

The water quality crisis in Dublin Bay; what is happening and what needs to be done to protect Dublin Bay.

SOS Dublin Bay; a time for action

SOS Dublin Bay was formed by a group of volunteers in October 2020 due to the concern of the rapid deterioration of the quality of the bathing water in Dublin Bay.

Our goal is to protect Dublin Bay as an amenity for the citizens of Ireland and the tourists who visit it; we also want to ensure it retains its status as a UNESCO biosphere.

We are a voluntary group of sea users (swimmers, beach users, divers & sailors) who have a passion for protecting the Bay.

We launched a petition in November 2020 which has attracted over 19,000 signatures ; people care about the Bay and how it should be protected.

A work group was established¹ consisting of a number of experts including two scientists (One oceanographer and one PhD in this field), a lobbyist, a lawyer specialising in environmental affairs, and one marketing and communications expert.

We are indebted to the many organisations and individuals we have met, especially the staff of the Dublin City Council, Dun Laoghaire Rathdown County Council, Irish Water, the Environmental Protection Agency, the Health Services Executive, the Dublin Bay Task Force, DCU and UCD Acclimatise Project. We have learnt a lot about this complex problem and many of those we met shared our interest and concerns. We thank them all for the time and expertise; this helped us to understand more about the Dublin Bay environment.

Finally I wish to thank Charlotte O’Kelly, Philip Lee, Peter Whelehan, Sophie Jones and John Kavanagh, the members of the work group, for their time, expertise and assistance all of which was done on a voluntary basis.

¹ See Appendix for the details of the Group Membership

We hope our work will build awareness of the need to act now in order to ensure Dublin Bay is protected for future generations and that everyone can continue to enjoy this unique natural amenity.

If you wish to make contact with SOS Dublin Bay please do so by emailing sosdublinbay2021@gmail.com

If you wish to use any of the content of this document please do so; but we ask that you include a reference to the document if doing so.

Yours sincerely,

Gerry Jones
Chairman
SOS Dublin Bay

Dublin 3 April 2021

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Executive Summary

In the 4 year period 2017 to 2020, a total of 8.875 million cubic metres ²of untreated sewage and storm waters has been discharged into Dublin Bay from overflow tanks located at the Ringsend Wastewater Treatment Plant. This figure does not include other significant discharges from the 410 Storm Water Overflows in the Dublin region which are not measured but are thought to exceed the discharges from the plant.

This equates to 3,550 full size Olympic 50 metre pools over the four year period and averages out at 74 Olympic pools full of untreated waste water each month. These discharges of untreated sewer wastewater usually occur during storm periods where the current Dublin Wastewater Treatment Facility (DWwTF) reaches maximum capacity and cannot cope with the loadings being received.

There were 66 'Reportable Events' in 2019 alone by Irish Water to the EPA ³. This was an increase from 61 in 2018 which is 8%. However the increase in volumes, measured in cubic metres, between 2018 and 2019 is alarming.

In 2019, 44 (up from 18 in 2018 which is a 144% increase) of the incidents led to the Ringsend WwTp Storm water overflows from the storm tank with a total volume of 3,703,078 cubic metres (up 1,987,519 cubic metres in 2018 which is an 86% increase) of waste water discharged into Dublin Bay. These types of discharges are not only a serious environmental issue but are a public health hazard.

These discharges are breaking Irish and European environmental law.

In an online survey of over 1200 people conducted in March, more than one in 5 (21.77%) declared that they had been ill or suffered adverse health effects as a result of recreational activity they had recently undertaken in Dublin Bay. Other findings were;

- More than 1 in 5 (21%) suffered from a combination of symptoms:

² [\[1\]](#) Ringsend WwTp Storm water overflows from the storm tank (supplied to SOS Dublin Bay 15.1.2021)

³ Annual Environmental Report 2019 Ringsend Section 3.2
http://www.epa.ie/licences/lic_eDMS/090151b280778766.pdf

