

A review of implementation of the Bathing Water Regulations in Northern Ireland

November 2024



Office for
**Environmental
Protection**

A review of implementation of the Bathing Water Regulations in Northern Ireland

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November 2024

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Contents

Foreword	3
Executive summary and recommendations	7
1. Introduction	17
1.1 About this report.....	18
1.2 What is a bathing water?.....	18
1.3 Why we are looking at the Bathing Water NI Regulations	18
1.4 Focus of this report.....	19
1.5 Our approach	20
1.6 Structure of this report	21
2. The Bathing Water NI Regulations	23
2.1 Brief history of the Bathing Water NI Regulations	24
2.2 Summary of the Bathing Water NI Regulations.....	24
2.3 Better Beaches Forum and Blue Flag Awards	28
3. The state of bathing waters	29
3.1 Dominance of coastal bathing sites in Northern Ireland	30
3.2 Changing trends – increasing requests for inland sites.....	31
3.3 Status of bathing waters in Northern Ireland.....	31
3.4 Northern Ireland’s bathing water quality compared to other UK administrations	32
3.5 Northern Ireland’s bathing water quality compared to EU Member States	33
4. Underlying principles of the Bathing Water NI Regulations	35
4.1 Who the regulations are intended to protect – the meaning of ‘bathers’.....	36
4.2 When the regulations provide protection – the bathing season	41
4.3 Identifying bathing waters	43
5. Classification, monitoring and reporting of bathing water quality	47
5.1 Classification of bathing waters	48
5.2 Monitoring of bathing waters	52
5.3 Reporting and communication issues	58
6. Interaction of the Bathing Water NI Regulations with other law and policy	63
6.1 The Water Framework Directive Regulations.....	64
6.2 Water industry regulation and investment mechanisms	67
6.3 The Marine Strategy Regulations	69
6.4 How the Bathing Water NI Regulations interact with other rights and restrictions	71
Glossary	73
Annex 1. Stakeholder engagement and expert review	75

Foreword

Foreword

Healthy rivers, lakes, and seas support a healthy economy, and allow nature to thrive. The Northern Ireland Executive cannot meet its environmental ambitions and targets without improving water quality. Good quality open water is also increasingly important for human health. With more people participating in outdoor water pursuits, it is ever more necessary to make sure that enjoying Northern Ireland's waters is not just fun, but good for us, rather than a risk to our health and wellbeing.

The Northern Ireland Executive's 'Draft Programme for Government 2024-2027'¹ identifies protecting the environment and cleaning up water among the Executive's immediate priorities. It sets out measures to begin addressing the well-known problems at Lough Neagh, while also noting that these problems cannot be seen in isolation from the natural environment more generally. We very much welcome both the commitment to address the challenges in Lough Neagh and the recognition of their relationship with the wider environment. For now, we see that it will be a complex, large scale, lengthy and costly task to restore and protect the quality of Northern Ireland's water resources, improve water supply, manage demand and improve infrastructure.

This report on the legislation that applies to bathing waters in Northern Ireland is one of a series of OEP reports relating to various aspects of water. We hope the series as a whole is helpful to DAERA and the Northern Ireland Executive as they consider how best to proceed.

We have found the current regulations on bathing waters out of step with the needs of today. They originate from developments in the 1970s and 1980s and are a product of their time. They have not kept pace with the evolving ways in which waters are now used for recreational purposes, or with public expectations.

It is fair to say that the regulations have led to significant improvements in bathing water quality over around three decades, although there has been some recent stagnation and decline. And important elements of the regulations, such as they are, are being implemented: in particular, our assessment is that the monitoring, classification and reporting obligations of the regulations are being complied with.

Nevertheless, the lack of overall improvement in water quality observed in recent years, combined with a number of bathing water sites failing to achieve sufficient or better standards, is a cause for concern and has been widely reported. For the public to enjoy the significant health and wellbeing advantages of being active, closer to nature and more connected to their communities, the regulatory regime needs to be more expansive and more effective.

We see room for improvement, for example, in how bathing waters are identified and in the numbers of such areas, particularly inland. There are also opportunities to strengthen how bathing water objectives are set and achieved, and for increased coherence between the regulations on bathing waters and other laws and policies.

An effective regulatory regime will ensure that people can safely access recreational waters and benefit from the significant health and wellbeing advantages that brings. In this report, we make practical and specific recommendations to improve how the regulations are implemented and might be developed.

1 Northern Ireland Executive, 'Our Plan: Doing What Matters Most Draft Programme for Government 2024-2027' (2024) <www.northernireland.gov.uk/sites/default/files/consultations/newnigov/draft-programme-for-government-our-plan-doing-what-matters-most.pdf> accessed 17 September 2024.

We are grateful to those who have given us their time and expertise, and provided information to inform our work. We hope that our analyses and recommendations will be valuable to the Northern Ireland Executive and DAERA as they undertake the critical task of rethinking and revitalising the management of water resources and cleaning up Northern Ireland's rivers, lakes and seas.



A handwritten signature in black ink, appearing to be 'G Stacey'.

Dame Glenys Stacey
Chair, Office for Environmental Protection

Executive summary and recommendations

Executive summary and recommendations

Overview

In this report, we look at the Quality of Bathing Water Regulations (Northern Ireland) 2008 (which we refer to in the report as the ‘Bathing Water NI Regulations’² and their implementation. We consider their effectiveness as a legal instrument, their application in practice and their coherence with wider law and policy. In so doing, we assess whether the regulations are positioned to achieve their aim of improving bathing water quality to protect human health and facilitate recreational water use.

Background

The Bathing Water NI Regulations have their origins in European Union (EU) legislation. They were originally made to transpose the EU Bathing Water Directive.³ They have now become ‘assimilated law’ by virtue of the Retained EU Law (Revocation and Reform) Act 2023.

The primary purpose of the Bathing Water Directive is the protection of human health. It takes two indicators of pollution as test ‘markers’ and requires the measurement and provision of public information about them as a means to deliver some assurance to the public that water quality is safe for bathing.

The Bathing Water NI Regulations and the Directive from which they were derived can only deliver results as part of a wider framework of water legislation. This is reflected in the Bathing Water Directive which states⁴ that its purpose ‘is to preserve, protect and improve the environment and to protect human health by complementing Directive 2000/60/EC’. This is a reference to the ‘Water Framework Directive’ (WFD),⁵ the main EU law to protect and improve the water environment.

In Northern Ireland, the WFD is transposed by the Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017 (‘the WFD NI Regulations’).⁶ Like the Bathing Water NI Regulations, the WFD NI Regulations are now ‘assimilated law’. We have reported on their implementation in a separate report.⁷

Protection of public health is also a key concern of the numerous groups engaging in the changing patterns of use for bathing waters, as the public press to develop more bathing waters, to use them for longer, and to use them differently. There is now a much greater variety of potential ‘bathers’ than when the current legislation was first developed, and a whole variety of activities which result in people bathing, or swimming, from time to time. This raises important questions about the ways in which the existing regulations are working.

2 The Quality of Bathing Water Regulations (Northern Ireland) 2008, Statutory Rules of Northern Ireland 2008/231.

3 Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC [2006] OJ L 64/37.

4 Art 1(2), Bathing Water Directive.

5 Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy [2000] OJ L 327/1.

6 The Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017, Statutory Rule 2017 No. 81.

7 Office for Environmental Protection, ‘A Review of Implementation of the Water Framework Directive Regulations and River Basin Management Planning in Northern Ireland’ (2024) <www.theoep.org.uk/report/implementation-water-framework-directive-northern-ireland> accessed 18 September 2024.

Previous assessments

In September 2024, we reported on implementation of the WFD NI Regulations in Northern Ireland.⁸ That report highlights a failure to effectively apply the WFD NI Regulations to protect rivers, lakes, coastal and other waters. It also identifies several underlying and seemingly endemic issues relating to delivery mechanisms and governance structures to protect and improve the water environment.

Separately, in October 2024 the OEP published the results of a project looking at the pressures affecting terrestrial and freshwater biodiversity in Northern Ireland.⁹ This identifies the top three categories of pressures affecting freshwater priority species as land-use change, pollution, and natural resource use and exploitation.

This previous work on the WFD NI Regulations and pressures on biodiversity provides important context for this more specific report on the Bathing Water NI Regulations. Building on these earlier assessments, we highlight in this report the opportunity for the Department of Agriculture, Environment and Rural Affairs (DAERA) to improve the current application of the regulations and to consider their possible development. This is intended to support the department, in applying its functions, to determine how best to respond to the current uses of waters for swimming and other recreational activity and the known pollution risks to human health, in alignment with wider environmental measures and ambitions.

The Bathing Water NI Regulations

Implementation of the Bathing Water NI Regulations is led by DAERA. Bathing water ‘operators’ such as local authorities also have a role under the regulations. Though not specifically referenced in the regulations, their focus on public health protection means that other authorities, such as the Department of Health and the Public Health Agency, additionally have a potential interest.

The Bathing Water NI Regulations require DAERA to identify all bathing waters in Northern Ireland on an annual basis. These are surface waters where, among other criteria, the department ‘expects a large number of people to bathe’.¹⁰

At the end of every bathing season, DAERA must make an assessment of bathing water quality, and use it to classify bathing waters as ‘excellent’, ‘good’, ‘sufficient’ or ‘poor’. DAERA and bathing water operators must also exercise certain functions to manage and report on bathing waters.

Among other requirements, DAERA must exercise its functions so that all bathing waters are classified as, at least, ‘sufficient’.¹¹ It must also take such realistic and proportionate measures as it considers appropriate to increase the number of bathing waters classified as ‘good’ or ‘excellent’.¹²

8 *ibid.*

9 Office for Environmental Protection, ‘Drivers and pressures affecting terrestrial and freshwater biodiversity in Northern Ireland’ (2024) <www.theoep.org.uk/report/drivers-and-pressures-northern-ireland> accessed 15 October 2024.

10 Reg 3(1), Bathing Water NI Regulations.

11 Reg 5(1)(a), Bathing Water NI Regulations.

12 Reg 5(1)(b), Bathing Water NI Regulations.

Current status of bathing waters in Northern Ireland

Northern Ireland has 26 officially identified bathing waters and seven ‘candidate’ bathing waters. All but one of these bathing waters are located at the coast.

These are relatively small numbers of bathing waters compared to other European countries, particularly for inland sites. For instance, Germany has over two thousand bathing sites on lakes and rivers and France has over a thousand.¹³ Even accounting for the fact that Northern Ireland is considerably smaller, in terms of both population and geography, its number of bathing waters is proportionately lower.

The number of coastal sites identified as bathing waters in Northern Ireland is also slightly lower than some other relevant figures. For instance, the independent ‘Beach Guide’ for Britain and Ireland lists 35 beaches in Northern Ireland.¹⁴

Of the officially identified bathing waters, 18 of 26 (69.2%) achieved ‘excellent’ status in 2023. In the same year, six official sites (23.1%) were ‘good’, one was ‘sufficient’ (3.8%), and one site was ‘poor’ (3.8%).

If the first year of results from the seven ‘candidate’ sites are included, the picture changes considerably. Across the complete set of 33 bathing waters including those candidate sites, 19 were ‘excellent’ in 2023 (57.6%), eight were ‘good’ (24.2%), one was ‘sufficient’ (3.0%) and five were ‘poor’ (15.2%).¹⁵ It should however be noted that the results for the candidate sites only reflect the results from one year of monitoring, whereas the more longstanding sites reflect classifications averaged over four years. DAERA has indicated that the 2023 figures for the new candidate sites are reflective of an unusually wet July 2023.

While these outcomes represent a major improvement since the 1990s, they remain worse than those in most other European countries. If the first year of results for the candidate sites is included, Northern Ireland is among the lowest achievers in Europe in terms of bathing water sites assessed as ‘excellent’.

Underlying principles of the regulations

Who the regulations are intended to protect – the meaning of ‘bathers’

In its application of the regulations to date, like many other authorities DAERA generally has interpreted ‘bathing’ to mean swimming. The effect of this is that other water users, including surfers, windsurfers, paddleboarders and people who take part in various forms of boating and sailing, are not considered under the regulations. This potentially limits the ability of the regime to protect other water users against possible harmful pollution.

Our view is that the existence of a wide range of other users being exposed to the same water periodically raises questions for DAERA about how to apply the duty to publish a list of bathing waters where the department expects a large number of people to bathe, and on how to update the profile of each bathing water.

13 Stantec and Centre for Research into Environment and Health, ‘Assessment of the Implementation of Environmental Law in Relation to Bathing Waters’ (2024) s 5.2.

14 The Beach Guide, ‘Great British Beaches – UK Beach Guide’ (2024) <www.thebeachguide.co.uk/> accessed 9 September 2024.

15 DAERA, ‘About Bathing Water Quality’ (2024) <www.daera-ni.gov.uk/articles/bathing-water-quality/> accessed 6 August 2024.

Further, our view is that the regulations, and the term ‘bathers’ and its narrow interpretation, no longer properly reflect societal practices. We therefore suggest that DAERA consider wider categories of people using bathing waters given activities such as surfing and paddleboarding. This is because such activities also result in immersion and exposure from time to time and this is what the Bathing Water NI Regulations aim to address.

The bathing water season

The Bathing Water NI Regulations specify an annual ‘bathing season’ of 1 June to 15 September. These dates determine when the public are provided with most protection and information concerning the risks associated with polluted bathing waters.

For some years, there has been concern that the bathing water season does not match the modern use of bathing waters and that, as a result, public health does not fully benefit from the protections intended. While DAERA recognised this and began to consult upon it in 2022, the regulations retain the current, fixed season.

In our view, this approach is inflexible and out of step with how people use the water environment. We consider that an approach to bathing seasons that reflects public usage could help better protect public health.

The identification of bathing waters

For a site to be eligible for identification as a bathing water, it must be used by over 45 bathers on at least one occasion or over 100 beach users on at least two occasions across a review period, alongside other criteria. This number is reflected in DAERA guidance rather than being a requirement of the regulations themselves.

We consider that an alternative and more flexible approach to defining a ‘large number of bathers’ may be more appropriate than relying on a single, minimum numerical threshold. Further, we identify possibilities to consider the possible use of a ‘pre-identification’ process within the regime. Such an approach has been applied in Germany, for example, to address issues related to access, planning and facilities, as well as investigations and works to maintain or improve water quality, before formal identification of bathing waters.

Technical implementation

Classification of bathing waters

The Bathing Water NI Regulations provide for bathing waters to be classified by DAERA based on concentrations of Intestinal enterococci (IE) and *Escherichia coli* (*E. coli*). These bacteria are known as ‘faecal indicator organisms’ (FIOs) and act as ‘markers’ of pollution.

Currently, the classification system uses different evaluation approaches for ‘excellent’ and ‘good’ bathing water quality compared to ‘sufficient’ and ‘poor’. We consider that the adoption of a single method of evaluation could provide a more consistent and understandable classification system. This has been recommended by the World Health Organization (WHO).¹⁶

¹⁶ World Health Organization, ‘WHO Recommendations on Scientific, Analytical and Epidemiological Developments Relevant to the Parameters for Bathing Water Quality in the Bathing Water Directive (2006/7/EC)’ (11 June 2018) <[www.who.int/publications/m/item/who-recommendations-on-scientific-analytical-and-epidemiological-developments-relevant-to-the-parameters-for-bathing-water-quality-in-the-bathing-water-directive-\(2006-7-ec\)](http://www.who.int/publications/m/item/who-recommendations-on-scientific-analytical-and-epidemiological-developments-relevant-to-the-parameters-for-bathing-water-quality-in-the-bathing-water-directive-(2006-7-ec))> accessed 27 July 2024.

The regulations also set out different classification standards for inland and coastal bathing waters. We question the extent to which different standards can be justified. The science here is complex, and the evidence limited. It may therefore be beneficial for DAERA to revisit this topic with input from the relevant health authorities as appropriate.

When DAERA has issued an alert and declared a ‘short term pollution’ incident, samples can be discounted from the classification process. While there is some distrust and confusion among stakeholders about this discounting process, it is provided for in the regulations and appears to be applied in accordance with them. We question whether bathing water information could be provided that would both include and exclude these samples, for comparison and to provide a more complete picture.

Monitoring of bathing waters

Our assessment is that DAERA is performing what is required by the current regulations in respect of monitoring. However, we consider that the current provisions of the regulations for the number of sampling points may not provide for a representative assessment of water quality or health risks, especially at larger sites, over their entire length or area. We are also concerned about possible risks of misclassification if sample numbers are reduced to below those recommended by the WHO.

Our assessment highlights the need for further research into new and emerging techniques for the assessment of FIOs with nearer real-time applications. Additionally, the potential for more applications for the identification of inland bathing waters and the popularity of swimming in freshwater environments suggests a need to increase attention on the presence of cyanobacteria (‘blue-green algae’).

Reporting and communication

We recognise the importance of the current classification system and the function it serves as an indicator of effectiveness of the implementation of broader water law and policy. However, we consider that there is scope for improvements to better ensure the public are aware of their more immediate risks from bathing.

Coherence with related law and policy

The Bathing Water NI Regulations do not operate in isolation. Rather, they form part of a wider framework of laws and policies for the management, protection and improvement of the water environment.

The Water Framework Directive NI Regulations

Our findings in our recent report on implementation of the WFD NI Regulations and River Basin Management Planning in Northern Ireland include that progress is not on track to meet the Environmental Objectives under those regulations or the targets set for most water bodies under that regime. This is due to a range of factors including a lack of clear objectives, or specific and certain measures to achieve those objectives.¹⁷

Bathing waters have the status of ‘protected areas’ under the WFD NI Regulations. From our assessment, we judge that many of the issues that concern how the WFD NI Regulations have been implemented will also apply specifically to bathing waters.

¹⁷ Office for Environmental Protection (n 7).

For example, while River Basin Management Plans (RBMPs), produced under the WFD Regulations, identify bathing waters as protected areas, they do not set out site-specific information on measures to meet the applicable standards. Nor do they clearly reflect the requirement to aim at least for ‘sufficient’ status or any better outcomes. This is despite the specific requirement in the Bathing Water NI Regulations to take such realistic and proportionate measures as the department considers appropriate to increase the number of bathing waters classified as ‘good’ or ‘excellent’.¹⁸

Additionally, there is no clear indication or target for what overall levels of bathing water quality DAERA aims or expects to achieve. We consider it would be valuable for the department to set such targets, aligned with specific objectives for individual bathing waters that should be included in RBMPs.

Water industry regulation and investment

The application and regulation of measures in the water industry to limit sewage discharges and ensure appropriate treatment are critical to meeting and raising bathing water standards. However, they are not the only source of pressure on bathing waters, with agriculture in particular also being significant.

Our report on the implementation of the WFD NI Regulations discusses several issues regarding their interaction with mechanisms for water industry improvements and investments. Again, these issues will also apply specifically when it comes to application of the WFD NI Regulations to protect and improve bathing waters.

A further, more specific issue is the cyclical timing of major water industry improvements, which generally work on the basis of six-year investment cycles through the Utility Regulator’s Price Control process. In contrast, the Bathing Water NI Regulations provide that a bathing water that is ‘poor’ for five consecutive years is automatically ‘declassified’. The result is that such a site is ‘no longer a bathing water’ and ‘permanent advice against bathing’ must be issued.

We consider that this provision for automatic declassification is inflexible and may be counter-productive. Allowing up to five years to bring a site out of ‘poor’ status should not be used as a basis to delay improvements that could be applied over a shorter timescale. However, in some cases even five years may not be enough to identify, plan for and implement measures in the water industry sector, or elsewhere, to achieve the necessary improvements.

