 season an abnormal situation was declared at Ogmore By Sea. The abnormal situation was declared on the 21st May following the report of a pollution incident in the River Ogmore which appeared to be ongoing and had the potential to impact bathing water quality. The abnormal situation was lifted on the 18th of June. The monitoring calendar was suspended during this time and the three missed samples caught up during the rest of the season.

On the 1st July, abnormal situations were declared at Tenby North, Castle Beach, Tenby South and Penally bathing waters. The River Ritec, which runs onto Tenby South, was significantly polluted with sewage from a leak on the sewer line. Following the repair and low sample results the abnormal situation was lifted on the 4th July. One sample was suspended during this time which was caught up during the rest of the season.

Following a high-level incident of a slurry tank leaking to the river which drains to Llangrannog beach, an abnormal situation was declared at Llangrannog and Cilborth on the 12th July due to the likely risks and impacts on bathing water quality. The abnormal situation was lifted on the 15th July. No scheduled samples coincided with the duration of the abnormal situation.

Data Quality Issue in 2024

At fifteen Bathing Waters in Ceredigion and North Pembrokeshire, the maximum interval of one month between samples was exceeded during the 2024 monitoring season, due to an isolated data quality issue. We have undertaken additional statistical analysis so that we have confidence in the classifications for these bathing waters.

Classification

Classifications are based on four years' worth of data. New or recently designated bathing waters may be classified on less than four years data, but with a minimum number of 16

samples. The Regulation standards use two microbiological parameters, E.coli and intestinal enterococci, and are based on 95th and 90th percentile values.

Samples are classified according to four categories: Excellent, Good, Sufficient and Poor.

An objective was set in the original Directive for all bathing waters to achieve sufficient status by 2015, which they did in Wales. The classifications will also be used in the periodic reviews of the bathing water profiles required by the Regulations:

- · every two years for poor bathing waters
- every three years for sufficient
- every four years for good

Short-term pollution, prediction and discounting

At some bathing waters short-term pollution may be predicted by models. Beach operators then update a sign at the bathing water to warn the public on days that poor water quality is predicted. The prediction information is also shared online.

If the model has predicted poor quality, the public have been informed and a confirmation sample is taken to show if that pollution lasted less than 72 hours, then a scheduled bathing water sample taken that day may be discounted from the four-year dataset.

This is possible up to a maximum of 15 percent of samples provided for in the monitoring calendars established for that period, or no more than one sample per bathing season, whichever is the greater.

The sample may, optionally, be replaced by a sample taken seven days after the end of the short-term pollution event. Bathing waters where short-term pollution has been predicted during the season can only be classified as sufficient, good or excellent quality if adequate management measures are being taken.

2024 Bathing Water	Discounted sample date	Replacement sample date
Swansea Bay	28/05/2024	N/A
Swansea Bay	22/08/2024	29/08/2024
Abergele (Pensarn)	02/09/2024	N/A

At the end of the 2024 season the following samples were discounted and replaced:

2024 Bathing Water	Discounted sample date	Replacement sample date
Kinmel Bay (Sandy Cove)	02/09/2024	11/09/2024
Rhyl	02/09/2024	N/A
Prestatyn	02/09/2024	N/A

Step change

Major changes at bathing waters such as sewerage infrastructure improvements may mean that data from before the changes are no longer representative of the current bathing water quality. Data from before such changes can be excluded from classification calculations under a provision commonly known as step change.

No bathing waters in Wales were affected by step change in the 2024 season.