- Diarrhoea (14%), skin rash (14%), gastroenteritis (13%), nausea (10%), stomach ache (6%), vomiting (5%), headache (2%), fever (1%), other (14%)

- More than half of people or 1 in 2 (51.18%) knows of is aware of someone other than themselves who has adverse health conditions

SOS Dublin Bay is calling for a series of short and medium term actions to be implemented

Short Term Measures Proposed

1. Systematic year-round survey of Dublin Bay bathing waters incorporating daily sampling and testing over a 24 month period - 365 days a year at 10 separate locations around the Bay. This should commence immediately, continue and conclude in May 2023. Information gained will inform the users of Dublin Bay when it is safe to use the bay for activities such as swimming, kayaking, etc.
2. The information to be disseminated to the public via real time electronic signage at established bathing locations and through information channels such as local authority information websites and social media channels.
3. The data to be used for planning and ensure investment in infrastructure is properly targeted at the root causes of the pollution of Dublin Bay.
4. The Dublin Waste Water Treatment Facility Plant in Ringsend has an Ultra Violet (UV) treatment facility which reduces the microbiological load of effluent from the Plant to Dublin Bay . This UV plant operates only during the Bathing Season (1 June - 15 September) each year. This plant should operate continuously throughout the year. This will result in an immediate improvement of the bathing water quality..;

Medium and Longer Term Measures Proposed

More investment is immediately needed in the water infrastructure for the Greater Dublin Region. This will protect public health, achieve compliance with EU Directives meet the duty of care obligation of the State and ensure that Dublin Bay can retain its status as a UNESCO Biosphere Reserve .

These measures are :

1. Expediting the delivery of the new Clonsbaugh waste water treatment plant; this facility is urgently needed. Its future is in question following a decision of the High Court in 2020. The judicial review process is leading

to a breakdown in the development of critical public infrastructure investment.

2. Accelerating the current upgrade at the Ringsend plant. This is due for completion by 2025; we believe the deadline is optimistic and unlikely to be achieved. Current contracts with the existing contractors for the Ringsend Plant upgrade, should be reviewed to determine how delivery can be brought forward.
4. Implement real time testing using next generation buoy based sensors which can test many times each day and transmit results via 5G telecommunications networks.

Introduction

Dublin Bay is an exceptional marine environment and is recognised as such in its designation as a UNESCO Biosphere.

The Bay is steeped in maritime history, is home to the country's largest port and supports an abundance of wildlife, flora and fauna. It is also a unique sheltered sea environment facilitating a multitude of outdoor recreational activities such as sea swimming, rowing, angling and fishing, kayaking, sailing, diving, paddle boarding, boat rental, beach walking, beach picnics, running, kiting, kitesurfing and windsurfing.

Dublin Bay also attracts a large number of tourists who come to enjoy the Capital City, its historic sites and its unique environment. Tourists frequently come to partake in water-based sporting events including the Iron Man, national and international sea swimming events, national and international sailing events and rowing events. These activities make an important contribution to the local economy especially to the towns and districts bordering the Bay area.

In summary, Dublin Bay is the city's largest outdoor amenity - a vast and unique natural resource providing countless benefits to its citizens and to visitors coming to our capital city. But like every precious resource, it can only fulfil this unique function if it is protected from pollution and maintains the highest level of water quality.

While the prerequisite for all these activities is clean and safe sea water, recent experience has raised serious concerns over the bathing water quality in Dublin Bay. The lack of capacity at the city's main wastewater treatment facility at Ringsend combined with unmanaged surges from the city's network of storm overflow drains is creating a growing environmental and public health problem for those using the Bay. Temporary and permanent beach closures are becoming more frequent. In response to a visible and alarming deterioration in bathing water quality in recent months and years, a concerned group of citizens in South Dublin have come together to seek solutions and to agitate for transparency and change.

In what appears to be a rapidly evolving situation, the ‘SOS Dublin Bay’ movement has gathered over 19,170 ⁴ signatures calling for an end to the practice by Irish Water of discharging untreated sewage directly into Dublin Bay and for action to be taken to prevent the further deterioration of the sea water quality due to pollution from the network of storm water overflows located throughout the city.