Marine strategy

We highlight that ongoing implementation of the Bathing Water NI Regulations, and their possible review, should also take account of the interaction with the Marine Strategy Regulations.¹⁹ This should address, for instance, the implications of not clearly setting the minimum objective of ‘sufficient’ for bathing waters, or any better outcomes, under the WFD NI Regulations, for the pursuit of ‘Good Environmental Status’ under the Marine Strategy Regulations.

¹⁸ Reg 5(1)(b), Bathing Water NI Regulations.

¹⁹ The Marine Strategy Regulations 2010, Statutory Instrument 2010 No. 1627.

Other rights and restrictions

Finally, we discuss the interaction of the Bathing Water NI Regulations with other rights and restrictions that may prohibit or limit swimming or other uses of water. We do not question the need for authorities to impose such controls in certain circumstances. However, we consider that there is the potential for the interaction of different measures to act as a barrier to improving water quality under the Bathing Water NI Regulations and, by extension, the WFD NI Regulations.

In conclusion

Overall, we see a regime that is being implemented effectively in terms of compliance with monitoring, classification and reporting obligations in the Bathing Water NI Regulations. Application of the regulations has also seen significant improvements in bathing water quality since the regime was introduced in the 1990s, albeit with some recent stagnation and decline.

At the same time, we see room for improvement in how the current regulations are applied, including how bathing waters are identified and in the numbers of such areas, particularly at inland sites. There is also considerable scope to achieve better outcomes, with Northern Ireland currently being one of the worst performers in Europe in realising 'excellent' bathing waters. We think there needs to be a clearer, more ambitious and purposeful approach to setting and pursuing objectives for bathing waters under the WFD NI Regulations. It also needs a greater degree of coherence between the Bathing Water NI Regulations and other laws and policies to address all relevant sources of pollution, including from agriculture as well as the water industry.

More fundamentally, we consider that the design of the current regulations is not comprehensive when assessed against current societal trends. In particular, their focus on 'bathing' and a fixed 'bathing season' limits the ability of the regime to protect people's health when they use waters for other recreational purposes or at other times. Public expectations and uses of water for leisure purposes have moved on significantly since the legislation was developed. The regulations have not kept up with those changes.

While some of the more specific points that we highlight in this report can be dealt with as matters of implementation under the current regulations, changes in law would likely be necessary to deal with the broader issues. They will therefore be a matter for DAERA and the NI Executive to consider in any review of the regulations alongside other relevant factors, including costs and benefits.

We recognise that it will take some time for DAERA to finalise its plans as regards the future direction of water policy and law. As it does so, we highlight the importance of DAERA confirming its intentions as regards the WFD NI Regulations and the Bathing Water NI Regulations. For reasons identified in our previous report on the WFD NI Regulations, and in this report on bathing waters, we support the review of both regimes to inform improvements in their implementation and strengthen their underlying legislative and governance provisions. We also highlight a number of possible improvements in implementation under the current regulations.

Our recommendations

We make 11 recommendations to DAERA. These address issues in the implementation of the regulations, their design and their coherence with related law and policy.

Recommendation 1. We recommend that, in considering what is meant by waters at which it ‘expects a large number of people to bathe’, and in any review of the regime, DAERA should consider whether wider categories of water users need now to be taken into account, given the purpose of protecting human health. To this end, we recommend that DAERA consider not just those people whose express intention is to swim, but also those who would normally or frequently expect to be immersed (such as surfers) as well as other recreational users who may be exposed to polluted water from ‘bathing’ from time to time. We also recommend that DAERA clarify its intended meaning of ‘beach users’ under the current regulations.

Recommendation 2. In any review of the regime, we recommend that DAERA consider options to expand the bathing water season to better match the actual usage of bathing waters by significant numbers of people. This could include considering the possible use of different season lengths at different locations.

Recommendation 3. We recommend that DAERA review the current bathing water identification criteria to ensure they support the level of protection intended to be provided where large numbers of people are expected to bathe. To this end, we recommend that DAERA ensure that its approach provides sufficient flexibility to base its identification of bathing waters on a properly representative assessment of current use and necessary protection of human health rather than a fixed minimum number of bathers. We also recommend that any material proposals for changes to the bathing water identification criteria and process should be subject to public consultation before they are finalised.

Recommendation 4. We recommend that any review of the Bathing Water NI Regulations by DAERA should include further consideration of whether a structured and transparent pre-identification process, such as that operating in Germany, might be beneficial.

Recommendation 5. We recommend that, in any review of the regulations, DAERA consider: a) the potential benefits of using 95-percentile evaluation for all classifications as suggested by the WHO; and b) the approach to disregarding samples, to ensure stakeholders understand what is being done and why and to make use of the data collected. We also recommend that, in any such review, DAERA, with input from the relevant health authorities as appropriate, consider further the justification behind the different standards for inland and coastal bathing waters.

Recommendation 6. In any review of the Bathing Water NI Regulations, we recommend that DAERA consider the scope and options to update the monitoring and sampling regime. We recommend that this should include considering the potential to: a) increase the number of sample points on long stretches of identified areas; and b) provide increased transparency and explanation of monitoring decisions so that people understand what is being done, when, how and why.

Recommendation 7. We recommend that DAERA pursue the further development of short-term pollution risk forecasting systems so that health risks can be better understood and communicated to the public with greater speed, including for inland sites which may be increasingly identified as bathing waters. While establishing accurate

levels of *E. coli* and IE may for the time being only be possible via laboratory analysis, event duration monitoring data provides a near real-time indication of risk to harm at affected bathing sites. We therefore also recommend that DAERA consider how best to align implementation of the Bathing Water NI Regulations with that of the Urban Waste Water Treatment Regulations (Northern Ireland) 2007, so that event duration monitoring data can be fed into pollution risk forecasting systems.

Recommendation 8. We recommend that any review of the regime include consideration of options to improve the quality, clarity, and accessibility of bathing water information. We suggest this could include online resources and the improved utilisation of social media and increasing the use of Quick Response (QR) codes as well as the use of physical signs at bathing sites.

Recommendation 9. In its ongoing implementation of the WFD NI Regulations, including addressing our earlier recommendations on this regime, we recommend that DAERA ensure that: a) the objectives set for bathing waters in RBMPs are sufficiently ambitious and recognise the duty in Regulation 5(1)(b) of the Bathing Water NI Regulations to aim for 'good' or 'excellent' where appropriate; b) those objectives are backed up by clear, specific and time-bound measures to achieve them at the level of individual water bodies; and c) the identification of those measures considers all relevant pressures, including from agriculture and other sources as well as the water industry, and the impacts for the water environment as a whole.

Recommendation 10. In any review of the Bathing Water NI Regulations, we recommend that DAERA revisit the current approach to the declassification of bathing waters, which can result in successive poor results leading to automatic declassification and loss of bathing water status even where improvements are in progress.

Recommendation 11. In any review of the regime, we recommend that DAERA clarify the relationship between provisions under the Bathing Water NI Regulations for identifying and monitoring bathing waters, and giving advice against bathing, with other rights and restrictions in common law and bye-laws. This should consider not just the current practical interpretation of 'bathing' to cover swimmers but also the possible application of the regulations to cover other recreational water users.

As can be seen, some of the above recommendations above are concerned with issues of implementation that can be addressed under the current regulations. They are not dependent on any review of or change to the regulations. These are recommendations 3 (bathing water identification criteria and process), 7 (pollution risk forecasting) and 9 (improvement of bathing water standards through implementation of the WFD Regulations).

The other recommendations are concerned with areas which we suggest would benefit from consideration if DAERA were to undertake a wider review, to assess whether and how the regime might be updated to achieve the outcomes intended.

1. Introduction

1. Introduction

1.1 About this report

This report looks at the effectiveness of the Quality of Bathing Water Regulations (Northern Ireland) 2008,²⁰ as amended in 2013²¹ ('the Bathing Water NI Regulations') and their implementation. It considers their effectiveness as a legal instrument, their application in practice and their coherence with wider law and policy.

After briefly introducing what is meant by a 'bathing water' (Section 1.2), this introductory chapter explains why we have looked at this subject (Section 1.3), our approach to the work (Section 1.4) and the structure of the report (Section 1.5).

In conducting the project, we have also looked in parallel at the equivalent issues and legislation in England. We are producing separate reports for each jurisdiction. Both reports will be published on the OEP website.

1.2 What is a bathing water?

The term 'bathing water' has a specific legal meaning. Rather than simply referring to any area of water where people bathe, 'bathing waters' are defined areas that are formally identified under the Bathing Water NI Regulations.

When an area of water is legally identified as a 'bathing water', it becomes subject to specific environmental regulations designed to protect public health. These regulations are intended to ensure that water quality is safe for bathing, to provide warnings where it is not, and to enhance the environmental, societal, and economic benefits associated with clean, accessible bathing areas.

1.3 Why we are looking at the Bathing Water NI Regulations

In recent years, there has been a significant rise in outdoor water-based activities, including 'wild swimming'. This is representative of a shift in how the public engages with natural waters, moving beyond the patterns of use when the first laws to protect bathing waters were established in the 1970s.

The importance of bathing waters extends beyond recreational enjoyment, encompassing public health and wider benefits. Activities like swimming in natural waters can foster social connections and enhance people's relationship with nature, as well as boosting well-being.

It is regrettable, therefore, that bathing can also carry risks of exposure to pollution that may cause illness. In this regard, the identification and management of bathing waters has been a powerful tool for both human health and environmental restoration. Substantial investments in urban wastewater treatment plants and improvements in wastewater networks since the 1990s have led to a large reduction in organic pollutants and pathogens at most bathing water sites in Northern Ireland. Despite this, there is room for significant further improvement in the quality of Northern Ireland's bathing waters.

20 The Quality of Bathing Water Regulations (Northern Ireland) 2008, Statutory Rule 2008, No. 231.

21 The Quality of Bathing Water (Amendment) Regulations (Northern Ireland) 2013, Statutory Rule 2013, No. 151.

There are also questions about how the Bathing Water NI Regulations are implemented, whom they serve to protect, and their standards of protection. These concerns have been exacerbated by public and political disquiet over the state of the wider water environment, including the condition of Lough Neagh, regulation of the water industry, storm overflows, and diffuse pollution from intensive agriculture.

1.4 Focus of this report

The Bathing Water NI Regulations are concerned with identifying and managing bathing waters to protect people against risks of harmful exposure to water pollution. They aim to improve bathing water quality to protect human health and facilitate recreational water use. They also sit within a wider body of water law and policy intended to protect and improve the environment and achieve other outcomes.

In looking at the implementation of the regulations, we have considered the following broad questions:

- What do the Bathing Water NI Regulations aim to achieve and require and how have they been applied?
- Does their underlying approach offer a good basis to achieve their aims?
- How effective has their implementation been?
- Are they effectively integrated in a coherent, wider body of water law and policy?
- What are the barriers to achieving the regulations' objectives, and how could these be addressed?
- Are there areas of the current regulations, guidance and related law and policy that could be improved?

Overarching issues

This review of the Bathing Water NI Regulations builds upon earlier work by the OEP on implementation of the Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017 ('the WFD NI Regulations')²². Our report on that project²³ highlights a failure to effectively apply the WFD NI Regulations to protect rivers, lakes, coastal and other waters. It also identifies several underlying and seemingly endemic issues relating to delivery mechanisms and governance structures to protect and improve the water environment.

In addition, the OEP has reported separately on drivers and pressures affecting biodiversity in Northern Ireland.²⁴ That assessment highlights that, while pollution is a major pressure on the water environment as noted in the implementation of the WFD NI Regulations, significant pressures on the water environment extend beyond this. It also observes that pollution from agriculture is a notable pressure.

22 The Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017, Statutory Rule 2017 No. 81.

23 Office for Environmental Protection (n 7).

24 Office for Environmental Protection (n 9).

These findings from our previous work on the WFD NI Regulations and the drivers and pressures affecting biodiversity provide an important context for this more specific report on the Bathing Water NI Regulations, which operate within the same wider legal and policy framework.

We therefore highlight the opportunity for the Department for Agriculture, Environment, and Rural Affairs (DAERA) to review the regime with a view to considering the current use of waters for swimming and other recreational activity and the known pollution risks to public health.

Separately, the European Commission's is currently reviewing the European Union (EU) legislation that originally underpinned the Bathing Water NI Regulations.²⁵ While the UK administrations are no longer bound by EU measures in this area, the Commission's review may provide valuable insights for DAERA from the application of bathing water legislation across various countries.

1.5 Our approach

The project commenced in 2023 alongside our work on the WFD NI Regulations. It has encompassed several elements.

Firstly, we have reviewed relevant legislation, guidance documents, implementation reports and literature.

Secondly, we convened a stakeholder group to facilitate broad-based engagement. This group comprised representatives from public authorities, the water and farming sectors, non-governmental organisations and professional associations across Northern Ireland and England. Two virtual meetings were held with this group in 2023, providing a platform for diverse perspectives and insights. Annex 1 outlines the nature and scope of our stakeholder interactions.

Thirdly, we have also engaged with the key public authority responsible for the implementation of the Bathing Water NI Regulations. This involved discussions with and review of information from DAERA.

Fourthly, to support the project, we commissioned independent research from the consultancy Stantec and the Centre for Research into Environment and Health (CREH). We have published their report on our website.²⁶ The findings and recommendations of these consultants reflect their independent views and are not necessarily those of the OEP. We cite their work as evidence in this report where relevant and refer to it as the 'Bathing Waters Technical Report'.

This OEP report builds on all of the components above. It has been reviewed and critiqued by external, independent experts, identified in Annex 1, whose contributions we gratefully acknowledge.

In formulating our findings and recommendations, we have applied an evidence-based approach, ensuring that our conclusions are rooted in the available data and evidence. We have referenced stakeholder views where relevant to contextualise our analysis. We also

25 European Commission, 'Bathing Water' (13 June 2024) <https://environment.ec.europa.eu/topics/water/bathing-water_en> accessed 17 June 2024.

26 Stantec and Centre for Research into Environment and Health (n 13).

identify areas where information is lacking, suggesting these as potential areas for further government review.

The scope of this report is primarily a legal and practical examination of the Bathing Water NI Regulations and their implementation. Broader scientific inquiries and wider socio-economic implications fall outside of this assessment.

1.6 Structure of this report

After this introduction, the remaining chapters of the report are as follows.

Chapters 2 and 3 are intended to provide relevant facts and context as background for the analytical content in Chapters 4 to 6 that follow.

Chapter 2 outlines the history of the Bathing Water NI Regulations, including their origins in European law. It also summarises the main components of the regulations and how they are implemented.

Chapter 3 outlines trends in and the present quality of bathing waters. It compares outcomes in Northern Ireland with other UK administrations and EU Member States.

Chapters 4 to 6 are our main analytical chapters. They look at a number of specific issues in turn, setting out the current position, discussing the main issues of note, and then presenting our view and any specific recommendations.

Chapter 4 considers certain guiding principles that underpin the Bathing Water NI Regulations. It looks at the meaning of ‘bathers’, the definition of the ‘bathing season’ and the process of identifying bathing waters. These are foundational elements that effectively define the scope of the regime.

Chapter 5 discusses the regime’s technical water quality classification and monitoring processes, including methods and frequency of sampling. It also looks at the effectiveness of public reporting on bathing water quality.

Finally, Chapter 6 examines the interaction of the Bathing Water NI Regulations with other environmental laws and policies, including the WFD NI Regulations. It also discusses how water industry regulation and investment mechanisms relate to bathing water quality issues.

2. The Bathing Water NI Regulations

2. The Bathing Water NI Regulations

This chapter summarises the background to and provisions of the Bathing Water NI Regulations. The Bathing Waters Technical Report provides additional information.²⁷

2.1 Brief history of the Bathing Water NI Regulations

The current approach to identifying and regulating bathing waters in Northern Ireland began to take shape in the 1970s. This was driven by the 1976 European Economic Community (EEC) Bathing Water Directive.²⁸ That Directive's aim was to improve bathing water quality to protect human health and facilitate recreational use of natural waters across what was then the EEC and is now the EU.

The 1976 Bathing Water Directive should have been 'transposed' (meaning written into domestic law, to give it effect) within two years of adoption. However, it was not until after the Water Act 1989 was passed that the Bathing Waters (Classification) Regulations 1991 were produced to apply the Directive in England and Wales.²⁹ This was followed by transposition in Northern Ireland through the Quality of Bathing Water Regulations (Northern Ireland) 1993.³⁰

The EU revised the European bathing water regime in 2006, adopting a new Bathing Water Directive³¹ to replace the 1976 law. The objective of the Bathing Water Directive 2006/7/EC was 'to protect human health and to preserve, protect and improve the quality of the environment'³² A key provision in the new Directive was for all bathing waters to achieve at least 'sufficient' status by 2015, coupled with an ongoing requirement to increase the number classified as 'excellent' or 'good'.

The 2006 Bathing Water Directive was transposed by the Quality of Bathing Water Regulations (Northern Ireland) 2008,³³ as amended in 2013.³⁴ These regulations, which we refer to for convenience as the 'Bathing Water NI Regulations', remain in force at the time of this report.

Following the UK's exit from the EU, the Bathing Water NI Regulations became 'retained EU law' under the European Union (Withdrawal) Act 2018,³⁵ later renamed 'assimilated law' under the Retained EU Law (Revocation and Reform) Act 2023.³⁶ This renaming does not change the legal effect of the regulations.

2.2 Summary of the Bathing Water NI Regulations

The following paragraphs provide a brief summary of some of the main legal provisions of the Bathing Water NI Regulations and how they are applied in practice.

27 *ibid* s 2.1.

28 Council Directive 76/160/EEC of 8 December 1975 concerning the quality of bathing water [1976] OJ L31/1.

29 The Bathing Waters (Classification) Regulations 1991, Statutory Instrument 1991 No. 1597.

30 The Quality of Bathing Water Regulations (Northern Ireland) 1993, Statutory Instrument 1993 No. 205.

31 Directive 2006/7/EC of the European Parliament and of the Council of 15 February 2006 concerning the management of bathing water quality and repealing Directive 76/160/EEC [2006] OJ L64/37.

32 Art 1, Bathing Water Directive.

33 The Quality of Bathing Water Regulations (Northern Ireland) 2008, Statutory Rule 2008, No. 231.

34 The Quality of Bathing Water (Amendment) Regulations (Northern Ireland) 2013, Statutory Rule 2013, No. 151.

35 Ss. 2-4, European Union (Withdrawal) Act 2018.

36 S. 5, Retained EU Law (Revocation and Reform) Act 2023.

Implementation responsibilities and interests

Implementation of the Bathing Water Regulations is led by DAERA. Local councils, the National Trust and the Northern Ireland Environment Agency have a statutory role as ‘bathing water operators’. Though not specifically referenced in the regulations, their focus on public health protection means that other bodies, such as the Department of Health and the Public Health Agency, may also have an interest.

Identification of and reporting on bathing waters

DAERA must identify bathing waters and must annually publish a list of them.³⁷ This is done by updating a schedule to the regulations, which was last modified in 2018.³⁸ DAERA must also publish an annual report on the ‘bathing season’ (see below) in the previous year.³⁹

The list of bathing waters is maintained by DAERA’s Marine and Fisheries Division, which leads on implementation of the Bathing Water NI Regulations for the department. DAERA also publishes the annual bathing water reports⁴⁰ and other information on implementation of the regime.⁴¹

We discuss the process for identifying bathing waters in Section 4.3. A key issue underpinning this topic is the related issue of the meaning of ‘bathe’ and ‘bathing’, which we explore in Section 4.1.