Results of 2024 sampling and analysis of water quality at designated bathing water sites in Wales against the Bathing Water Regulations

** Bathing water sites where gap between samples is greater than one month during 2024 monitoring season

Bathing Water	2024 classification	2023 classification for comparison
Aberafan	EXCELLENT	GOOD
Aberdaron	EXCELLENT	EXCELLENT
Aberdyfi	EXCELLENT	EXCELLENT
Aberdyfi Rural	EXCELLENT	EXCELLENT
Abereiddy	EXCELLENT	EXCELLENT
Aberffraw	EXCELLENT	EXCELLENT
Abermawr	EXCELLENT	EXCELLENT
Barafundle	EXCELLENT	EXCELLENT
Barmouth	EXCELLENT	EXCELLENT
Borth**	EXCELLENT	EXCELLENT
Bracelet Bay	EXCELLENT	EXCELLENT
Broad Haven (Central)	EXCELLENT	EXCELLENT
Broad Haven (South)	EXCELLENT	EXCELLENT
Caerfai	EXCELLENT	EXCELLENT

Bathing Water	2024 classification	2023 classification for comparison
Castle Beach, Tenby	EXCELLENT	EXCELLENT
Caswell Bay	EXCELLENT	EXCELLENT
Church Bay	EXCELLENT	EXCELLENT
Cilborth**	EXCELLENT	EXCELLENT
Cold Knap Barry	EXCELLENT	EXCELLENT
Col-Huw Beach (Llantwit Major)	EXCELLENT	EXCELLENT
Colwyn Bay Porth Eirias	EXCELLENT	EXCELLENT
Coppet Hall	EXCELLENT	EXCELLENT
Craig Du Beach Central	EXCELLENT	EXCELLENT
Dale	EXCELLENT	EXCELLENT
Druidston Haven	EXCELLENT	EXCELLENT
Dyffryn (Llanendwyn)	EXCELLENT	EXCELLENT
Fairbourne	EXCELLENT	EXCELLENT
Freshwater East	EXCELLENT	EXCELLENT
Freshwater West	EXCELLENT	EXCELLENT
Glan Don Beach	EXCELLENT	EXCELLENT
Harlech	EXCELLENT	EXCELLENT
Langland Bay	EXCELLENT	EXCELLENT
Little Haven	EXCELLENT	EXCELLENT
Llandanwg	EXCELLENT	EXCELLENT
Llanddwyn	EXCELLENT	EXCELLENT
Llanfairfechan	EXCELLENT	EXCELLENT
Llangrannog**	EXCELLENT	EXCELLENT
Llanrhystud**	EXCELLENT	EXCELLENT
Llyn Padarn	EXCELLENT	EXCELLENT
Lydstep	EXCELLENT	EXCELLENT
Manorbier	EXCELLENT	EXCELLENT
Marloes Sands	EXCELLENT	EXCELLENT
Morfa Dinlle	EXCELLENT	EXCELLENT
Morfa Nefyn	EXCELLENT	EXCELLENT
Mwnt**	EXCELLENT	EXCELLENT
Newgale	EXCELLENT	EXCELLENT
Newport North	EXCELLENT	EXCELLENT
Nolton Haven	EXCELLENT	EXCELLENT
Pembrey	EXCELLENT	EXCELLENT
Penally	EXCELLENT	EXCELLENT
Penbryn**	EXCELLENT	EXCELLENT
Pendine	EXCELLENT	EXCELLENT
Penmaenmawr	EXCELLENT	EXCELLENT
Poppit West**	EXCELLENT	EXCELLENT
Port Eynon Bay	EXCELLENT	EXCELLENT
Porth Dafarch	EXCELLENT	EXCELLENT
Porth Neigwl	EXCELLENT	EXCELLENT