Current Situation

The Extent of The Problem

The true extent of the problem is extremely worrying and is only now becoming fully apparent.

Over the 4 year period from 1 January 2017 to 31 December 2020, a total of 8.875 million cubic metres ⁵ has been discharged into Dublin Bay from storm overflow tanks located at the Ringsend Wastewater Treatment Plant.

This equates to the same volume of 3,550 Olympic pools or an average of 74 Olympic pools each month.

These discharges of untreated sewer wastewater usually occur during storm periods where the current Dublin Wastewater Treatment Facility (DWwTF) reaches maximum capacity and cannot cope with the loadings being received.

There is the added problem of discharges emerging from an entirely separate network of Storm Water Overflows (SWO’s) dotted throughout the Greater Dublin Area, flowing into its rivers and tributaries and numbering 410 ⁶ in total. The discharges from these City SWO’s are not measured; estimates by experts suggest it is greater in volume than the discharges from the Ringsend Plant. During storm surge periods, the discharges from the City SWO’s contain a toxic mixture of raw sewage combined with surface water from street gullies and drains.

⁴ <https://www.change.org/p/environmental-protection-agency-sos-save-our-sea-in-dublin-bay?redirect=false>
19,171 have signed as of 01.02.2021

⁵ Ringsend WwTp Storm water overflows from the storm tank (supplied to SOS Dublin Bay 15.1.2021)

⁶ Irish Water “ Storm Water Overflows - Jan21” Presentation

If we assume the SWO's outflows are the same as Dublin Wastewater Treatment Facility (DWwTF) then the total of the SWO's and the Dublin Wastewater Treatment Facility (DWwTF) would suggest a total of 17.75 million cubic metres was discharged over this 4 year period which equates to the volume of 7,100 Olympic pools or an average volume of 148 Olympic pools each month.

There were 66 'Reportable Events' in 2019 alone by Irish Water to the EPA ⁷. This was an increase from 61 in 2018 which is 8%. However the increase in volumes, measured in cubic metres, between 2018 and 2019 is alarming.

In 2019, 44 (up from 18 in 2018 which is a 144% increase) of the incidents led to the Ringsend WwTp Storm water overflows from the storm tank with a total volume of 3,703,078 cubic metres (up 1,987,519 cubic metres in 2018 which is an 86% increase) of waste water discharged into Dublin Bay. These types of discharges are not only a serious environmental issue but are a public health hazard.

There are also a number of other causes of pollution in Dublin Bay such animal faeces, misconnections, agricultural & forestry runoff, algae, septic tanks, beach litter, marine vessel discharges, increased hardstanding areas and increased rainfall events. It is more difficult to quantify the impact of these sources and no estimates are included in the data above.

There are a number of direct consequences which are directly related to these events.

Firstly, there is a violation of Irish and European environmental law by a state agency. In the EPA Report for 2019 ⁸ on Urban Waste Water it identified that the Ringsend Plan was a priority where improvements were needed in order to resolve environmental priorities identified by the EPA. This report stated that the Ringsend Plant "*failed to meet EU treatment standards, sole pressure on waters at risk of pollution and contributing to poor quality bathing water*"

Secondly, it poses a major risk to public health, in particular the thousands of people who swim in the Bay on an ongoing basis. There is clear evidence of

⁷ Annual Environmental Report 2019 Ringsend Section 3.2
http://www.epa.ie/licences/lic_eDMS/090151b280778766.pdf

⁸ [Urban Waste Water Treatment in 2019](#)

significant adverse health incidents amongst sea bathers throughout this year in particular, which can be directly linked to this illegal and highly dangerous practice. We have included a selection of actual quotes we've received from swimmers which we have included in our appendix (see Appendix 4) to highlight this point and make clear that this is a reality. The potential risk to public health must not be underestimated given we know that thousands of people swim in Dublin Bay every week (and perhaps tens of thousands in the summer months).