There are 26 identified bathing waters in Northern Ireland and seven ‘candidate’ bathing waters, making a total of 33 bathing waters at the time of writing this report.⁴² We understand from DAERA that the ‘candidate’ sites were nominated during the period when there was no Northern Ireland Executive, so they could not be added to the formal, statutory list of bathing waters in the schedule to the regulations. Hence, they were named as ‘candidate’ sites until such time as the schedule could be updated.

However, this is not clear on DAERA’s website, which presents water quality ‘classification’ information (see below) for the candidate sites immediately after that for the formal sites, without explaining the difference. We suggest that DAERA should explain this point more clearly on its website and also act to add the candidate sites into the schedule to the regulations as soon as possible. DAERA will also need to develop ‘bathing water profiles’ (see below) for the candidate sites. The department has told us these are currently being produced.

The selection of ‘candidate’ sites, though not explicitly the identification of them as ‘candidate’ sites, was explained by DAERA in a separate document produced following its 2022 bathing waters review.⁴³ This stated that: *‘Further consultation with councils has resulted in a final list of seven sites which the Department will move to identify in legislation in collaboration with Bathing Water Operators. The Department concludes that the following 7 sites [these being the ‘candidate’ bathing waters] meet the requirements for*

37 Reg 3(1)-(3), Bathing Water NI Regulations.

38 Sched. 1, Bathing Water NI Regulations, as last amended by the Quality of Bathing Water (Amendment) Regulations (Northern Ireland) 2018, Statutory Rule 2018 No. 104.

39 Reg 15A, Bathing Water NI Regulations.

40 DAERA, ‘96% of Our Bathing Waters Meet Required Water Quality Standards in 2023’ (2023) <www.daera-ni.gov.uk/news/96-our-bathing-waters-meet-required-water-quality-standards-2023> accessed 7 June 2024.

41 DAERA, ‘About Bathing Water Quality’ (n 15).

42 *ibid.*

43 DAERA, ‘2022/23 Review of Bathing Waters’ (14 June 2023) 11 <www.daera-ni.gov.uk/publications/202223-bathing-water-review-report> accessed 3 August 2024.

identification, subject to confirmation that the appropriate council will adopt the formal role of Bathing Water Operator’.

The bathing season

The regulations state that the ‘bathing season’ begins on 1 June and ends on 15 September each year.⁴⁴ Important aspects of the regime are based on this bathing season, which we discuss in Section 4.2.

Classification of bathing waters

The regulations require DAERA to classify bathing waters as ‘poor’, ‘sufficient’, ‘good’ or ‘excellent’.⁴⁵ These classifications are based on measurements of the presence and levels of the bacteria Intestinal enterococci (IE) and *Escherichia coli* (*E. coli*). These two bacteria in this context are referred to commonly as ‘faecal indicator organisms’ (FIOs). We discuss the state of bathing waters in Chapter 3, and the approach of the classification system in Chapter 5 (Section 5.1).

General duty of DAERA to achieve bathing water quality standards

DAERA must exercise its ‘relevant functions’ so as to ensure that, from 2015 onwards, all bathing waters are classified as at least ‘sufficient’.⁴⁶ ‘Relevant functions’ are defined by reference to a list of functions in the WFD NI Regulations.⁴⁷

DAERA must also take such realistic and proportionate measures as it considers appropriate with a view to increasing the number of bathing waters classified as ‘good’ or ‘excellent’.⁴⁸ We discuss the implementation of these requirements, including the link with the WFD NI Regulations, in Chapter 6 (Section 6.1).

Sampling, monitoring and investigations

DAERA must carry out sampling, monitoring and investigations to assess the condition of bathing waters.⁴⁹ This includes monitoring for the purposes of classifying each bathing water. The regulations set out details of sampling methods, locations, frequency, storage, transport and laboratory parameters to be analysed. We discuss issues concerned with monitoring in Section 5.2.

Bathing water profiles

DAERA must prepare a ‘bathing water profile’ for each bathing water.⁵⁰ This contains information such as a description of the bathing water and the causes of pollution. DAERA publishes the profiles on its website.⁵¹

44 Reg 4, Bathing NI Water Regulations.

45 Reg 12 and Sched. 4, Bathing Water NI Regulations.

46 Reg 5(1)(a), Bathing Water NI Regulations.

47 The Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017, Statutory Rule 2017 No. 81. See Schedule 2 of these regulations for the list of ‘relevant functions’.

48 Reg 5(1)(b), Bathing Water NI Regulations.

49 Regs 8, 11 and 12 and Sched. 3, Bathing Water NI Regulations.

50 Reg 7 and Sched. 2, Bathing Regulations.

51 DAERA, ‘About Bathing Water Quality’ (n 15).

Public communication and reporting

The regulations set out a range of provisions for communicating and reporting on the condition of bathing waters. These include obligations on the ‘bathing water operator’ to disseminate information to the public during the bathing season, and on DAERA to provide information on bathing water classifications and profiles.⁵² We discuss issues of reporting and communication under the regulations in Section 5.3.

The ‘bathing water operator’ is the person who controls the land immediately adjacent to a bathing water and through which it is normally accessed.⁵³ This is commonly the local council or National Trust.

Management measures

The regulations also require DAERA, or the relevant bathing water operator, to take bathing water ‘management measures’ in specific situations such as ‘pollution incidents’, ‘abnormal situations’ and ‘short term pollution’.⁵⁴

These management measures are not the main mechanisms through which the requirement to meet the ‘sufficient’ or better classification of bathing waters is achieved. Rather, these outcomes should be realised through the application of measures under the wider body of water law and policy, of which the Bathing Water NI Regulations form a part. This is reflected in the obligation on DAERA concerning the application of its ‘relevant functions’ as noted above.

Declassification of bathing waters

As a specific element of the management measures, DAERA and the relevant bathing water operator are subject to requirements in the regulations concerning the provision of information when a bathing water is classified as ‘poor’. This includes an obligation on the department to issue ‘permanent advice against bathing’ if it has classified a bathing water as ‘poor’ in five consecutive years. In these cases, the bathing water is ‘declassified’ and as such is ‘no longer a bathing water’.⁵⁵

DAERA must publish annually details of the former bathing waters at which permanent advice against bathing is in place.⁵⁶ At the time of writing, no bathing waters have been declassified in Northern Ireland in this way, although DAERA has told us that one beach was declassified in 2012 due to the lack of a bathing water operator. We discuss issues associated with the possibility of declassification stemming from failure to achieve the necessary standards in Chapter 6 (Section 6.2).

Notices and enforcement

The regulations contain provisions for DAERA to serve notices upon bathing water operators requiring them to take specified measures under the functions.⁵⁷ They also provide for DAERA to take enforcement action under the regulations.⁵⁸

52 Regs 9 and 10, Bathing Water NI Regulations.

53 Reg 2(2), Bathing Water NI regulations.

54 Regs 13-15 Bathing Water NI Regulations.

55 Reg 14(2)-(3), Bathing Water NI Regulations.

56 Reg 2(4)(b), Bathing Water NI Regulations.

57 Reg 16, Bathing Water NI Regulations.

58 Regs 17-18, Bathing Water NI Regulations.

2.3 Better Beaches Forum and Blue Flag Awards

Better Beaches Forum

As part of its wider approach to bathing waters, DAERA currently leads a ‘Better Beaches Forum’ in Northern Ireland.⁵⁹ This is not a requirement of the regulations but serves to support their implementation. The forum consists of bathing water operators and environmental NGOs. It was originally set up in 2011 under the name ‘Good Beach Summit’, with a remit focused on water quality. In 2016 this evolved into the Better Beaches Forum. The Forum intends to focus on improving water quality, beach cleanliness, facilities management and signage, and keeping the public and media better informed.

Blue Flag Awards

The Blue Flag programme (also not within the regulatory obligations) is run by the Foundation for Environmental Education located in Denmark.⁶⁰ Within Northern Ireland the scheme is locally managed by Keep Northern Ireland Beautiful.⁶¹ In Northern Ireland, there are currently nine beaches which have been awarded Blue Flag Status for 2024/25.

This programme is world renowned, with a series of strict environmental, educational, safety-related and access-related criteria which must be met and maintained for a beach to be awarded the Blue Flag status. This includes the bathing water being classed as ‘excellent’ status as defined by the regulations.

59 DAERA, ‘96% of Our Bathing Waters Meet Required Water Quality Standards in 2023’ (n 40).

60 Foundation for Environmental Education, ‘Blue Flag’ <www.blueflag.global> accessed 11 September 2024.

61 Keep Northern Ireland Beautiful, ‘Blue Flag Award’ <www.keepnorthernirelandbeautiful.org/> accessed 11 September 2024.

3. The state of bathing waters

3. The state of bathing waters

This chapter provides a brief overview of the state of bathing waters in Northern Ireland. We highlight current performance and the challenges presented by changing trends in bathing. The Bathing Waters Technical Report provides more information.⁶²

3.1 Dominance of coastal bathing sites in Northern Ireland

Bathing waters in Northern Ireland are primarily coastal, reflecting the fact that these sites historically have been the most popular for swimming and recreation.

Of the current 33 bathing waters in Northern Ireland (both ‘official’ and ‘candidate’ – see Section 2.2), only one site is inland. This is the ‘candidate’ site at Rea’s Wood on the shores of Lough Neagh (see case study box below). The remaining 32 bathing waters are coastal beaches.

This trend is also observed, though to a lesser extent, across many other countries in Europe, where a significant proportion of bathing sites are coastal.⁶³ Despite this, the 1976 and 2006 European Directives were always intended to protect the public at both coastal and inland sites.⁶⁴ As set out in the Bathing Waters Technical Report, several EU Member States have very large numbers of inland bathing water sites. For instance, Germany has over two thousand sites on lakes and rivers and France has over a thousand.⁶⁵

The number of coastal sites identified as bathing waters in Northern Ireland is slightly lower than other figures. For instance, the independent ‘Beach Guide’ for Britain and Ireland lists 35 beaches in Northern Ireland.⁶⁶

Case Study – Rea’s Wood inland bathing water site

Inland sites will inevitably present new challenges when compared to coastal sites. One high-profile example of this is Rea’s Wood, a recently nominated candidate bathing water site on the shores of Lough Neagh.

In the first year of testing (2023), Rea’s Wood received a ‘poor’ classification. During the 2024 bathing season, an advisory notice against bathing was issued on 16 July 2024.⁶⁷ This advice was not issued due to FIOs, but rather because the levels of blue-green algae were considered too high for safe bathing.

Ensuring such sites are safe for bathing, and improving their condition more generally, will require an ongoing and coordinated approach that extends beyond DAERA alone. In May 2024, in response to the blue-green algae issue in Lough Neagh, the Inter-Agency Blue-Green Algae Monitoring Protocol was produced by DAERA in collaboration with the Northern Ireland Environment Agency, Northern Ireland Water, the Food Standards

62 Stantec and Centre for Research into Environment and Health (n 13).

63 The European Environment Agency, ‘European Bathing Water Quality in 2023’ (28 May 2024) <www.eea.europa.eu/publications/european-bathing-water-quality-in-2023/> accessed 5 July 2024.

64 A fact underlined by the many entirely landlocked EU Member States, such as Austria, who have for decades applied the Bathing Water Directives.

65 Stantec and Centre for Research into Environment and Health (n 13) s 5.2.

66 The Beach Guide, ‘Great British Beaches – UK Beach Guide’ (2024) <www.thebeachguide.co.uk/> accessed 9 September 2024.

67 NI Direct Government Services, ‘Bathing Water Quality’ (2024) <www.nidirect.gov.uk/articles/bathing-water-quality/> accessed 5 August 2024.

Agency, the Agri-Food and Biosciences Institute, and the Public Health Agency.⁶⁸ This protocol outlines the roles and responsibilities related to blue-green algae, not just in Lough Neagh but in other potentially affected areas, many of which are likely to be inland.

3.2 Changing trends – increasing requests for inland sites

DAERA's most recent consultation on bathing waters was in 2022.⁶⁹ During this consultation, a number of inland sites were nominated as bathing waters. However, the only site judged to meet the required criteria at the time was Rea's Wood.

With the popularity in 'wild swimming' and other open water recreational activities across rivers, further applications for inland bathing sites appear likely. This presents an important point for DAERA to consider, as bathing water sites on rivers may be exposed to sewage (both treated and untreated), agricultural run-off, urban run-off and industrial pollution in ways that may differ from those at coastal sites.

As explained in greater detail in the Bathing Waters Technical Report, coastal bathing water quality, based on the FIOs of concern, is generally better than that of inland waters because of the greater dispersion and dilution rates and more rapid bacteria decay. Moreover, riverine sites tend to be more susceptible than coastal areas to short-term pollution caused or affected by heavy rains or droughts.⁷⁰

This means that there is the potential for the overall percentages of bathing waters meeting the 'excellent', 'good' and 'sufficient' classifications to decrease if the number of inland (in particular, riverine) bathing waters increases. This should not be taken as an indication that standards of bathing water quality are declining, since it would actually be a reflection of the changing mix and nature of identified bathing waters. Rather, it illustrates the need to use statistics in this area with care. It also highlights the challenges of communicating in a way that is both clear and simple while allowing these important contextual points to be understood.

3.3 Status of bathing waters in Northern Ireland

The most recent bathing water quality figures available at the time of producing this report, from 2023,⁷¹ showed that 18 of 26 (69.2%) of Northern Ireland's 'official' (i.e. not including 'candidate') bathing waters were at 'excellent' status. In the same year, six official sites (23.1%) were 'good' and one was 'sufficient' (3.8%). One site was 'poor' (3.8%). This was the bathing water at Ballyholme, located on the North Down coast.

This failure of one site represents 3.8% of the 26 official bathing waters, although the small number of water bodies limits the value of this percentage figure. Northern Ireland could only have a smaller percentage rate of failure if no sites failed at all.

68 DAERA, 'Inter-Agency Blue-Green Algae Protocol' (2024) <www.daera-ni.gov.uk/sites/default/files/publications/daera/24.25.026%20Inter-Agency%20Blue-Green%20Algae%20Protocol%20Proof%202.PDF> accessed 9 July 2024.

69 DAERA, '2022 Review of Bathing Waters in Northern Ireland' (2022) <www.daera-ni.gov.uk/sites/default/files/consultations/daera/2022%20Bathing%20Waters%20Review%20Consultation%2008022022.pdf> accessed 4 July 2024.

70 Stantec and Centre for Research into Environment and Health (n 13) 115.

71 DAERA, 'About Bathing Water Quality' (n 15).

If the ‘candidate’ sites are included, using their preliminary classification based on the first year’s data, the picture is different.⁷² Across the complete set of 33 bathing waters, 19 were ‘excellent’ in 2023, (57.6%), eight were ‘good’ (24.2%), one was ‘sufficient’ (3.0%) and five were ‘poor’ (15.2%), including the inland site at Rea’s Wood.

It should be noted that the candidate sites are based on only one year’s data. This contrasts with the ‘official’ bathing sites which are averaged across four years’ data.

Table 3.1 below shows the trends in the classification of bathing waters since 2015. The data do not include the seven candidate sites. The information shown in the table is not publicly available, and has been provided to us by DAERA. We would encourage DAERA to make the comparable, year-on-year data more readily accessible to the public.

Table 3.1. Bathing water classification results in Northern Ireland, 2015 to 2023
(Source: based on data from DAERA, 2024)⁷³

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023
Number of bathing waters assessed	23	23	23	26	26	26	26	26	26
Excellent	14	11	12	15	14	17	19	21	18
	60.9%	47.8%	52.2%	57.7%	53.8%	65.4%	73.1%	80.8%	69.2%
Good	7	9	5	7	9	5	5	3	6
	30.4%	39.1%	21.7%	26.9%	34.6%	19.2%	19.2%	11.5%	23.1%
Sufficient	2	2	5	4	3	4	2	1	1
	8.7%	8.7%	21.7%	15.4%	11.5%	15.4%	7.7%	3.8%	3.8%
Poor	0	1	1	0	0	0	0	1	1
	0.0%	4.3%	4.3%	0.0%	0.0%	0.0%	0.0%	3.8%	3.8%

3.4 Northern Ireland’s bathing water quality compared to other UK administrations

Table 3.2 below shows bathing water quality results for Northern Ireland and other UK administrations. Scotland and Wales each had two bathing water sites that failed to achieve the legal minimum ‘sufficient’ standard in 2023, corresponding to failure rates of 2.3% in Scotland and 1.8% in Wales. Meanwhile, 18 bathing waters (4.2%) in England failed to meet the ‘sufficient’ standard.

At the other end of the scale, the 2023 figures show that 69.2% of Northern Ireland’s 26 official bathing waters achieved ‘excellent’ classification, falling to 57.6% when the candidate sites are included. These figures compare to 66.4% of sites classed as ‘excellent’ in England, 42.7% in Scotland, and 73.4% in Wales.

There are different pressures and drivers that may account for these differences. Population density is likely to be a factor, although clearly not the only one. This is illustrated by the fact that Scotland has a lower proportion of bathing waters classed as ‘excellent’ despite also having the lowest population density in the UK.

⁷² *ibid.*

⁷³ Information provided directly to the OEP from DAERA.

Table 3.2. Bathing water quality across the UK (Source: based on data from DAERA, Defra, SEPA, and NRW)

	Northern Ireland ^{74 75}		England ⁷⁶	Scotland ⁷⁷	Wales ⁷⁸
	Excluding candidate sites	Including candidate sites			
Number of bathing waters assessed	26	33	423	89	109
Excellent	18	19	281	38	80
	69.2%	57.6%	66.4%	42.7%	73.4%
Good	6	8	99	37	20
	23.1%	24.2%	23.4%	41.8%	18.3%
Sufficient	1	1	25	12	7
	3.8%	3.0%	5.9%	13.5%	6.4%
Poor	1	5	18	2	2
	3.8%	15.2%	4.3%	2.3%	1.8%

3.5 Northern Ireland’s bathing water quality compared to EU Member States

In our review of the implementation of the WFD NI Regulations and River Basin Management Planning in Northern Ireland, the OEP observed that Northern Ireland was among the lower performers in the percentage of surface water bodies achieving good ecological status or potential.⁷⁹ As shown in Figure 3.1 below, this trend appears to be repeated when it comes to the quality of bathing waters.

In 2023, 85.4% of bathing waters across the EU as a whole achieved ‘excellent’ status, with only 1.5% of sites failing to achieve the minimum ‘sufficient’ legal standard.⁸⁰ As detailed above, Northern Ireland’s overall performance was significantly lower, regardless of whether or not the figures include the candidate sites.

Intensive land-use in Northern Ireland such as agriculture usage and urbanisation combined, with variable weather patterns, might partially explain this discrepancy. Nevertheless, it is notable that, at a headline level, Northern Ireland’s results in achieving excellent water quality at its ‘official’ bathing water sites exceed those of only four EU Member States – Belgium, Estonia, Hungary and Poland.⁸¹ When the ‘candidate’ sites are included (based on only one year’s data for those sites), Northern Ireland’s performance is only better than one EU Member State, Poland.

74 DAERA, ‘Northern Ireland Bathing Water Quality 2023’ (2023) <www.nidirect.gov.uk/articles/bathing-water-quality> accessed 19 July 2024.

75 DAERA, ‘About Bathing Water Quality’ (n 15).

76 Defra, ‘Bathing Water Quality Statistics’ (6 December 2023) <www.gov.uk/government/statistics/bathing-water-quality-statistics> accessed 17 July 2024.

77 The Scottish Environment Protection Agency, ‘98% of Scottish Bathing Waters Continue to Meet Strict Environmental Standards’ (21 November 2023) <beta.sepa.scot/news/2023/98-of-scottish-bathing-waters-continue-to-meet-strict-environmental-standards/> accessed 19 July 2024.