Bathing Water	2024 classification 2023 classification comparison	
Pwllheli	EXCELLENT	EXCELLENT
Rest Bay Porthcawl	EXCELLENT	EXCELLENT
Rhosneigr	EXCELLENT	EXCELLENT
Rhossili	EXCELLENT	EXCELLENT
Sandy Bay Porthcawl	EXCELLENT	EXCELLENT
Sandy Haven	EXCELLENT	EXCELLENT
Saundersfoot	EXCELLENT	EXCELLENT
Silver Bay Rhoscolyn	EXCELLENT	EXCELLENT
Southerndown	EXCELLENT	EXCELLENT
St Davids - Benllech	EXCELLENT	EXCELLENT
Tal-y-Bont	EXCELLENT	EXCELLENT
	EXCELLENT	EXCELLENT
Tenby North		EXCELLENT
Tenby South	EXCELLENT	
Trecco Bay Porthcawl Tresaith**	EXCELLENT	EXCELLENT
	EXCELLENT	EXCELLENT
Tywyn Maet Angle	EXCELLENT	EXCELLENT
West Angle	EXCELLENT	EXCELLENT
Whitesands	EXCELLENT	EXCELLENT
Abergele (Pensarn)	GOOD	GOOD
Aberporth**	GOOD	GOOD
Abersoch	GOOD	EXCELLENT
Aberystwyth North**	GOOD	GOOD
Aberystwyth South**	GOOD	EXCELLENT
Amroth Central	GOOD	GOOD
Benllech	GOOD	EXCELLENT
Borth Wen	GOOD	GOOD
Clarach South**	GOOD	GOOD
Colwyn Bay	GOOD	GOOD
Criccieth	GOOD	SUFFICIENT
Jackson's Bay Barry Island	GOOD	SUFFICIENT
Kinmel Bay (Sandy Cove)	GOOD	GOOD
Limeslade Bay	GOOD	GOOD
Llanddona	GOOD	GOOD
Llandudno West Shore	GOOD	GOOD
Marine Lake, Rhyl	GOOD	SUFFICIENT
New Quay North**	GOOD	GOOD
Oxwich Bay	GOOD	EXCELLENT
Penarth Beach	GOOD	GOOD
Porth Nefyn	GOOD	N/A
Prestatyn	GOOD	EXCELLENT
Rhyl East	GOOD	GOOD
Swansea Bay	GOOD	GOOD
Traeth Gwyn New Quay**	GOOD	GOOD

Bathing Water	2024 classification	2023 classification for comparison
Traeth Lligwy	GOOD	GOOD
Trearddur Bay	GOOD	EXCELLENT
Whitmore Bay Barry Island	GOOD	GOOD
Cemaes	SUFFICIENT	SUFFICIENT
Llandudno North Shore	SUFFICIENT	SUFFICIENT
New Quay Harbour**	SUFFICIENT	GOOD
Watch House Bay	SUFFICIENT	POOR
Wiseman's Bridge	SUFFICIENT	SUFFICIENT
Ogmore-By-Sea	POOR	POOR
Rhyl	POOR	SUFFICIENT

Parameters used for classification of coastal waters and transitional waters (such as estuarine bathing waters) under the bathing water regulations

Parameters measured are E.coli and IE (intestinal enterococci). Percentiles are values that should theoretically be complied with 90 or 95 percent of the time (based on the distribution of the data). This does not mean that 90 or 95 percent of samples comply with these values.

Classification	E.coli 95th percentile*	IE 95th percentile*	E.coli 90th percentile*	IE 90th percentile*
Excellent	250	100	n/a	n/a
Good	500	200	n/a	n/a
Sufficient	n/a	n/a	500	185

* Colony forming units (cfu)/100ml

Poor - Fails to meet any of the above standards

Not classified – Does not have enough samples in the four-year calculation window

Parameters used for classification of inland waters under the bathing water regulations

Parameters measured are E.coli and IE (intestinal enterococci). Percentiles are values that should theoretically be complied with 90 or 95 percent of the time (based on the

distribution of the data). This does not mean that 90 or 95 percent of samples comply with these values.

Classification	E.coli 95th percentile*	IE 95th percentile*	E.coli 90th percentile*	IE 90th percentile*
Excellent	500	200	n/a	n/a
Good	1000	400	n/a	n/a
Sufficient	n/a	n/a	900	330

* Colony forming units (cfu)/100ml

Poor – Fails to meet any of the above standards

Not classified - Does not have enough samples in the four-year calculation window