In March 2021 a detailed survey was undertaken with a sample size of 1265 respondents; the findings ⁹ are summarised;

The vast majority (83.72%) of those surveyed use Dublin Bay primarily for swimming, as their recreational activity of choice.

Season (Summer)

- More than half (52.13%) use the Bay every day (defined as minimum of 5-times-a-week)
- Almost 9 out of 10 (88.72%) use the Bay for recreational activity more than once a week

Season (Winter)

- More than 1 in 4 (28.23%) use the Bay daily (defined as a minimum of 5 times-a-week)
- Almost 8 out of 10 (80.36%) use the Bay for recreational once a week or more

Illness/Health

- More than one in 5 (21.77%) have been ill or suffered adverse health as a result of recreational activity in the Bay
- More than 1 in 5 (21%) suffered from a combination of symptoms:
 - Diarrhoea (14%), skin rash (14%), gastroenteritis (13%), nausea (10%), stomach ache (6%), vomiting (5%), headache (2%), fever (1%), other (14%)
- More than half of people or 1 in 2 (51.18%) knows of is aware of someone other than themselves who has adverse health conditions

Thirdly, certain beaches have been permanently closed in Dublin (Merrion and Sandymount strands have recorded "poor" bathing water quality in 2018). In 2020 Merrion Strand was permanently closed. Other beaches in Dublin Bay

⁹ See The Document attached with the survey details.

(Sandycove, Seapoint and Sandymount) have had temporary closures imposed at intermittent periods over the past 3 years .

The Ringsend Plant has been operating at capacity for almost 2 decades and is undergoing a multi-million Euro upgrade which is due for completion in 2025; our research indicates this timeline is unlikely to be achieved. Wastewater from Dublin has been treated in Ringsend since 1906. Completed in 2005, the current plant is the largest in Ireland and was designed to cater for an equivalent of 1.64 million people (average annual load). The Ringsend Wastewater Treatment Plant (WwTP), which provides over 40% of Ireland's wastewater treatment capacity, is currently overloaded and is not in compliance with the EU's Urban Wastewater Treatment Directive. The average daily load received at Ringsend Wastewater Treatment Plant in 2020 was 1.91m population equivalent (lower than the 1.98 million population equivalent in 2019).

Furthermore, a major new plant proposed for Clonshaugh in North Dublin which is the linchpin for the success of the Greater Dublin Drainage Strategy, has had its planning permission overturned by the High Court ¹⁰.

These factors all point towards the lack of capacity in the city's wastewater infrastructure, being an immediate to long term reality; this will make the current situation even worse.

It is a great tragedy that while water quality improved considerably following the Plant's opening in 1998, with blue flags granted for the first time at almost all major public bathing spots around the Bay, all this positive progress has been gradually ebbed away over the past decade and most notably over the past 3 years.

The greatest concern of SOS Dublin Bay is that the current testing and reporting of water quality are inadequate and are failing to report the true extent of the water quality problem that exists in Dublin Bay.

The current regime of bathing water quality is inadequate.

¹⁰ <https://www.irishtimes.com/news/crime-and-law/courts/high-court/judge-rules-against-500m-clonshaugh-wastewater-plant-1.4418048>

This regime of bathing water quality is based on the Statutory Instrument . No. 79 of 2008 BATHING WATER QUALITY REGULATIONS 2008 (“the Statutory Instrument . No. 79”). The parent law for the Statutory Instrument. No. 79 is the European Directive 2006/7/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 February 2006. (“Directive 2006/7/EC“) which defines the “bathing season” as “the period during which large numbers of bathers can be expected.” This has been then defined in the Statutory Instrument . No. 79 as “the period from 1 June to 15 September in that year.” This period of 1 June to 15 September is inadequate given the much longer swimming period by the people of Dublin. Sea swimming has now become an all year round activity and therefore the period should be the 12 calendar months which can be done by way of a Statutory Instrument which amends the definition of the bathing season. See Appendix 3 for a more detailed commentary on the legal framework for Bathing.