78 Natural Resources Wales, ‘Bathing Water Quality Wales’ (18 June 2024) <naturalresources.wales/evidence-and-data/research-and-reports/water-reports/bathing-water-quality/> accessed 1 September 2024.

79 Office for Environmental Protection (n 7).

80 The European Environment Agency (n 63).

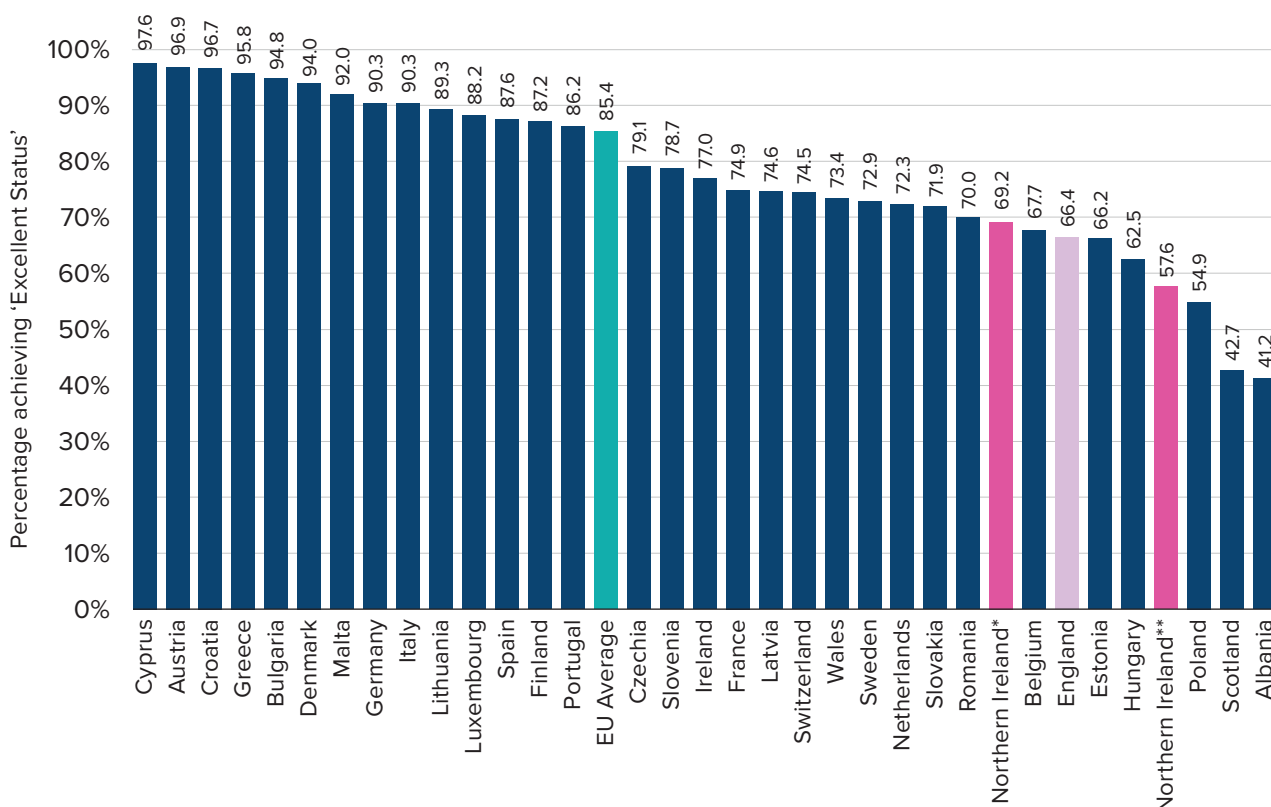
81 *ibid.*

The Republic of Ireland shares a land border with Northern Ireland and has similar climate conditions to Northern Ireland. In 2023, the Republic of Ireland had 148 bathing waters, 10 of which are inland sites and 138 coastal. In 2023, 114 sites (77%) achieved ‘excellent’ classification, 24 sites (16.2%) achieved ‘good’ status, five sites (3.3%) achieved ‘sufficient’ status, and five sites (3.3%) achieved ‘poor’ status.

These results suggest the potential to achieve better outcomes in Northern Ireland with the necessary political will, technical measures and investments. At the same time, any comparison of bathing water results from one country to another needs to be treated with a degree of caution. As discussed previously, for example, different administrations will face different pressures, land use, climate and other factors. The scope to achieve improvements at bathing waters may therefore vary. There may also be variations in the approach to identification of bathing waters, which may affect the likelihood of them meeting the standards.

Chapter 5 of the Bathing Waters Technical Report further explores the reasons behind the differences in these figures across Europe. Amongst other things, the chapter highlights the importance of ultraviolet disinfection at wastewater treatment plants to reduce micro-organisms and pathogens in untreated or partially treated urban wastewater.⁸²

Figure 3.1. Proportion of bathing waters with excellent quality in selected European countries in 2023 (Source: based on data from the European Environment Agency, 2024)⁸³



* Northern Ireland, officially identified sites only.

** Northern Ireland, officially identified sites and candidate sites combined.

82 Stantec and Centre for Research into Environment and Health (n 13) s 5.6.

83 The European Environment Agency (n 63).

4. Underlying principles of the Bathing Water NI Regulations

4. Underlying principles of the Bathing Water NI Regulations

This chapter looks at selected issues concerned with the current wording and practical implementation of certain guiding principles that underpin the Bathing Water NI Regulations. It considers, in turn:

- The focus of the regulations on ‘bathers’ (Section 4.1)
- The operation of the regime around a specified ‘bathing season’ (Section 4.2)
- How bathing waters are identified (Section 4.3).

4.1 Who the regulations are intended to protect – the meaning of ‘bathers’

4.1.1 Introduction

This section looks at who the Bathing Water NI Regulations are designed to protect through their reference to ‘bathers’ (the actual term used in the Bathing Water NI Regulations is ‘surface waters... at which the Department expects a large number of people to bathe’)⁸⁴.

This is considered in relation to the specific purpose of the regime as set out in the Bathing Water Directive 2006 from which the Bathing Water NI Regulations originate. The purpose of the Directive is stated to be ‘to preserve, protect and improve the environment and to protect human health by complementing Directive 2000/60/EC (the Water Framework Directive)’.⁸⁵ It also relates to the identification of ‘bathing waters’ (Section 4.3) and their classification standards (Chapter 5, Section 5.1).

4.1.2 The current position

The regulations are based around the notions of ‘bathers’, ‘bathing’ and ‘bathing waters’. A ‘bathing water’ is an area of surface water identified as such by DAERA under the regulations.⁸⁶ The terms ‘bathers’ and ‘bathing’ are not defined in the regulations, or in DAERA’s supporting documents and guidance.⁸⁷

In its practical application of the regulations to date, a ‘bather’ in this context has been considered by DAERA to mean a swimmer. This was reflected in DAERA’s 2022 review of bathing waters which states that: ‘It should be noted that the Regulations are focussed on bathing only.’⁸⁸ It is also supported to some degree by guidance from the European Commission under the Bathing Water Directive, as we discuss below.

This interpretation has the effect of potentially excluding other water users from consideration. Despite this, DAERA’s practical approach to identifying bathing waters does provide some leeway to consider other water users. As discussed further in Section 4.3,

84 Reg 2(2), Bathing Water NI Regulations.

85 Art 1(2), Bathing Water Directive.

86 Regs 2(2) and 3(1), Bathing Water NI Regulations.

87 DAERA, ‘About Bathing Water Quality’ (n 15).

88 DAERA, ‘2022 Review of Bathing Waters in Northern Ireland’ (n 71).

DAERA's criteria for considering proposed bathing sites include evidence of usage by over 45 'bathers' at least once or over 100 'beach users' at least twice across a review period.⁸⁹

The term 'beach users' is not defined but is clearly different to 'bathers' or 'people expected to bathe'. Depending on how it is interpreted, it could include a wide range of others who go into or onto the water, whether or not with the principal intention of swimming, such as surfers, windsurfers, kite surfers, kayakers, rowers, and anglers. On one view, it could also cover those who spend time near the water but not in or on it, such as walkers or picnickers.

Although its interpretation of 'beach users' is not set out in the guidance, DAERA has told us that it considers 'beach users' to refer as those people on a beach who might go swimming. DAERA also explained that this term was never intended to cover non-water contact sports.

While this leaves a degree of uncertainty as to whether 'surfers', for example, would be considered in practice as 'bathers', it appears that they could be viewed as 'beach users'. The department has also confirmed to us that all beaches considered safe for surfing in Northern Ireland are currently included as identified bathing waters. DAERA has further added that it has initiated year-round monthly sampling on these beaches to inform future policy direction (see Section 4.2.3).

4.1.3 Discussion

The potential exclusion of other water users from the interpretation of 'bather' to date has been a cause of concern and comment, including from stakeholders in this project. This is discussed further in the Bathing Waters Technical Report.⁹⁰

A wide range of other recreational water users may also be exposed to pathogens in water. They include surfers, windsurfers, paddleboarders, anglers and people who take part in various forms of boating, rowing and sailing. However, they are not expressly considered or provided for under the regulations, which focus solely on 'bathers'.

Some of these other water users, such as surfers, will be fully immersed at times, with similar exposure to pathogens as people who bathe. There is some evidence that immersion from such activities (and particularly 'impact immersion' such as falling off a surfboard) may present higher risk factors for exposure to water-borne pathogens compared with swimming at the surface.^{91 92} Despite this, our understanding is that surfers have not been taken into account as 'bathers' when bathing waters have been identified and classified.

Other users, such as paddleboarders, may not have an intention to swim, but necessarily need to do so if they fall in the water. This will not be an unusual occurrence. It is also unclear if paddling in shallow water, for example by small children, should be viewed as 'bathing'. Again, there will be risks of exposure.

As a result, an area with significant recreational use by people who could be harmed by exposure to polluted water may not qualify as a 'bathing water' under the regime. This will

89 DAERA, 'About Bathing Water Quality' (n 15).

90 Stantec and Centre for Research into Environment and Health (n 13) s 3.8.

91 Anne FC Leonard and others, 'Human Recreational Exposure to Antibiotic Resistant Bacteria in Coastal Bathing Waters' (2015) 82 *Environment International* 92.

92 Jack Schijven and Ana Maria de Roda Husman, 'A Survey of Diving Behavior and Accidental Water Ingestion among Dutch Occupational and Sport Divers to Assess the Risk of Infection with Waterborne Pathogenic Microorganisms' (2006) 114 *Environmental Health Perspectives* 712.

depend, among other factors, on whether enough of those people swim (see Section 4.3), regardless of other recreational uses and their risks of exposure.

This issue was also considered by the European Commission in a 2002 Explanatory Memorandum on the Directive.⁹³ This stated that:

‘The 1976 Directive’s main aim was improving water quality and thereby protecting the health of citizens who use natural water bodies for bathing. At that time, bathing meant mainly swimming. During the past 25 years, a lot of social and technical changes have occurred. New water activities like surfing, wind-surfing, kayaking, etc. have developed. In all these activities, falling into the water, submerging and swallowing of water is commonplace. This also applies for canoeing and kayaking on fresh waters, especially when the sport is practised in a family context, i.e. by non experienced users, as water contact and immersion are rather likely.’

Despite this, the Commission went on to take the view that *‘it would not be appropriate to include the new recreational uses of water in the definition of bathing waters as to do so would oblige Member States to significantly increase the extent, both physically and temporally, of water quality protection, monitoring and management obligations.’* It was therefore left as a choice for Member States, rather than an obligation.

Since then, trends in increasing and more diverse recreational water use have continued. As noted above, this already appears to have been addressed, to some degree, by DAERA extending the criteria for bathing water sites to include consideration of ‘beach users’ rather than purely ‘bathers’.

Similarly in England, under the previous government administration in May 2024, the Department of Environment, Food and Rural Affairs said that it will *‘seek public and stakeholder views on extending the definition of ‘bathers’ to include a wider range of water users in addition to swimmers – such as rowers, kayakers and paddleboarders.’*⁹⁴

A wider interpretation of ‘bather’ might attempt to cover not just people who go into the water for the express purpose of swimming, but also those whose water sports or use of recreational waters result in their swimming or immersion in the water at least part of the time.

Such a wider interpretation of the existing obligations could then reasonably include surfers and paddleboarders as ‘bathers’, for example. Arguably, this would be a more purposeful interpretation to better reflect the regime’s objective to protect human health and facilitate recreational use of natural waters.

Regardless of how the term ‘bather’ is interpreted, where an area is identified as a ‘bathing water’, any action taken to ensure it meets the appropriate standards or to report its water quality will support the protection of all users, and not just swimmers. This was also noted in DAERA’s 2022 review which observed that the current bathing water standards: *‘are associated with the possible health outcomes arising from recreational water activities, where whole-body contact takes place, (i.e. those in which there is a meaningful risk of swallowing water). However, the information provided at Bathing Waters will be useful to all water users.’*⁹⁵

93 European Commission, ‘Explanatory Memorandum to COM(2002)581 – Quality of Bathing Water’ (2002) <www.eumonitor.eu/9353000/1/j4nvhdjdk3hydzq_j9vvik7m1c3gyxp/vi8rm2zhs5zz> accessed 3 July 2024.

94 Defra, ‘Record Number of New Bathing Sites Get the Go Ahead’ (13 May 2024) <www.gov.uk/government/news/record-number-of-new-bathing-sites-get-the-go-ahead> accessed 2 July 2024.

95 DAERA, ‘2022 Review of Bathing Waters in Northern Ireland’ (n 69).

The standards of protection for swimmers in the regulations may be higher than those for some others, such as boaters or anglers, who may be subject to less risk under normal conditions. This highlights the possibility that an area of water might not be suitable for swimming (for example for safety reasons) but could be suitable for other recreational activities (such as kayaking or rowing) that still carry some risk of exposure to pathogens.

Authorities in other parts of the world approach this issue through setting different water quality standards for the management of ‘recreational waters’ rather than just a single set of standards for ‘bathing waters’.⁹⁶ Examples include different standards for immersive and non-immersive recreational use in the USA, or ‘primary contact’ (full immersion activities such as bathing) versus ‘secondary contact’ activities (like paddleboarding or kayaking on the surface) in Japan.

4.1.4 Our view

We recognise that DAERA’s current interpretation of ‘bathing’ to mean swimming reflects what it is widely understood to mean in practice. However, we consider this a limited interpretation which overlooks the wider objectives of protecting human health and facilitating the recreational use of natural waters.

It is arguable that a broader interpretation could reasonably cover a wider body of people who may be immersed in water and need to swim from time to time. This is especially the case for individuals who are likely to be subject to full and regular immersion in the water, such as surfers.

Our view, therefore, is that the interpretation of ‘bather’ as applied under the current regulations should include people who will, or reasonably may need to swim periodically. This would include, for example, surfers and paddleboarders, consistent with the regime’s intended objectives. This is not dependent on any change in the regulations but rather is a definitional and interpretative choice when identifying bathing waters.

We note in this regard that an interpretation that is ‘mainly’ limited to swimmers appears to have been supported by the European Commission. However, this seems to have been based on the procedural and economic consequences for Member States of taking account of others such as surfers, paddleboarders, and windsurfers, rather than what the Bathing Water Directive states.

On the other hand, we also recognise that the Bathing Water NI Regulations (and the Directive from which they were originally derived), are unclear on this point, with no clear definition. This inevitably leaves applicants and decision-makers with some ambiguity or uncertainty as to what constitutes ‘bathing’.

More broadly, we consider that the focus of the regulations on ‘bathing’ reflects a view of the recreational use of waters which was common in the 1970s, when the regime originated, but is now out of date. The legislation has not kept pace with recreational trends such as surfing and paddleboarding. Its provisions therefore now appear out of step with its objectives of protecting human health and facilitating the recreational use of waters. From a practical perspective, for example, it makes little sense that other activities, which see people regularly immersed, may be excluded from consideration when it comes to identifying bathing waters.

96 Stantec and Centre for Research into Environment and Health (n 13) ch 6.

Our view is that the existence of a wide range of other users being exposed to the same water periodically raises questions for DAERA about how to apply the duty to ‘identify all bathing waters on an annual basis, those being areas where it ‘expects a large number of people to bathe’, and on how to update the profile of each bathing water.

We do, however, understand that the current interpretation of the term ‘at which the Department expects a large number of people to bathe’ is a matter of applying the existing law correctly. Any wider review or adjustment of the regime is therefore a matter of policy to be determined by DAERA. Given the current misalignment between the regulations’ objectives and their provisions, we would support a review on the possibility of applying the regime beyond ‘bathers’.

We suggest that such a review should include consideration of a wide range of recreational water users such as surfers, windsurfers, kite surfers, paddleboarders, kayakers, paddlers, anglers, and people who take part in various other forms of boating, rowing and sailing, all of whom may be at some risk from pollution.

We further suggest that any such review should consider not just such different groups of recreational water users, but also their different likelihoods, means and levels of exposure to pathogens and of resulting harm. For instance, some users will face risks of exposure from swallowing water when they are immersed. Others may be exposed via aerosols or water drops while they remain above the water surface.

DAERA may also wish to consider the merits of ‘recreational water management’, as seen in other parts of the world. This could provide a broader approach to protecting and informing different users of water based on their likely exposure to pathogens and risk of illness.

Any such re-appraisal could have the aim of supporting raised standards overall. We also recognise that any extension of the regime beyond ‘bathing’ could entail additional costs of implementation as well as societal and environmental benefits. These would be matters for DAERA to consider as part of any review. We further recognise that DAERA has already gone some way in practice towards addressing the limitations of the current regime’s focus on bathers, by also providing for the inclusion of ‘beach users’ in the consideration of possible bathing waters. We note, however, that the exact meaning of ‘beach users’ in this context is also open to some degree of interpretation. This offers some flexibility in the consideration of proposed bathing water sites but could also generate some ongoing uncertainty or scope for disagreement or misunderstanding among applicants or decision-makers. DAERA may therefore wish to clarify this point in its guidance.

Recommendation 1. We recommend that, in considering what is meant by waters at which it ‘expects a large number of people to bathe’, and in any review of the regime, DAERA should consider whether wider categories of water users need now to be taken into account, given the purpose of protecting human health. To this end, we recommend that DAERA consider not just those people whose express intention is to swim, but also those who would normally or frequently expect to be immersed (such as surfers) as well as other recreational users who may be exposed to polluted water from ‘bathing’ from time to time. We also recommend that DAERA clarify its intended meaning of ‘beach users’ under the current regulations.

4.2 When the regulations provide protection – the bathing season

4.2.1 Introduction

This section considers when the Bathing Water NI Regulations serve to protect bathers. It looks at the ‘bathing water season’ and its impacts on the identification and prevention of pollution instances and provision of information to the public.

4.2.2 The current position

In Northern Ireland, the ‘bathing season’ is established in the regulations as beginning on 1 June and ending on 15 September every year.⁹⁷ The dates of the bathing season determine when the public are provided with most protection and information concerning the risks associated with polluted bathing waters. Specifically, the regulations state that the first sample for every bathing water should be taken shortly before the season commences and that monitoring should then continue at intervals not exceeding one month throughout the season.⁹⁸ This is discussed further in Chapter 5 (Section 5.2).

During the bathing season, DAERA evaluates bathing water quality by measuring the levels of *E. coli* and IE. The values recorded inevitably will fluctuate based on a variety of factors, such as the weather, diffuse pollution from agricultural and urban sources, sewage treatment works’ discharges and stormwater overflows. The overall classification of a bathing water site is then determined by the readings collected over the past four bathing seasons. Again, this is discussed further in Chapter 5 (Section 5.1).

Based on the monitoring outcomes, the regulations state that adequate measures should be taken to prevent bathers’ exposure to pollution. This can require that measures be put in place to prevent bathers’ exposure to pollution. It can also require the provision of clear guidance advising against bathing at the site at a particular time.

The same provisions for monitoring and reporting on water quality do not exist outside of the bathing season. Consequently, the opportunities to identify and rectify causes of pollution are reduced, and the public does not benefit from the same level of information (if any) if they use those waters outside of the defined season.

4.2.3 Discussion

There are concerns that the bathing water season does not match the modern use of bathing waters, and that as a result, the public does not fully benefit from the protections intended by the Bathing Water NI Regulations.

DAERA recognised this issue and consulted on it as part of its 2022 review of bathing waters.⁹⁹ The response showed a significant appetite to extend the bathing season. DAERA reported that 160 respondents expressed an opinion on this topic, with 83% supporting a year-round season, 15% favouring an extension typically from April to October, and 2% supporting the current season length.¹⁰⁰

97 Reg 4, Bathing Water NI Regulations.

98 Reg 3, Bathing Water NI Regulations.

99 DAERA, ‘Bathing Waters Consultation’ (2 February 2022) s 4.5 <www.daera-ni.gov.uk/consultations/bathing-waters-consultation> accessed 3 August 2024.

100 DAERA, ‘2022/23 Review of Bathing Waters’ (n 43) 9–10.

In light of this response, DAERA stated that it ‘will undertake a course of consultation with key stakeholders to assess the economic and other impacts of an extension of the current bathing season. Resource limitations on central and local government mean extending testing across an entire year must be balanced with the expansion in the number of regularly tested bathing waters.’¹⁰¹

DAERA has also told us in this project that it has initiated a year-round monthly sampling regime on identified bathing water beaches which are popular surfing areas to inform future policy directions. However, the results of this testing are not publicly available. DAERA has also highlighted the resource pressure on the department of performing such year-round monitoring.

4.2.4 Our view

The current ‘bathing season’ is written into the law. Implementation of this aspect of the regulations appears to be happening in accordance with those provisions.

As with the term ‘bathers’ discussed in the previous section, the legal specification of a fixed ‘bathing season’ that is identical for every bathing site across the country seems to originate from the 1970s, when the initial focus of the bathing water regime was on summer bathing. Again, that approach no longer appears to reflect current practices where many people bathe or undertake other recreational activities, such as surfing, over longer periods and sometimes year-round.

We therefore consider that this aspect of the current regulations is inflexible and out of step with how people now use the water environment. It may affect the ability of the regime to achieve its intended objectives by not assessing or reporting on water quality at other times when people continue to bathe.

An approach to bathing seasons that better reflects public usage could therefore better protect public health in accordance with the regime’s objectives. This is a matter for DAERA to consider, as it would require a different approach to applying the existing law, or its revision. We note that DAERA has previously consulted on this matter, and has stated its intention to consult further in order to assess the economic and other impacts of an extension of the current bathing season.

We recognise that lengthening the bathing season inevitably would raise several related issues. These would need to be considered as part of any review of this matter to ensure the regime’s overall effectiveness and coherence.

Firstly, altering the bathing season would affect the cost of monitoring and reporting by DAERA and bathing water operators. As we note elsewhere (see Section 5.2) DAERA is already constrained in terms of its available resources for implementing the regime. Any change of approach will need to be adequately resourced to be successful.

Expanding the bathing season into the autumn and winter months would also require assessment of wider issues including associated mitigation and remediation costs, and their affordability. For instance, it would be necessary to consider how best to approach the impact of changes in agricultural and urban run-off and combined sewer overflow activations resulting from different patterns of rainfall during this time.

¹⁰¹ *ibid.*

A further point of consideration will be the effects of changes in daylight length and intensity, as well as water temperature. These will affect the persistence of bacteria and the associated need for wastewater treatment to meet the relevant standards. Climate change will have an impact on these matters, raising the question of DAERA of how best to make the regime ‘future-proofed’ to allow for further adjustment as appropriate.

Whether it would be feasible and practical for bathing water sites, both coastal and inland, to meet the existing water quality standards over an extended period (potentially year-round) would require detailed analysis. There is a risk that extending the bathing season would lead to more bathing waters failing to meet the standards, with little realistic prospect of achieving compliance within the relevant periods, thereby leading to their declassification (see Section 6.2). This would not be desirable.

A ‘one-size-fits-all’ approach to this challenge is not necessarily required. It is not simply a choice between all bathing waters having a season of 1 June to 15 September, or the whole year, or something else. For example, the current season could be maintained as a minimum, with scope to extend the season where there is sufficient use over a longer period. DAERA could therefore consider a range of options if it revisits this aspect of the regulations.

As a point of comparison, the equivalent legislation in Scotland does not operate with a fixed bathing season. Rather, it leaves this as a discretionary matter for ministers to determine the season individually for each bathing water, as ‘the period during which large number of bathers are expected there’.¹⁰²

We suggest, additionally, that it would be sensible for any reconsideration of the ‘bathing season’ to proceed in alignment with any parallel reconsideration of the current coverage of ‘bathers’, as discussed in the previous section of this report, and of the criteria for identifying bathing waters as discussed in the next section. Levels of use of water bodies throughout the year may vary considerably between different water bodies and between different activities, such as swimming or paddleboarding at inland or coastal waters or surfing in the sea. The impact on wider related issues such as signage and communication (see Section 5.3) will also need to be assessed.

Recommendation 2. In any review of the regime, we recommend that DAERA consider options to expand the bathing water season to better match the actual usage of bathing waters by significant numbers of people. This could include considering the possible use of different season lengths at different locations.

4.3 Identifying bathing waters

4.3.1 Introduction

This section examines the current process for identifying bathing waters in Northern Ireland. It reviews DAERA’s application guidelines concerning bather numbers and other relevant factors. It also discusses the cyclical nature of the bathing water application process, with reference to alternative approaches in other jurisdictions that provide for a ‘pre-identification’ process.

¹⁰² Reg 3(3)(b), Bathing Waters (Scotland) Regulations 2008, Scottish Statutory Instrument 2008 No. 170.

4.3.2 The current position:

The Bathing Water NI Regulations require DAERA to identify bathing waters and publish a list of them annually.¹⁰³ DAERA maintains a publicly accessible list of Northern Ireland's bathing waters on its website, where it also publishes the criteria for identifying bathing waters.¹⁰⁴ At the time of writing, to have a site considered for a new application, the following requirements must be met:

- Provision of initial usage evidence at the site (the selection criteria for candidate sites include over 45 bathers on at least one occasion or over 100 'beach users' on at least two occasions during the review period).
- Evidence that bathing is not prohibited or inadvisable for safety reasons.
- Provision of information about site facilities, such as signage, litter collection, site access, car parks, lifeguards, and changing facilities.
- Confirmation from an appropriate body that it is willing to assume responsibility as the 'bathing water operator'.

4.3.3 Discussion

Numbers of bathers

The thresholds for the number of bathers needed to be observed for an area to be considered as a bathing water have been a point of discussion with stakeholders in this project. Northern Ireland's threshold of 45 bathers at least once (or over 100 'beach users' on at least two occasions) is relatively low in this regard. In contrast, England has a threshold of 100 bathers as an average across the whole season,¹⁰⁵ while Scotland has a general guideline figure of 150 bathers.¹⁰⁶ Wales, in contrast, does not set a minimum threshold but rather asks applicants to provide information on the numbers of swimmers, paddlers and other beach users.¹⁰⁷

Identification process

New bathing water applications are considered on a periodic basis, with the list of sites in the regulations updated from time-to-time. This can mean that potentially suitable bathing sites are identified at a time that may not be aligned well with the corresponding scope for measures to improve water quality, including through water industry investments.

This could lead to newly identified bathing waters initially being classed as 'poor', as has been seen with several of the current 'candidate' sites (see Section 3.3 above). This creates a risk that a continuing classification at this level will lead to their declassification. We discuss this further in Chapter 6 (Section 6.2).

103 Reg 3(1)-(3), Bathing Water NI Regulations.

104 DAERA, 'About Bathing Water Quality' (n 15).

105 Defra, 'Designate a Bathing Water: Guidance on How to Apply' (13 May 2024) <www.gov.uk/government/publications/bathing-waters-apply-to-designate-or-de-designate/designate-a-bathing-water-guidance-on-how-to-apply> accessed 7 June 2024.

106 SEPA, 'Bathing Waters | Designation' (2024) <<https://bathingwaters.sepa.scot/designation/>> accessed 1 August 2024.

107 Welsh Government, 'Designation and De-Designation of Bathing Waters: Application Form' (15 February 2023) <www.gov.wales/designation-and-de-designation-bathing-waters-application-form> accessed 2 August 2024.

The Bathing Waters Technical Report considers a number of differing approaches to identifying bathing waters in different jurisdictions.¹⁰⁸ Aspects of these have the potential to alleviate some of the issues highlighted above. One such approach is the ‘pre-application process’ followed in Germany.¹⁰⁹

By way of explanation, the ‘pre-identification’ process in Germany ensures that issues related to access, planning and facilities, as well as investigations and works to maintain or improve water quality, are addressed before formal identification. These steps can lead to the early identification and mitigation of potential pollution sources, better management of surrounding land use, and enhanced public amenities. This helps to ensure that once a site is identified, it already meets high standards of water quality.

By ‘investigating first, then deciding on status’, the approach in Germany has been praised for enabling authorities to proactively address water quality, planning, and access issues for potential bathing waters.¹¹⁰ Germany also has proportionately larger numbers of bathing waters and better levels of water quality than Northern Ireland, even accounting for significant differences in size and pollution. In 2023, Germany had 2,291 bathing waters (of which 1,929 were inland). Across all of these bathing waters, 90.3% were ‘excellent’, 5.9% were ‘good’, 1.6% were ‘sufficient’ and 0.3% were ‘poor’ (with the remaining 1.8% unclassified).¹¹¹

In Northern Ireland, on the other hand, identification may be viewed as a means to strengthen authorities’ obligations to improve water quality. Additional steps prior to identification could be of concern to some stakeholders who may fear that potential bathing sites will be dismissed before achieving bathing water status, or that a pre-identification process could be unnecessarily prolonged or create further barriers to the identification of an area as a bathing water.

4.3.4 Our view

We note that the determination of what constitutes a ‘large number of bathers’, as provided for in the regulations, is a subjective matter to be determined by DAERA at its discretion. As stated previously, the Bathing Water NI Regulations are intended to protect people from harm they may experience when using bathing waters. The higher the threshold that is applied for the number of bathers in identifying bathing waters, the less this outcome will be achieved.

We note that Northern Ireland’s threshold of 45 bathers is lower than that applied in England or Scotland. In the context, we do not consider it overly restrictive compared against that applied elsewhere.

We note, however, that it appears to be specified as a single, fixed threshold. This could have the effect that an area could have up to 44 bathers every day across the whole season, leading to significant use overall, without meeting the threshold.

We consider that a more flexible approach, for example as already applied in Wales, may be more appropriate. This is because a single, fixed numerical minimum threshold on bather numbers may unnecessarily constrain the discretion of decision-makers when identifying bathing waters. Scotland similarly maintains discretion for ministers to determine what

108 Stantec and Centre for Research into Environment and Health (n 13) chs 5, 6.

109 *ibid* 5.3.

110 *ibid*.

111 The European Environment Agency (n 63).

would be a large number of bathers for a site, while stating a general guideline figure of 150 people using the water. This replaced a previous requirement for 150 bathers without such flexibility, following a request for this change by Environmental Standards Scotland.¹¹²

DAERA could revisit this aspect of the regime now, independent of other factors, since it is a matter of how the current regulations are interpreted and applied, as reflected in the department's criteria for identifying new bathing waters. However, if DAERA is minded to review the regime more broadly, we suggest that this topic should be revisited alongside the parallel assessments that we highlight for consideration of applying the regime to wider categories of 'bathers' and extending the 'bathing season'.

In broad terms, the question of whether it is appropriate to identify a bathing water should be based on who the regime is trying to protect and over what period. This will also give rise to consideration of issues of cost and practicality.

A 'pre-identification' process, along the lines of that applied in Germany, could also be worthy of further exploration as part of any reconsideration of the bathing water identification process in Northern Ireland. This may provide for improved understanding of poor water quality, and the possibilities and means to address it, prior to identification. Such an approach could also reduce the risk of sites being declassified owing to underlying sources of pollution that may take several years to rectify. To be effective in supporting the regime's objectives, any such process should create, and be seen to provide, effective means to work towards bathing water status and standards rather than creating new barriers to these outcomes.

Recommendation 3. We recommend that DAERA review the current bathing water identification criteria to ensure they support the level of protection intended to be provided where large numbers of people are expected to bathe. To this end, we recommend that DAERA ensure that its approach provides sufficient flexibility to base its identification of bathing waters on a properly representative assessment of current use and necessary protection of human health rather than a fixed minimum number of bathers. We also recommend that any material proposals for changes to the bathing water identification criteria and process should be subject to public consultation before they are finalised.

Recommendation 4. We recommend that any review of the Bathing Water NI Regulations by DAERA should include further consideration of whether a structured and transparent pre-identification process, such as that operating in Germany, might be beneficial.

112 Environmental Standards Scotland, 'Designation of Bathing Water Sites in Scotland Summary Report' (4 December 2023) <<https://environmentalstandards.scot/our-work/our-investigation-reports/designation-of-bathing-water-sites-in-scotland/>> accessed 1 August 2024.

5. Classification, monitoring and reporting of bathing water quality

5. Classification, monitoring and reporting of bathing water quality

This chapter looks at selected issues concerned with technical elements of the Bathing Water NI Regulations. It considers, in turn:

- The classification system for bathing waters (Section 5.1)
- Monitoring practices for bathing waters (Section 5.2)
- How bathing water quality information is provided to the public (Section 5.3).

5.1 Classification of bathing waters

This section discusses the method used to classify bathing areas, including differences between coastal waters and inland sites.

5.1.1 Current position

As outlined in Chapter 2, the Bathing Water NI Regulations provide for bathing waters to be classified as ‘poor’, ‘sufficient’, ‘good’ or ‘excellent’. The classification system is based on measurements of FIO concentrations, namely those of IE and *E. coli*.

Samples are collected and collated across each bathing season. This provides a basis to classify the bathing water for the results over the whole of that season. The results of the annual classifications, as well as individual monitoring samples that contribute to them, are published by DAERA on its website.¹¹³

The overall, longer-term classification for each bathing water works on a rolling, four-year period. It is therefore based on the combination of the results for the most recent season and the previous three seasons.

Classification standards

Table 5.1 shows the classification standards in the regulations. They vary according to whether the site is inland or coastal (including ‘transitional’ waters, such as in estuaries). A bathing water is classified as ‘poor’ if it fails to meet the standards specified for ‘sufficient’.

¹¹³ DAERA, ‘About Bathing Water Quality’ (n 15).

Table 5.1. Classification standards for bathing waters (colony forming units in 100ml water)

Parameter	Excellent	Good	Sufficient
Inland Waters			
Intestinal enterococci	200(*)	400(*)	330(**)
<i>Escherichia coli</i>	500(*)	1000(*)	900(**)
Coastal Waters			
Intestinal enterococci	100(*)	200(*)	185(**)
<i>Escherichia coli</i>	250(*)	500(*)	500(**)
<p>Note that the standards for ‘excellent’ and ‘good’ marked with (*) are based on a 95-percentile evaluation. Those for ‘sufficient’ (**) are based on a 90-percentile evaluation. As explained further below, this is why the numerical figures for ‘sufficient’ are higher than those for ‘good’.</p>			

The classification system is based on ‘95-percentile’ and ‘90-percentile’ evaluations as shown in the table. In simple terms, a ‘percentile’ can be thought of as a value that ‘X%’ of measured values (in these cases 95% or 90%) must fall below for the standard to be met. This is calculated based on the overall distribution of the data rather than the simple number of samples that fall above or below the specified figure. This means, for instance, that one or two significantly high values out of 20 could preclude a bathing water from achieving one of the 95- or 90-percentile classification standards respectively.

As a specific example, the results of samples taken at an inland site must be such that their overall distribution will have 95% of values with no more than 200 ‘colony forming units’ of IE and 500 colony forming units of *E. coli* in 100 millilitres of water in order to be classed as ‘excellent’. A ‘colony forming unit’ is a unit of measurement for the bacteria IE and *E. coli*.

The ‘excellent’ and ‘good’ classifications are based on 95-percentile evaluations, whereas ‘sufficient’ reflects a 90-percentile evaluation. This explains why the figures for ‘sufficient’ look, at first sight and in purely numerical terms, to be more stringent than those for ‘good’. This is because a bathing water could be classified as ‘sufficient’ when a larger number of samples exceed the standard for that classification, compared to the number of exceedances that would enable a site to be classified as ‘good’ or ‘excellent’.

It is also notable that the specified levels of bacteria for the different classifications at inland sites are greater than those for coastal waters. For example, levels of bacteria that would lead to an inland bathing water being judged as ‘excellent’ would only lead to a classification of ‘good’ on the coast. The levels for an inland site to be ‘good’, meanwhile, might lead a coastal water to be ‘poor’.

Predicting water quality and disregarding samples

Bathing waters are affected by natural factors such as rain, tides, wind and sunlight. When there is heavy rain, for example, reduced water quality is more likely for particular bathing waters. This is because heavy rain can wash pollutants from agricultural land and urban areas into bathing areas, as well as sewage being spilled by the operation of sewer overflows.

Currently in Northern Ireland there are only six bathing waters which have daily water quality predictions. The predictions are available online and displayed via electronic signage at the beach during the bathing season.¹¹⁴

Such a modelled forecast or prediction is not the same as an actual pollution incident that has been confirmed by sample analysis. As set out in the Bathing Water NI Regulations, when DAERA has issued an alert and declared a ‘short term pollution’ event, providing systems are in place to warn the public, samples taken during this period can be discounted from the classification process outlined above.¹¹⁵

These situations are defined in the regulations as ‘short term pollution events’. Up to 15% of such samples used in the classification data may be removed over the four-year period (but not more than one per season). This is the maximum level of discounting allowed under the regulations. The discounting assessment is made at the end of each season.

The same practice of discounting is used in England. There, the Environment Agency has explained that ‘this is because a warning against swimming has been issued in advance and the conditions are not considered to be reflective of the actual water quality most people bathe in.’ It has also said that ‘disregarding samples in this way means the classification assessment will be representative of normal conditions that bathers are likely to encounter.’¹¹⁶ If these samples were included, the overall classification would likely be lower.

5.1.2 Discussion

Our assessment is that DAERA has undertaken the monitoring required under the Bathing Water NI Regulations and produced a classification for each identified bathing water since 2015. It even met the monitoring requirements in 2020, during the Covid pandemic, when authorities in other parts of the UK did not.

As noted above, the current classification system uses both 95- and 90-percentile evaluations. During discussion with stakeholders, it was evident that this system can be confusing and difficult to understand. It was suggested by some stakeholders that, in order to make the system clearer, it would be beneficial to use just one approach with the preference being 95-percentile. This has also been recommended by the World Health Organization (WHO).¹¹⁷

A further point of discussion is the apparently less stringent classification values for freshwater sites compared to coastal sites. The science here is complex, and the evidence limited. In addition, the origins of the different standards in the EU Bathing Water Directive are difficult to trace. It has been suggested by the Environment Agency in England that they reflect an effort that was made at EU level to reconcile different epidemiological studies carried out at coastal sites in the UK and lakes in Germany.

114 Keep Northern Ireland Beautiful, ‘Swim NI’ <www.keepnorthernirelandbeautiful.org/cgi-bin/generic?instanceID=57> accessed 5 August 2024.

115 Reg 10(1)e, Bathing Water NI Regulations.

116 Environment Agency, ‘Bathing Water Classifications and Short-Term Pollution’ (23 February 2024) <<https://environmentagency.blog.gov.uk/2024/02/23/bathing-water-classifications-and-short-term-pollution/>> accessed 18 July 2024.

117 World Health Organization, ‘WHO Recommendations on Scientific, Analytical and Epidemiological Developments Relevant to the Parameters for Bathing Water Quality in the Bathing Water Directive (2006/7/EC)’ (n 16).

The WHO refers to evidence that gastrointestinal illness occurs at a higher rate in seawater swimmers than in freshwater swimmers at a given level of FIOs.¹¹⁸ However, the WHO also suggests that this difference in gastrointestinal illness rates may be due to the more rapid rate of FIO die-off than that of actual pathogens in seawater compared to freshwater.¹¹⁹ This could mean that there are more pathogens in marine waters than in fresh waters at the same FIO bacterial levels.

Overall, the WHO recommends that freshwater values should be the same as those for coastal sites and that the classification values are changed to reflect a more health based outcome.¹²⁰

On the matter of excluding samples, some stakeholders have expressed the view that this relates to a lack of transparency and even has the result of ‘massaging’ the classification figures. It is, however, provided for in the regulations and appears to be applied in accordance with them.

5.1.3 Our View

Our assessment is that it would be beneficial for the public to understand why values in freshwater locations can have higher concentrations of FIOs than saline waters. There are also questions over the extent to which such different standards can be justified, with only limited information currently available in this area. We do not have a specific view in this area but simply note that the current position is difficult to understand, with the current standards in the Bathing Water NI Regulations and the EU Directive from which they originate being at odds with the approach recommended by the WHO.

In any review of the current regulations and standards, therefore, it may be beneficial for DEARA to revisit this topic. We note in this regard that the standards are set for the purposes of protecting human health. This suggests that any such review should include the appropriate involvement of the relevant health authorities.

Further to this, a single method of evaluation would provide a more consistent and understandable classification system. We consider that using only 95-percentile values, as recommended by the WHO, would allow for a simpler system of bathing water data analysis and greater transparency. We note that if the standards for ‘sufficient’ were to be switched to 95-percentile evaluation, the corresponding IE and *E. coli* values would need to be adjusted accordingly.

As regards the approach of disregarding 15% of samples, this is provided for in the regulations and has some basis in logic. At the same time, it is misunderstood or mistrusted by some stakeholders, and allows for quite a high proportion of samples to be discounted. In addition, it means that annual and overall bathing water assessments may only provide a picture of when the ‘best’ (or at least not the ‘worst’) water quality is expected.

There would be nothing to stop, for example, DAERA from assessing and presenting the bathing water classifications for a site in two ways, both including and excluding these data associated with short term pollution.

118 World Health Organization, ‘Guidelines for Safe Recreational Environments Addendum to Volume 1 – List of Agreed Updates’ <www.who.int/publications/i/item/WHO-HSE-WSH-10.04> accessed 1 August 2024.

119 World Health Organization, ‘Guidelines on Recreational Water Quality: Volume 1 Coastal and Fresh Waters’ 15 <www.who.int/publications/i/item/9789240031302> accessed 1 August 2024.

120 *ibid.*

On the one hand this would provide greater information on the extent to which the exclusion of data affects the results. It would also provide a comparison between the assessed state of the bathing water including versus excluding those conditions when there is advice against bathing in place.

On the other hand, we recognise that it could be confusing to have two different classifications for the same bathing water. This appears largely to be a communications issue for DAERA to consider, in order to achieve the best balance between providing information that is clear and useful to bathers and stakeholders and avoiding misunderstandings and mistrust.

Recommendation 5. We recommend that, in any review of the regulations, DAERA consider: a) the potential benefits of using 95-percentile evaluation for all classifications as suggested by the WHO; and b) the approach to disregarding samples, to ensure stakeholders understand what is being done and why and to make use of the data collected. We also recommend that, in any such review, DAERA, with input from the relevant health authorities as appropriate, consider further the justification behind the different standards for inland and coastal bathing waters.

5.2 Monitoring of bathing waters

This section looks at the monitoring programme currently used to evaluate bathing waters. It considers the parameters used in this assessment, sample numbers and sample locations.

5.2.1 Current position

Sampling point location

The Bathing Water Directive states that sampling should be undertaken at one single defined location within the bathing water area.¹²¹ This should be at a location within the bathing water area where most bathers are expected, or the greatest risk of pollution is expected, according to the bathing water profile.

The Bathing Water NI Regulations reflect both of these options, providing for DAERA to choose one or the other.¹²² They do not have provision for more than one sampling point within an identified area.

Sample numbers

There are variations in the number of bathing water samples to be taken across the different UK administrations. Table 5.2 below illustrates these.

¹²¹ Art 3, Bathing Water Directive.

¹²² Sched. 3, Bathing Water NI Regulations.

Table 5.2. Differences in bathing water sampling frequency in the UK¹²³

	Northern Ireland	England	Scotland	Wales
Bathing Water Season	1 June – 15 September	15 May – 30 September	Defined per bathing water. Typically, 1 June – 15 September	15 May – 30 September
Bacterial Sampling Programme (Statutory)	Minimum of 1 pre-season, with 4 bathing season samples taken at intervals not exceeding one month (total 5). ¹²⁴	Minimum of 1 pre-season, with bathing season samples taken at intervals not exceeding one month (total 5). ¹²⁵	Minimum of 1 pre-season, with 4 bathing season samples taken at intervals not exceeding one month (total 5) Where bathing season does not exceed 8 weeks a minimum of 3 bathing season samples must be taken (total 4). ¹²⁶	Minimum of 1 pre-season, with bathing season samples taken at intervals not exceeding one month (total 5). ¹²⁷
Bacterial Sampling Programme (Normal Practice)	16 to 20 bathing season samples plus one pre-season sample. ¹²⁸	Minimum of 10 samples per bathing season (including pre-season sample) depending on the consistency of the classification. ¹²⁹	Most bathing waters are sampled 18 times including pre-season sample. Some geographically remote sites are sampled 10 times. Sites which have consistently demonstrated ‘excellent’ water quality are sampled five times. ¹³⁰	Between 10 and 16 samples per bathing season (including pre-season sample). ¹³¹

123 Stantec and Centre for Research into Environment and Health (n 13) s 4.4.

124 Sched. 3 para 2, Bathing Water NI Regulations.

125 Sched. 4 para 2, The Bathing Water Regulations 2013, Statutory Instrument 2013 No. 1675.

126 Sched. 2 para 2, Bathing Water (Scotland) Regulations 2008.

127 Sched. 4 para 2, The Bathing Water Regulations 2013 (n 127).

128 20 samples were collected at each site in 2022. See for example: DAERA, ‘Northern Ireland’s Bathing Waters Show Overall Improvement in 2022’ (8 December 2022) <www.daera-ni.gov.uk/news/northern-irelands-bathing-waters-show-overall-improvement-2022> accessed 1 September 2024.

129 Done at the discretion of the Environment Agency.

130 SEPA, ‘Scotland’s Bathing Waters’ (2024) <<https://bathingwaters.sepa.scot/>> accessed 4 July 2024.

131 Natural Resources Wales (n 78).

In Northern Ireland, samples will be collected on between five and 20 occasions during the season. However, normal practice is to collect 20 samples from each site per season. This is similar to Scotland and Wales.

Assessment of bacterial parameters

All samples collected under the Bathing Water NI Regulations must be analysed for levels of *E. coli* and IE. These tests are carried out in accordance with protocols defined within the regulations.¹³²

Methods used in analysing bathing water samples are traditionally culture-based. Due to this, bacterial growth is required for measurement. It can take up to 24 hours of incubation to get an *E. coli* result and up to 72 hours for a confirmed IE result. This time period, required for analysis, can delay alerting the public to pollution incidents. At present, no reliable real-time analysis is available for this type of test although there are pilot programmes underway.¹³³

Additional parameters

In addition to sampling for FIOs, DAERA must also carry out visual inspections for waste, including tarry residues, glass, plastic or rubber. These must be carried out at a frequency which will allow adequate management measures to be put in place.¹³⁴

The presence or absence of macro-algae or marine phytoplankton is considered under the regulations during the creation of the bathing water profile. The information is not used within the annual classification. However, if there is the potential for a large accumulation of macro-algae or marine phytoplankton, investigations and monitoring must be carried out.¹³⁵

At present there are no standard limits for macro-algae or marine phytoplankton in bathing water. However, the WFD NI regulations do consider them to an extent through a eutrophication assessment.

Cyanobacteria (sometimes referred to as ‘blue-green algae’) is not currently included as part of the bathing water classification calculations. However, there is a requirement within the Bathing Water NI Regulation to include management measures when blooms are considered unacceptable or pose a risk to public health.¹³⁶

Due to a number of factors, Lough Neagh was subjected to a prolific presence of cyanobacteria in 2023, recurring in 2024. Due to Lough Neagh’s riverine connections, cyanobacteria were also found in a number of related coastal bathing sites.

In July 2024, the Northern Ireland Executive agreed an action plan to try to manage the cyanobacteria issues within Lough Neagh.¹³⁷ Before this, in May 2024 DAERA, in association with other government departments and agencies, released an Inter-Agency Monitoring Protocol.¹³⁸ This outlines the roles and responsibility departments and agencies have in responding to cyanobacteria blooms.

132 Sched. 4, Bathing Water NI Regulations.

133 Stantec and Centre for Research into Environment and Health (n 13) s 2.5.

134 Reg 8, Bathing Water NI Regulations.

135 Reg 9, Bathing Water NI Regulations.

136 Stantec and Centre for Research into Environment and Health (n 13) ch 3.

137 DAERA, ‘Muir Welcomes Executive Approval for Lough Neagh Report and 37-Point Action Plan’ (18 July 2024) <www.daera-ni.gov.uk/news/muir-welcomes-executive-approval-lough-neagh-report-and-37-point-action-plan-0> accessed 19 July 2024.

138 DAERA, ‘Inter-Agency Blue-Green Algae Protocol’ (n 68).

Emerging monitoring opportunities

With a changing environment, pressures, societal expectations and activities and developments in scientific knowledge, the need to keep regulatory requirements and practices under review is ever-present. The following paragraphs present a brief discussion on three further monitoring topics, which are also discussed in more detail in the Bathing Waters Technical Report.¹³⁹

Microbial source tracking (MST) is an approach that can be used to ascertain the origin of faecal contamination, for example if the original source is human or from livestock. DAERA has no legal obligation to carry out MST analysis, but is using it as an investigative tool. DAERA has told us it is currently running an investigative monitoring programme using MST to assist in establishing sources of contamination in ‘at-risk’ beaches. We support this activity. The further development of MST, and possibly its use in routine testing, could improve the ability to provide greater certainty within source apportionment studies.

Case Study – The use of MST at Portrush Curran (East Strand)

DAERA prioritises bathing waters identified as experiencing a decline in water quality for catchment-based pollution source apportionment studies. For example, between 2016 and 2017, classification of the water quality at the coastal bathing site of Portrush Curran was downgraded from ‘good’ to ‘sufficient’. In 2017, MST was introduced as part of an investigation to trace the origins of faecal contaminants. Despite extensive sampling, the results were inconclusive. However, the investigation did lead to the identification and remediation of issues within the Northern Ireland Water sewerage network.¹⁴⁰ Portrush Curran has been classified as ‘excellent’ since 2021¹⁴¹

Antimicrobial resistance (AMR) is the ability of microorganisms to become increasingly resistant to antimicrobial agents, such as medical antibiotics. AMR testing is not a requirement of the Bathing Water NI Regulations. However, it has been highlighted elsewhere as an emerging issue.¹⁴²

There are mixed views on this topic. The European Commission stated in 2017 that: ‘The development and spread of AMR in the environment is also a growing concern, requiring further research.’¹⁴³ Conversely, the WHO in 2018 advised that ‘bathing waters are not thought to be a major route of transmission for antimicrobial resistant microorganisms and environmental surveillance techniques are not currently sufficiently advanced for obligatory monitoring.’¹⁴⁴

139 Stantec and Centre for Research into Environment and Health (n 13) ch 3.

140 DAERA, ‘Better Beaches Report 2020’ (2020) <<https://www.daera-ni.gov.uk/sites/default/files/publications/daera/20.21.084%20Better%20Beaches%20Report%202020%20final.PDF>> accessed 12 September 2024.

141 DAERA, ‘About Bathing Water Quality’ (n 15).

142 See for example: The Royal Academy of Engineering, ‘Testing the Waters: Priorities for Mitigating Health Risks from Wastewater Pollution’ (2024) <<https://nepc.raeng.org.uk/media/qi2eyivp/testing-the-waters-priorities-for-mitigating-health-risks-from-wastewater-pollution.pdf>> accessed 9 July 2024.

143 European Commission, ‘A European One Health Action Plan against Antimicrobial Resistance (AMR)’ (2017) <https://health.ec.europa.eu/system/files/2020-01/amr_2017_action-plan_0.pdf> accessed 9 July 2024.

144 World Health Organization, ‘WHO Recommendations on Scientific, Analytical and Epidemiological Developments Relevant to the Parameters for Bathing Water Quality in the Bathing Water Directive (2006/7/EC)’ (n 16).

Testing for viruses within bathing water samples was a requirement of the original Bathing Water Regulations.¹⁴⁵ However, the requirement to test was removed when these regulations were repealed and replaced. The analysis of viruses in environmental waters is particularly difficult, which is why microbial indicators are used due their relative ease of analysis.¹⁴⁶

With recent breakthroughs in laboratory methods, viruses have been suggested as an alternative indicator of faecal contamination, as discussed in the Bathing Waters Technical Report.¹⁴⁷ However, the WHO has stated ‘that there is currently insufficient evidence to support a regulatory role’.¹⁴⁸

5.2.2 Discussion

The location and number of sample points has been raised as a point of concern by stakeholders in this project. Currently, identified bathing areas have only one sampling location. This is provided for in the regulations and DAERA is complying with these requirements.

A specific point of stakeholder concern was around the ability of a single monitoring point, as provided for in the regulations, to provide a complete picture of the state of each bathing water. In some cases, the bathing area identified may be up to two kilometres long. Taking into account the dynamic nature of water flows and the possible presence of multiple sources of pollution along a stretch of river or coastal area, a single sample point is unlikely to be representative of conditions across the entire area identified as the bathing water.

DAERA has informed the OEP that it carries out longitudinal studies of bathing waters periodically, although these results are not publicly available. Further to this, DAERA has also told us that samples from rivers which are close to or affecting an identified bathing water beach are collected and analysed, to assist in identifying potential sources of contamination.

The number of samples used for a classification calculation can have an important impact on the confidence of that classification. The WHO in 2018 suggested that using only 16 samples would lead to the wrong classification in 12-20% of cases, which would reduce to a 5% chance of misclassification with 80 samples.¹⁴⁹ It recommends a minimum of 20 samples per site per season, with the overall classification over the four years being based on at least 80 samples per site. Extending the bathing water season further may require additional sampling. We understand from DAERA that it has also carried out work in relation to misclassification, and intends to use this when considering next steps.

The current FIOs measured (*E. coli* and IE), are supported by epidemiological studies for their inclusion as water quality parameters.¹⁵⁰ However, both tests are based on the traditional culture methods and therefore are subject to a time delay for assessment purposes. This approach can therefore only offer retrospective assessment of the water quality at the time and point the sample was collected, with an inevitable time lag.

145 Bathing Waters (Classification) Regulations 1991.

146 Stantec and Centre for Research into Environment and Health (n 13) s 2.1.

147 *ibid* 3.

148 World Health Organization, ‘WHO Recommendations on Scientific, Analytical and Epidemiological Developments Relevant to the Parameters for Bathing Water Quality in the Bathing Water Directive (2006/7/EC)’ (n 16).

149 *ibid*.

150 *ibid*.

The Bathing Waters Technical Report considers this issue further. It suggests that, until near real time monitoring becomes available and reliable, predictive water quality modelling offers the only option for effective real time risk predictions allowing for mitigation measures to be put in place in a timely manner.¹⁵¹

We also discuss this issue further in Chapter 6 (Section 6.2), in relation to the possibility of improving the alignment of the Bathing Water NI Regulations with the Urban Waste Water Treatment NI Regulations.¹⁵² This may allow storm overflow event duration monitoring data to be better used in bathing water pollution prediction and forecasting tools.

5.2.3 Our View

Our assessment is that DAERA is performing what is required of it by the current regulations in respect of monitoring. However, if DAERA decides to review the current regime, we suggest it would be beneficial to revisit the monitoring provisions to ensure the appropriate protection of health and public awareness.

As regards the location and number of sampling points, our view is that the current fixed 'one size fits all' approach in the regulations appears somewhat inflexible. There is flexibility around the location of sampling points, but not the number, with just one sampling point per site, regardless of its size or any other factors. This aspect of the regulations may not provide for a representative assessment of water quality or health risks, especially at larger sites over their entire length.

DAERA may therefore wish to reconsider the issue of the number of sampling points alongside the related questions concerning the number of samples to be taken and how information on these matters is communicated to the public.

Our assessment is that DAERA is currently taking reasonable numbers of samples, exceeding those required by the regulations, though not always at the levels recommended by the WHO. Any reduction in sampling would increase the chances of misclassification.

We support the application of risk-based sampling and we recognise that there is a cost to monitoring and sampling. This means that decisions on what is to be monitored, where and how will need to take account of available resources as well as practical issues. It is therefore important that DAERA has the resources needed to undertake the required level of monitoring for the regime.

Our assessment also highlights the need for further research into new and emerging techniques for the assessment of FIOs with nearer real-time applications. However, we understand the demand on resources when carrying out research and development projects. We note, additionally, that the rise in applications for identification of inland bathing waters and the increased popularity of swimming in freshwater environments suggests a need to increase attention on the presence of cyanobacteria blooms.

¹⁵¹ Stantec and Centre for Research into Environment and Health (n 13) s 3.6.

¹⁵² The Urban Waste Water Treatment Regulations (Northern Ireland) 2007, Statutory Rule 2007 No. 187.

Recommendation 6. In any review of the Bathing Water NI Regulations, we recommend that DAERA consider the scope and options to update the monitoring and sampling regime. We recommend that this should include considering the potential to: a) increase the number of sample points on long stretches of identified areas; and b) provide increased transparency and explanation of monitoring decisions so that people understand what is being done, when, how and why.

5.3 Reporting and communication issues

In this section we consider how effectively the status of bathing water quality is conveyed to the public in accordance with the regulations and whether improvements might be made to enable the public to make more informed decisions about when and where to bathe.

5.3.1 The current position

During the bathing season, every bathing water operator must actively disseminate: the bathing water's current classification; any advice against bathing; a general description of the bathing water in non-technical language; information on the nature and expected duration of abnormal situations (such as heavy rainfall or pollution events); and an indication of the sources of more complete information.¹⁵³ The regulations establish that the appropriate media and technologies must be used when disseminating this information.

The Bathing Water NI Regulations also require DAERA to publish on its website a list of all bathing waters, including their current bathing water classification and those for the preceding three years. The regulations also provide that DAERA must publish information if a bathing water is likely to be affected by short-term pollution. This includes (among other things) conditions likely to lead to short-term pollution, as well as the causes and relevant procures if short-term pollution does occur.¹⁵⁴

In practice, information relating to the quality of bathing waters is made available on DAERA's website¹⁵⁵ and the NI Direct Government Services website.¹⁵⁶ Moreover, if a bathing water is classified as 'poor', then a sign advising against bathing will be displayed by the bathing water operator. However, this does not amount to prohibition and individuals may still bathe if they wish.

During the bathing season, water quality information is updated weekly and displayed on colour-coded posters. These are distributed to beach operators and typically posted at the bathing sites, council offices, and tourist information centres.¹⁵⁷

5.3.2 Discussion

Balancing long and short-term needs

There is a need to balance the long-term classification of bathing sites with the requirement to provide accurate, up-to-date information to bathers. The bathing water classification scheme provides a view of average bathing water quality over the long term. As outlined

¹⁵³ Regs 9 and 10, Bathing NI Water Regulations.

¹⁵⁴ Reg 14, Bathing NI Water Regulations.

¹⁵⁵ DAERA, 'Bathing Water Quality' (2024) <www.daera-ni.gov.uk/topics/water/bathing-water-quality> accessed 5 August 2024.

¹⁵⁶ NI Direct Government Services (n 67).

¹⁵⁷ DAERA, 'About Bathing Water Quality' (n 15).

in Section 5.1, the overall classification for each bathing water works on a rolling, four-year period by combining the results for the most recent season and the previous three seasons. Within this period, of course, there may be considerable variability in the results from one sample to another.

This approach stems from the EU Bathing Water Directive and was intended to ‘provide a meaningful picture of bathing water quality over the long term’ and to ‘properly assess the progress achieved through the implementation of certain management measures set out in the Bathing Water Directive’.¹⁵⁸ It therefore supports the assessment of progress made through management measures in the Bathing Water NI Regulations and other legislation, including the Urban Waste Water Treatment NI Regulations and the WFD NI Regulations.

While this process is valuable for assessing general water management trends, the focus of the information is inherently retrospective. It is therefore of less use to bathers who are actively trying to determine when and where it is safe to bathe and need the most recent information to do so.

Pollution monitoring and the provision of real time risk information

The physical collection of samples and laboratory analysis are currently the only accurate ways of assessing *E. coli* and IE.¹⁵⁹ Despite this, predictive models and the use of artificial intelligence allowing for the identification of short-term pollution risk forecasting do exist and are improving.¹⁶⁰ While the consistency and accuracy of such modelling can be problematic and expensive, the Bathing Waters Technical Report describes how pollution risk forecasting systems only need to predict the high values and periods of poor water quality.¹⁶¹

In this regard, the Bathing Waters Technical Report makes a case for improving the alignment of the Bathing Water NI Regulations with that of the Urban Waste Water Treatment NI Regulations, so that storm overflow event duration monitoring data can be better used in bathing water pollution prediction and forecasting tools.¹⁶² While this might not provide accurate real-time analysis of *E. coli* and IE concentrations, and will not capture urban and rural diffuse pollution impacts that can be major sources of pollution at some sites, it nevertheless could improve the reliability of real-time risk forecasting, which could be of value to bathers. We further discuss issues concerning urban wastewater treatment in Chapter 6 (Section 6.2) of this report.

In relation to event duration monitors, which monitor and record spills from the wastewater network,¹⁶³ Northern Ireland Water has prioritised its roll-out to discharges within two kilometres of identified bathing waters.¹⁶⁴ This should provide for a better understanding of when spills occur and their duration.

158 The European Environment Agency (n 63).

159 Stantec and Centre for Research into Environment and Health (n 13) 57.

160 Linda Geddes, ‘Real-Time Water Quality Monitors Installed at Wild Swimming Spots in Southern England’ *The Guardian* (21 July 2024) <www.theguardian.com/environment/article/2024/jul/21/real-time-water-quality-monitors-installed-at-wild-swimming-spots-in-southern-england> accessed 21 July 2024.

161 Stantec and Centre for Research into Environment and Health (n 13).

162 *ibid.*

163 NI Water, ‘Northern Ireland’s Wastewater System’ (2024) <www.niwater.com/siteFiles/resources/2024/Wastewater/NorthernIreland%27sWastewaterSystemMay2024.pdf> accessed 12 September 2024.

164 ‘Storm Overflows’ <<https://www.niwater.com/storm/overflow/>> accessed 12 September 2024.

Availability of signage

The provisions for signage at bathing waters in Northern Ireland are outlined in guidance on DAERA's website.¹⁶⁵ This includes examples of the information and graphics to be used.¹⁶⁶

DAERA's guidance for bathing water site operators states that more than one sign may be required per site and that the decision on signage placement is best made at the local level, depending on the specific characteristics of the bathing water.¹⁶⁷ We have not sought to assess practical implementation at individual sites, which was outside the scope of this project.

The Bathing Waters Technical Report discusses the benefits of electronic bathing water signage systems, such as those tested in Northern Ireland under an EU-supported project in 2020.¹⁶⁸ This was a cross-border research programme, managed by the Special EU Programmes Body and match-funded by DAERA and the Department of Housing, Planning and Local Government in the Republic of Ireland. It provided for six bathing waters in Northern Ireland to have daily water quality predictions displayed via electronic signage during the bathing season.¹⁶⁹ The information was also made available online.¹⁷⁰

The Bathing Waters Technical Report suggests that such electronic signs are preferable to standard fixed signs as they can be updated remotely, providing more real-time and auditable records.¹⁷¹ This may be more effective in helping bathers take appropriate measures to avoid harm, rather than relying on a bathing water operator to manually replace paper signs.

On the other hand, electronic signage may be expensive and will require physical maintenance. As an alternative, Quick Response (QR) codes might offer a practical solution to some of the issues described in the Bathing Waters Technical Report. Placing QR codes at all key access points would allow visitors with mobile devices to access the most up-to-date water quality information.

For this to be most effective, it will be necessary to ensure that the linked information is regularly updated and maintained. Additionally, options for offline access will still need to be considered to account for areas with poor mobile network coverage, or people who do not have the necessary mobile devices. DAERA has told us that QR codes are currently being used at some identified beaches in Northern Ireland. However, it has also said that their use is still under active discussion within the Better Beach Forum.

5.3.3 Our view

Communicating the risk of harm to the public from entering bathing waters is a key component of the Bathing Water NI Regulations.

We recognise the importance of the current classification system and the function it serves as an indicator of effectiveness of the implementation of broader water legislation, as outlined above. However, we consider that improvements can be made to better ensure the public are aware of their more immediate risks from bathing. We therefore consider

¹⁶⁵ DAERA, 'About Bathing Water Quality' (n 15).

¹⁶⁶ *ibid.*

¹⁶⁷ *ibid.*

¹⁶⁸ Stantec and Centre for Research into Environment and Health (n 13) s 3.6.

¹⁶⁹ Keep Northern Ireland Beautiful (n 113).

¹⁷⁰ *ibid.*

¹⁷¹ Stantec and Centre for Research into Environment and Health (n 13) 61.

that any future changes to the regime should be viewed as a good opportunity to improve this process.

We also consider there are opportunities to provide better information under the current regulations. For instance, the information currently provided on the DAERA and NI Direct websites does not include information on short-term pollution or the provision of real-time risk updates. There is also currently no easily accessible summary of the bathing water classification for each bathing water over the past three years.

However, we recognise that the 'SWIM NI' project has provided six sites with this capability.¹⁷² We also note the commitment in the Northern Ireland Executive's draft Environment Strategy to 'conduct [a] review of Bathing Waters and implement bathing water prediction models to provide early warning of short-term pollution risk at identified bathing waters.'¹⁷³

We have observed that some non-governmental organisations, such as Surfers Against Sewage¹⁷⁴ provide online data for bathers on matters such as tide times, surf reports, water temperatures, and river levels. DAERA may therefore wish to consider how such organisations might be consulted on the subject of effectively communicating information that is of importance to bathers. Such platforms can also identify storm overflow locations, offering guidance to the public to inform their decisions on when and where to bathe. The Rivers Trust provides another example of such information, although this does not currently cover Northern Ireland.¹⁷⁵

Recommendation 7. We recommend that DAERA pursue the further development of short-term pollution risk forecasting systems so that health risks can be better understood and communicated to the public with greater speed, including for inland sites which may be increasingly identified as bathing waters. While establishing accurate levels of *E. coli* and IE may for the time being only be possible via laboratory analysis, event duration monitoring data provides a near real-time indication of risk to harm at affected bathing sites. We therefore also recommend that DAERA consider how best to align implementation of the Bathing Water NI Regulations with that of the Urban Waste Water Treatment Regulations (Northern Ireland) 2007, so that event duration monitoring data can be fed into pollution risk forecasting systems.

Recommendation 8. We recommend that any review of the regime include consideration of options to improve the quality, clarity, and accessibility of bathing water information. We suggest this could include online resources and the improved utilisation of social media and increasing the use of QR codes as well as the use of physical signs at bathing sites.

172 Keep Northern Ireland Beautiful (n 113).

173 DAERA, 'Draft Environment Strategy for Northern Ireland' (2021) 26 <www.daera-ni.gov.uk/sites/default/files/consultations/daera/Draft%20Environment%20Strategy.PDF> accessed 10 November 2023.

174 Surfers Against Sewage, 'Sewage Pollution Alerts' <www.sas.org.uk/water-quality/sewage-pollution-alerts/> accessed 14 August 2024.

175 The Rivers Trust, 'Sewage Map' <<https://theriverstrust.org/sewage-map>> accessed 11 September 2024.

6. Interaction of the Bathing Water NI Regulations with other law and policy

6. Interaction of the Bathing Water NI Regulations with other law and policy

The regulations do not operate in isolation. They are part of a wider framework of laws and policies for the management, protection and improvement of the water environment.

This chapter looks at the application of the Bathing Water NI Regulations within this wider legal and policy framework. The Bathing Waters Technical Report¹⁷⁶ discusses issues of interaction with a broad range of other laws and policies. We focus on the following specific areas:

- How implementation issues in the WFD NI Regulations affect bathing water objectives (Section 6.1)
- How water industry regulation and investment mechanisms affect bathing water objectives (Section 6.2)
- How the Bathing Water NI Regulations interact with regulations concerned with protecting the marine environment (Section 6.3)
- How the Bathing Water NI Regulations interact with other rights and restrictions (Section 6.4).

6.1 The Water Framework Directive Regulations

6.1.1 The current position

The Bathing Water NI Regulations require DAERA to exercise its ‘relevant functions’ to ensure that, from the end of 2015, all bathing waters are classified as, at least, ‘sufficient’.¹⁷⁷ ‘Relevant functions’ is defined to mean functions under other legislation listed in a schedule to the WFD NI Regulations.¹⁷⁸ This includes laws that apply to drainage, waste management, sewage treatment and agriculture.

As a further and separate requirement, DAERA must also exercise its relevant functions so to take such realistic and proportionate measures as the department considers appropriate with a view to increasing the number of bathing waters classified as ‘good’ or ‘excellent’.¹⁷⁹

Further, bathing waters have the status of ‘protected areas’ under the WFD NI Regulations.¹⁸⁰ Protected areas must meet standards in the WFD NI Regulations and the law under which the area is protected. These standards should be reflected in specific ‘Environmental Objectives’ set for individual water bodies under the WFD NI Regulations, and then achieved through ‘Programmes of Measures’. This also applies to other protected areas such as ‘shellfish waters’.

Information on the objectives set for water bodies under the WFD NI Regulations is presented in the Northern Ireland Environment Agency’s ‘Catchment Data Map Viewer’.¹⁸¹

176 Stantec and Centre for Research into Environment and Health (n 13).

177 Reg 5(1)(a), Bathing Water NI Regulations.

178 Sched 2, WFD NI Regulations.

179 Reg 5(2)(b), WFD NI Regulations.

180 Reg 10(2)(b), WFD NI Regulations.

181 DAERA, ‘NIEA Catchment Data Map Viewer’ <<https://gis.daera-ni.gov.uk/arcgis/apps/webappviewer/index.html?id=16fddc459bd04d64b9e8f084f3a8e14a>> accessed 1 February 2024.

However, while the 26 ‘official’ bathing waters’ are visible in the map viewer, at the time of writing there is no presentation of objectives for them. The ‘candidate’ sites are not presented in the map viewer.

Further, at the time of writing, the Northern Ireland Executive has not yet approved Northern Ireland’s ‘River Basin Management Plan’ (RBMP) under the WFD NI Regulations, which remains in draft form.¹⁸² As published in draft for consultation, this should have set out draft Environmental Objectives for all water bodies and summaries of Programmes of Measures to achieve them. As we have reported separately, however, it did not do so.¹⁸³

A further, specific provision of the WFD NI Regulations addresses the situation where monitoring or other data indicates that the Environmental Objectives for a water body are unlikely to be met. In this case, DAERA must ensure that such additional measures as may be necessary to achieve those objectives are included in the programme of measures applying to that water body.¹⁸⁴ This would be applicable where, for example, information suggests that the minimum ‘sufficient’ standard or any higher classification set as an objective for an individual bathing water is unlikely to be met.

6.1.2 Discussion

The OEP has recently reported separately and in detail on implementation of the WFD NI Regulations.¹⁸⁵ Our overall findings include that DAERA is not on track to meet the Environmental Objectives specified under the WFD NI Regulations, or the ‘working target’ it has set in relation to those objectives. This is due to a range of factors including a lack of specific and certain measures to achieve those objectives.

From our assessment, we judge that many of the issues that concern how the WFD NI Regulations have been implemented will also apply specifically to bathing waters. For example, while the RBMPs identify bathing waters as protected areas, they do not set out any objectives or site-specific information on measures to meet the applicable standards. As noted above, nor does the Catchment Data Map Viewer identify any bathing water objectives.

From the information in the RBMPs and related documents, therefore, it is not possible to know what particular action will be taken when or where to meet bathing water quality standards. It is also not possible to understand or assess where DAERA has determined that it would be realistic and proportionate to exercise its functions to achieve ‘good’ or ‘excellent’ classification, rather than just the minimum ‘sufficient’ standard. We cannot see any information in the draft RBMP, the Catchment Data Map Viewer or other DAERA documents that addresses this requirement.

6.1.3 Our view

The WFD NI Regulations create a central, integrated framework to protect and improve the water environment, including bathing waters among other protected areas. Our report on the WFD NI Regulations identifies several areas where we consider their implementation needs to be improved.¹⁸⁶ We do not repeat all of our findings and recommendations here

182 DAERA, ‘Consultation on the Draft Third Cycle River Basin Management Plan 2021 to 2027’ (2021) <www.daera-ni.gov.uk/consultations/consultation-draft-3rd-cycle-river-basin-management-plan-2021-2027> accessed 13 November 2023.

183 Office for Environmental Protection (n 7).

184 Reg 22, WFD NI Regulations.

185 Office for Environmental Protection (n 7).

186 *ibid.*

but rather make the additional observation that they will apply to bathing waters and other protected areas as much as to other water bodies.

This means that the development of the Programmes of Measures to achieve Environmental Objectives ought to include measures that will achieve the applicable objectives for all bathing waters on a site-specific basis. This is not clear in the draft Programme of Measures in the current draft RBMP.

It is also not clear how the current implementation of the WFD NI Regulations, which appears to exclude any specific objectives in respect of bathing water standards, complies with the specific provisions in the Bathing Water NI Regulations to increase the number of 'good' and 'excellent' sites. The draft RBMP and supporting documents appear to overlook this aspect of the Bathing Water NI Regulations, or at least do not clearly reflect it. This means they do not currently provide a clear basis to deliver any such better standards, since it is the RBMPs that set the objectives to be achieved for all water bodies and summarise the Programmes of Measures that should be developed to drive action to meet them.

Our view is that RBMPs should set clear, individual objectives for bathing waters and that those objectives should be more ambitious than 'sufficient' where appropriate. This should reflect a balanced assessment of the practicality and realism (including consideration of the proportionality of costs) of those outcomes in accordance with the Bathing Water NI Regulations. In addition, Programmes of Measures should contain specific, certain and time-bound measures that demonstrate with sufficient certainty how and by when the appropriate standards (whether 'sufficient', 'good' or 'excellent' as the case may be) will be met at the individual bathing water body level.

In view of the integrated nature of the WFD NI Regulations, the assessment of actions for Programmes of Measures should consider their overall impacts. For example, measures to protect and improve bathing waters could benefit water quality more generally or other protected areas. There may be particular opportunities to link measures to protect bathing and shellfish waters due to their geographical overlap in many cases, and shared vulnerability to pollution.

This will therefore include measures to be applied in the water industry sector, which we discuss further in Section 6.2 below. However, we have also noted in our report on the WFD NI Regulations that other major sources of pressure on the water environment, such as agriculture and transport, are not currently receiving the same resources or attention. This means that overall, we do not yet see a picture of the necessary resources being directed to all major pressures to meet the Environmental Objectives of the WFD NI Regulations.

The Bathing Waters Technical Report similarly notes that, while agriculture and wastewater are the primary causes of bathing water pollution, other factors also need to be addressed. These include the impact caused by foul-to-storm sewerage misconnections, and by dogs as well as birds and other wildlife.¹⁸⁷

To be effective in protecting and improving bathing waters, application of the WFD NI Regulations needs to address all relevant sources of pollution of bathing waters and other water bodies, including from agriculture as well as the water industry. DAERA has told us that the protection of beaches in Northern Ireland follows a catchment-based approach, in which all influences into a specific catchment are considered when carrying out

187 Stantec and Centre for Research into Environment and Health (n 13) 23.

investigations into failing bathing waters. DAERA has also said this approach is discussed in the Better Beaches Forum.¹⁸⁸

Recommendation 9. In its ongoing implementation of the WFD NI Regulations, including addressing our earlier recommendations on this regime, we recommend that DAERA ensure that: a) the objectives set for bathing waters in RBMPs are sufficiently ambitious and recognise the duty in Regulation 5(1)(b) of the Bathing Water NI Regulations to aim for ‘good’ or ‘excellent’ where appropriate; b) those objectives are backed up by clear, specific and time-bound measures to achieve them at the level of individual water bodies; and c) the identification of those measures considers all relevant pressures, including from agriculture and other sources as well as the water industry, and the impacts for the water environment as a whole.

6.2 Water industry regulation and investment mechanisms

6.2.1 The current position

One of the findings in the Bathing Waters Technical Report addresses the possibility for the funding mechanism in the regulatory system to be misaligned with the process by which bathing water sites can be identified and, if necessary, ‘de-classified’.¹⁸⁹ This echoed concerns of several stakeholders in the project.

Supporting compliance with the Bathing Water NI Regulations, there are further regulations that apply to Northern Ireland Water. These include provisions under the Water Order (Northern Ireland) 1999,¹⁹⁰ and the Urban Waste Water Treatment NI Regulations.

As further detailed in the Bathing Waters Technical Report, the Urban Waste Water Treatment Regulations include two key aspects in relation to bathing waters.¹⁹¹ Firstly, many of the measures required to meet the prescribed discharge limits for wastewater treatment works will also cause a reduction in the bacterial loads going into the environment. Secondly, the regulations require advanced treatment of wastewater, in the form of ultraviolet disinfection, in places with a population equivalent of 10,000 people in ‘sensitive areas’, which will include bathing water sites.

Under the Water Order (Northern Ireland) 1999, discharges from waste water treatment works require discharge consents. Where sludge is to be managed, there are conditions under the Pollution Prevention and Control (Industrial Emissions Regulations (Northern Ireland) 2013.¹⁹²

Northern Ireland Water is a publicly funded, regulated utility. Every six years, the Utility Regulator carries out a regulatory process known as ‘Price Control’. This determines the levels of customer bills, capital investment and company performance during the control period.

During this process, Northern Ireland Water submits a business plan to the Utility Regulator. This includes actions needed to meet obligations under the WFD NI Regulations and other

188 DAERA, ‘Better Beaches Forum Action Plan’ (2024) <www.daera-ni.gov.uk/sites/default/files/publications/daera/Better%20Beaches%20Forum%20Action%20Plan.pdf> accessed 22 September 2024.

189 Reg 14(2), Bathing Water NI Regulations.

190 The Water (Northern Ireland) Order 1999, Statutory Instrument 1999 No. 662.

191 Stantec and Centre for Research into Environment and Health (n 13) 15.

192 The Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013, Statutory Rule 2013 No. 160.

legislation, including the Bathing Water NI Regulations. DAERA and the Northern Ireland Department for Infrastructure (Dfi) provide advice on this during the price control process. Northern Ireland Water also produces statutory Water Resource and Supply Resilience Plans.¹⁹³ DAERA has told us in this project that: “Bathing water quality is a primary concern in the Price Control Process and has been a driver for significant improvement in waste water treatment and in sewerage system improvements.”

6.2.2 Discussion

The effective application and regulation of measures in the water industry to limit sewage discharges and ensure appropriate treatment are critical to meeting and raising bathing water standards. As previously noted, however, these are not the only source of pressure on bathing waters, with agriculture in particular also being significant.

Our report on the implementation of the WFD NI Regulations discusses several issues regarding their interaction with mechanisms for water industry improvements and investments¹⁹⁴. We highlight a risk of conflicting objectives when considering water industry sector plans and RBMPs. We also note evidence of significant under-investment in the water industry sector. These issues will also apply specifically when it comes to application of the WFD NI Regulations to protect and improve bathing waters.

A further, more particular issue concerns the timing of the implementation of improvement measures in the sector which may be important for bathing waters. As outlined above and discussed further in the Bathing Waters Technical Report,¹⁹⁵ major water industry investments, including those to protect the environment, are identified through the six yearly Price Control cycles.

This cyclical timing of major water industry improvements may create a particular issue in respect of bathing waters and the current provisions of the Bathing Water NI Regulations. In particular, the regulations provide that a bathing water classified as ‘poor’ for five consecutive years is automatically declassified.¹⁹⁶ Allowing up to five years to bring a site out of ‘poor’ status should not be used as a basis to delay improvements that could be applied over a shorter timescale. In the absence of a possible change of approach (see Section 6.2.3. below), however, this may be too short a period to identify, plan for and implement measures in the water industry sector, or elsewhere, to achieve the necessary improvement.

Although, to date this has not occurred in Northern Ireland, it has the possibility of happening. It may be more likely if increased numbers of inland sites are identified as bathing waters, where the relevant standards may be harder to achieve.

6.2.3 Our view

We recognise that it may take some time for the Northern Ireland Executive to determine its plans as regards the future direction of water policy and law, following its restoration in February 2024. As it does so, we highlight the importance of confirming its intentions as regards the WFD NI Regulations and the Bathing Water NI Regulations. For reasons identified in our previous report on the WFD NI Regulations, and in this report on bathing

193 NI Water, ‘Water Resource and Supply Resilience Plan’ <www.niwater.com/sitefiles/resources/pdf/2020/wrm/waterresourcesupplyresilienceplan-mainreport.pdf> accessed 24 April 2024.

194 Office for Environmental Protection (n 7). See for example S. 5.4.

195 Stantec and Centre for Research into Environment and Health (n 13) 154.

196 Reg 12, Bathing Water NI Regulations.

waters, we would support the review of both regimes to inform improvements in their implementation and strengthen their underlying legislative and governance provisions.

Additionally, we highlight the importance of alignment and coherence across a broader range of measures including those applying to regulation of agriculture and the water industry, as well as the WFD NI Regulations and the Bathing Water NI Regulations.

We also consider that the current approach in the regulations, for declassification of bathing waters after five years of ‘poor’ water quality, is inflexible and may be counterproductive. It appears appropriate that there are provisions in law to declassify bathing waters where necessary, and to provide short- or long-term advice against bathing where needed. However, the current requirement for automatic declassification leading to what is said to be ‘permanent advice against bathing’, such that the standards and the drive to achieve them no longer apply, is more questionable. It appears to run counter to the overall purposes of the Bathing Water NI Regulations and the WFD NI Regulations to maintain and improve water quality.

More generally, the timings and processes for water industry investments and improvements need to be aligned with the objectives they are intended to meet. This should ensure legal obligations, under the Bathing Water NI Regulations or elsewhere, are achieved by their due dates.

Recommendation 10. In any review of the Bathing Water NI Regulations, we recommend that DAERA revisit the current approach to the declassification of bathing waters, which can result in successive poor results leading to automatic declassification and loss of bathing water status even where improvements are in progress.

6.3 The Marine Strategy Regulations

6.3.1 The current position

In 2010, the Marine Strategy Regulations came into force. These regulations transposed the EU Marine Strategy Framework Directive¹⁹⁷ and set out the UK’s vision for clean, healthy, safe, productive, and biologically diverse oceans and seas. The regulations require the UK to take necessary measures to achieve or maintain ‘Good Environmental Status’ in the marine environment by 31 December 2020.¹⁹⁸

The marine environment in Northern Ireland is in a highly depleted state. The last assessment (in 2019) of progress towards achieving Good Environmental Status showed that the UK was failing to achieve this outcome for the majority of indicators of marine health.¹⁹⁹

6.3.2 Discussion

Bathing was identified as a social value and benefit of the marine environment in the last assessment under the Marine Strategy Regulations. The next assessment is due in 2024

197 Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), [2008] OJ L 164/19.

198 The Marine Strategy Regulations 2010, Statutory Instrument 2010 No. 1627.

199 Defra, ‘Marine Strategy Part One: UK Updated Assessment and Good Environmental Status’ (2019) <www.gov.uk/government/publications/marine-strategy-part-one-uk-updated-assessment-and-good-environmental-status> accessed 24 August 2024.

and should confirm whether or not the 2020 marine Good Environmental Status target has been met.²⁰⁰

However, recent data emerging under the implementation of the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic²⁰¹ suggests this target will be missed. The OSPAR 2023 Quality Status Reports²⁰² provide the most comprehensive and up-to-date assessment of the status of marine strategy indicators in the North-East Atlantic for the period 2009-2021.

Two marine indicators for Good Environmental Status of particular relevance here are eutrophication and marine litter indicators. The former is principally concerned with the main pressures affecting the pollution of bathing waters, including agriculture, wastewater treatment and run-off from urban areas. The eutrophication indicator was met in the 2019 assessment and will likely also be met in the 2024 update. The latter overlaps strongly with the Bathing Water NI Regulations' visual monitoring inspection provisions.

The UK Marine Strategy programme of measures to deliver Good Environmental Status only mentions the regulations on bathing water twice.²⁰³ These references relate to measures to address litter from wastewater treatment works and urban drainage, and to remove litter from the marine environment.

6.3.3 Our View

This discussion of the Marine Strategy Regulations raises similar issues of coherence as those discussed in Section 6.1 above in relation to the WFD NI Regulations and the Urban Waste Water Treatment NI Regulations. Given the structure and provisions of the legislation, it is the implementation of the WFD NI Regulations, in particular, that should help in setting and achieving bathing and other water quality standards. But clearly there is also an important overlap and connection with measures to protect and improve the marine environment.

Our view, therefore, is that ongoing implementation of the Bathing Water NI Regulations, and any review of them by DAERA, should also take account of this interaction with the Marine Strategy Regulations. It should address, for instance, the implications for the pursuit of Good Environmental Status under the Marine Strategy Regulations of the lack of clear measures and objectives for bathing waters under the WFD NI Regulations.

More broadly, we highlight the benefits of a coherent approach to applying the UK Marine Strategy and Bathing Water NI Regulations. DAERA has told us that this is led by a single team in the department, namely the Marine Strategy and Catchment branch.

The Marine Strategy Regulations' current consideration of bathing waters only extends to some pressures relevant to bathing waters, with wastewater treatment being the primary one. However, achieving the outcomes of the Bathing Water NI Regulations, the Marine Strategy Regulations and the WFD NI Regulations will require attention to all pressures. This will therefore benefit from a joined-up strategy for implementation.

200 *ibid.*

201 OSPAR, 'Convention for the Protection of the Marine Environment of the North-East Atlantic' (2024) <<https://www.ospar.org/convention>> accessed 14 August 2024.

202 OSPAR, 'OSPAR 2023 Quality Status Reports' <www.ospar.org/work-areas/cross-cutting-issues/qsr2023> accessed 14 August 2024.

203 Defra, 'Marine Strategy Part One: UK Updated Assessment and Good Environmental Status' (n 198).

6.4 How the Bathing Water NI Regulations interact with other rights and restrictions

6.4.1 The current position

Under the Bathing Water NI Regulations, a bathing water is an identified area of surface water 'at which permanent advice against bathing is not currently in place'. DAERA must identify and maintain a list of bathing waters.²⁰⁴

Accordingly, for DAERA to proceed with the identification of a site, it must be assured that bathing is not prohibited or inadvisable for safety reasons. Technically, this restriction only concerns instances where such advice has been issued under the Bathing Water NI Regulations. In practice, it is also taken to cover circumstances where bathing is prohibited for other reasons.

As has been discussed elsewhere, however, the question over whether swimming is allowed in a particular area can be limited by local bye-laws. For example, such restrictions exist in relation to the River Lagan, where bye-laws prohibit swimming in certain areas.²⁰⁵

Similarly, Fermanagh and Omagh District Council bye-laws state that: 'A person shall not in a designated pleasure ground: bathe, wade or wash in any ornamental lake stream or other water.'²⁰⁶

In addition, Waterways Ireland, the statutory cross border body whose remit is to restore, develop and promote navigable inland waterways in Ireland and Northern Ireland, issues Marine Notices.²⁰⁷ A Marine Notice provides important safety related information, and general guidance and details about upcoming changes to legislation to the shipping and maritime community. An example²⁰⁸ relating to bathing advises masters, owners and other users that it is prohibited to swim in the vicinity of harbours, quays, jetties and within 200 metres of locks, weirs, bridges and other navigation infrastructure because of the dangers associated with vessels manoeuvring.

Another aspect of the development of inland bathing areas is the potential conflict with other water users, for example anglers. It is noteworthy that anglers' rights are protected in law. For example, the Fisheries Act (Northern Ireland) 1966 states²⁰⁹ that: 'If any person unlawfully obstructs any person lawfully engaged in fishing or in proceeding to or in returning from lawful fishing, such first-mentioned person shall be guilty of an offence.'

6.4.2 Discussion

The interaction between the Bathing Water NI Regulations and other rights restrictions on swimming or other recreational activity, can be complex. There appear to be some cases, however, where such restrictions could have the effect of preventing identification of a bathing water. This in turn could create the circularity that there is then little or no incentive or legal basis to improve the water quality for the purposes of protecting human health.

204 Reg 3, Bathing Water NI Regulations.

205 The River Lagan Tidal Navigation and General Bye-laws (Northern Ireland) 2006. This states under paragraph 20 that: 'No person shall (a) bathe or swim in any part of the river', although this only applies to that part of the River Lagan between the Stranmillis Weir and a line five metres downstream of the seaward extremity of, and parallel to, the Lagan Bridge.

206 Bye-Laws as to Pleasure Grounds for the Good Rule and Government of the District (Fermanagh and Omagh District Council), made under S. 90 of The Local Government Act (Northern Ireland) 1972, and other relevant statutes.

207 Waterways Ireland, 'Discover Ireland's Waterways' <www.waterwaysireland.org/> accessed 30 August 2024.

208 Marine Notice, No.69 of 2014.

209 S. 160, Fisheries Act (Northern Ireland) 1966.

While we are not aware of such specific cases having happened in Northern Ireland, we have illustrated an example in our parallel report on bathing waters in England. This illustrates the possibility of such issues arising in the future in Northern Ireland.

6.4.3 Our view

The consideration of whether an area of water is safe and suitable for swimming will depend on a variety of factors. We therefore do not question the need for particular authorities to prohibit or restrict swimming, or other recreational activities, in certain circumstances. To support the objectives of the Bathing Water NI Regulations, any such prohibitions or restrictions should be limited, proportionate and justified.

In this context, however, we consider that there is the potential for the interaction of different measures to act as a barrier to improving water quality under the Bathing Water NI Regulations and, by extension, the WFD NI Regulations.

Additionally, as noted above byelaws may cover not just swimming but also other recreational uses, sometimes with different restrictions. There is therefore a link with the issue we discuss in Chapter 4, namely that the distinction between swimming and some other recreational water uses is not always clear cut. For example, some people paddleboarding in an area where such activity is permitted will inevitably need to swim, even if just briefly, if they fall into the water. As a result, they may be exposed to the risks that underpinned a prohibition on swimming. DAERA may therefore wish to consider such matters as it decides whether and how to proceed with application of the Bathing Water NI Regulations to cover other recreational uses.

Recommendation 11. In any review of the regime, we recommend that DAERA clarify the relationship between provisions under the Bathing Water NI Regulations for identifying and monitoring bathing waters, and giving advice against bathing, with other rights and restrictions in common law and bye-laws. This should consider not just the current practical interpretation of 'bathing' to cover swimmers but also the possible application of the regulations to cover other recreational water users.

Glossary

Glossary

AMR	Anti-Microbial Resistance
DAERA	Department of Agriculture, Environment and Rural Affairs
Defra	Department for Environment, Food and Rural Affairs
<i>E. coli</i>	<i>Escherichia coli</i>
EU	European Union
FIO	Faecal Indicator Organism
IE	Intestinal Enterococci
MST	Microbial Source Tracking
OEP	Office for Environmental Protection
QR	Quick Response
RBMP	River Basin Management Plan
WFD	Water Framework Directive
WHO	World Health Organization

The background of the page features a repeating pattern of stylized, light gray leaves. Each leaf is pointed and has a central vein, arranged in vertical columns that create a textured, organic feel. The leaves are set against a slightly darker gray background.

Annex 1. Stakeholder engagement and expert review

Annex 1. Stakeholder engagement and expert review

This annex outlines the approach that the project has taken to stakeholder engagement and expert review. We gratefully acknowledge the support and input of the many people and organisations who have contributed to this work.

Project stakeholder group

In carrying out this project, the OEP established a stakeholder group to engage with parties interested in the regulations on bathing waters and their implementation. Participants were drawn from public authorities, industry bodies, environmental NGOs and professional bodies across England and Northern Ireland.

The group held two online meetings in 2023. To ensure manageability, the group was necessarily of limited size. However, the group members were able (and encouraged) to exchange views with, and to collate and put forward information from, their wider communities of interest. Group attendees were as follows:

- British Canoeing
- Department of Agriculture, Environment and Rural Affairs (Northern Ireland)
- Department for Environment, Food and Rural Affairs
- Environment Agency
- Environmental Standards Scotland
- Green Alliance
- Ilkley Clean River Campaign
- Keep Northern Ireland Beautiful
- Marine Conservation Society
- National Farmers Union
- Northern Ireland Environment Agency
- Northern Ireland Water
- Outdoor Swimming Society
- Rivers Trust
- Stormwater Shepherds
- Surfers against Sewage
- Ulster Farmers Union
- Water UK

- Wildlife Trusts

This was not intended to be a decision-making or steering body. Nor was the OEP looking to agree on all issues with all stakeholders. There is a diversity of opinions in many areas concerned with the regulations on bathing waters and related matters. As such, the findings and recommendations presented in this report are those of the OEP and do not necessarily reflect the views of the stakeholders.

Rather, the group was convened with terms of reference as a forum for updating, discussion and information-sharing. It also enabled the OEP to gather views, information and evidence from stakeholders in the project.

Workshop

In addition, the OEP held an online workshop in September 2023 where the consultants presented their initial findings, as subsequently set out in the Bathing Waters Technical Report.

The following table presents a brief summary of stakeholder concerns and views expressed during the project, some of which are expanded on in this report.

Main topic	Stakeholder views
Identification of bathing water sites	<p>Suggested taking a tiered approach with the level of identification being dependent on the number of criteria met by that site.</p> <p>Concern over the number of water users needed to trigger identification.</p> <p>Suggested that it would be beneficial and more efficient for groups to have initial discussions with DAERA regarding applications prior to submission.</p> <p>Access and facilities were of significant discussion including the need for toilet facilities.</p>
Sample point location	<p>A view that a single point of testing for bathing water quality in rivers is insufficient.</p>
Signage	<p>Concerns raised regarding signs placed at freshwater sites and the inconsistency between signage at saline and freshwater sites.</p> <p>There was a concern raised that provisions for bathing water signage are inadequate. For example, a bathing water deemed 'poor' or unsafe for bathing only requires a notice to be placed upon the standard fixed bathing water sign. At many locations bathing waters can be accessed from numerous locations and a single sign will not be visible to many of the beach users.</p>

Main topic	Stakeholder views
Length of bathing season	A view that there is a demand on bathing areas all year round, and that an extension of the season length would be beneficial.
Other water users	A view that a water user should include paddleboarding, surfing, canoeing and other water sports.
Riverine bathing sites	Stakeholders expressed the opinion that river swimming has become more popular and the protocols developed for coastal bathing may need to be reviewed.
Real time information	In a Northern Ireland context, regarding the transparency of water quality monitoring and the length of time taken to issue water quality data, the EA's 'Swimfo' website was recognised as broadly positive and potentially easy to replicate.
Storm overflows	<p>There was a perception raised that 'poor' bathing waters are predominantly caused by discharges from storm overflows. This can lead to measures such as those required under the Environment Act 2021 for all storm overflows within 5 km upstream of an inland bathing water to discharge less than twice per bathing season.</p> <p>There were different views on the extent to which storm overflow discharges affect bathing water quality and classifications.</p> <p>There was some disagreement that this potentially takes investment or focus away from agricultural pollution sources and continuous water company and private sewerage discharges such as sewage treatment works, which may have a greater impact for longer periods.</p>
Other public health concerns	<p>There was a view that there is a need to develop pollution risk forecasting at bathing water sites, to better inform bathing water users.</p> <p>The bathing water classification only relates to bacterial water quality and does not include any provision for other public health considerations from bathing.</p> <p>'Physical factors' such as cold-water shock, strong tidal currents or rip tides, hidden underwater obstacles and safe access / egress to and from the bathing site are not considered by the regulations, including during the identification process.</p>

Main topic	Stakeholder views
Bathing water management	<p>There were suggestions for better dissemination and regular updates to information within England and Northern Ireland around the works being done to improve 'poor' bathing waters.</p> <p>There was a desire for more and regular information to be published describing the steps the authorities are taking when a bathing water is classified as 'poor'.</p>
De-designation of bathing waters	<p>There were views expressed that the regulations need to be more robust in this area.</p> <p>There were also views expressed that regulators should be made more accountable for their reasoning behind de-designation.</p>
Regulator accountability	<p>There were views expressed concerning the need for improved communication regarding action plans for failing bathing waters.</p>
Discounting of samples	<p>There were concerns around the transparency of discounting of samples.</p>

Expert review

Prior to its completion, we sent a draft copy of chapters of this report to external experts for independent review. These were drawn from the OEP's College of Experts and other individuals outside the OEP based on their subject matter expertise and availability to undertake the review.

The individual reviewers from the OEP's College of Experts were Howard Brett and Liz Buchanan. We also invited and received comment from reviewers in Environmental Standards Scotland, the Interim Environmental Protection Assessor for Wales, and the Royal Academy of Engineering.

All the reviewers returned comments which we have considered in finalising the report. The report remains the work and presents the conclusions of the OEP. It does not necessarily reflect the views of the reviewers.

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