There needs to be an increase in bathing water testing all year round.

It is the opinion of this group that bathing water quality levels fall far below the acceptable limits , more often than is reported.

MEASURES

In order to define the problem there is a need for more comprehensive and accurate data on the extent and causes of the pollution in Dublin Bay. Such data needs to be collected with best scientific practises. This data and predictive models can then be used to propose efficient solutions with a rigorous evidence based approach.

Our Short Term objectives

Greater Transparency and frequency in bathing water testing and Reporting:

1. Daily sampling 365 days per year at 10 designated points in Dublin Bay for a period of at least 24 consecutive months and then a review to determine the testing frequency.
2. Testing Results and Advisory Notices to be posted immediately online to beaches.ie

3. There should be digital signage with traffic lights system ¹¹ (Red means “Poor” and swimming not permitted , Orange means sufficient with swimming permitted and Green means Excellent with swimming permitted .

Short Term Measures

It is critical that a systematic baseline water quality data set be established for Dublin Bay. At present sampling is done on a weekly basis during the defined bathing season by both DCC and DLRCoco, and out of season once a month in DLRCoco and twice a month in DCC.

If we look at this it means that at most the maybe 20-40 spot water samples taken at any particular location along the coast in Dublin Bay.



A numerical model is a simulation of the natural environment. The more information that feeds into it the more accurate the simulation. This is even

¹¹ Digital signage is currently being tested by Dun Laoghaire Rathdown County Council and the Sandycove Beach

more powerful when it comes to Artificial Intelligence (AI) where training datasets are critical to accuracy. In the case of Dublin Bay at present there is between 5-10% coverage at a single point if looked at daily. If looked at in a “real” environment situation(24 hours) that is an 0.2-0.4% reflection of the environment at those discrete monitoring points. This is why ongoing real time monitoring is critical going forward and why such technology developments are being driven.

SOS Dublin Bay is looking for a systematic daily sampling programme to be instigated for a minimum of 24 months to ensure good data which can then be used to calibrate and validate numerical models going forward and used to develop a baseline of the Dublin Bay environment. The current baseline as described above has up to 90% gaps in it making it very unreliable, for calibration and validation of numerical models.

By carrying out a water sampling programme using 10 stations within Dublin Bay (we would recommend building onto this existing station to increase that dataset), we will for the first time have systematic daily data on water quality and can use that data to inform the public, for them to take the necessary action.



Water quality is affected by lots of different factors and we recommend that not only water samples be taken for E-coli but also use this opportunity to test all the water samples for Covid-19 (as the presence of this in seawater and its effect on human health from contamination at sea is still unknown), and in addition the traditional Salinity, Temperature, Dissolved Oxygen, Turbidity, Chlorophyll and pH be also measured. This is straight forward by way of a calibrated sensor doing profiles through the water column at each sample site daily. If possible Nitrate and Phosphates should also be measured as we know that the Ringsend plant has failed to meet EU treatment standards.

E-coli is the main water quality issue we think of as swimmers but harmful algae blooms are also a more seasonal issue, sometimes caused due to excessive agricultural runoff into coastal areas. Dublin Bay is no exception and we get a clear spring bloom in Dublin every March-April.

Sampling could begin immediately. This is critical as we know 70% or more of known overflows into Dublin Bay occurs outside the bathing season, and if winter 2019-2020 is used as a guide, in December 2019 and January 2020 significant overflows happened on over half of the days.

Dublin Bay could become the benchmark of what is considered good water quality monitoring, not only is it a UNESCO Biosphere (the only EU capital City to have this on its doorstep), but we are an Island Nation, and on issues like Marine Water Quality Monitoring we should be leaders.

Proper compliance cannot be assured without consideration of:

- State of tide at time of measurement
- Effect of currents and waves
- Identification of all contamination sources (not only on EU funding EU research projects but as a National Obligation which is adequately funded and understood)
- The implementation of mitigation measures to reduce sources of contamination
- The uptake of novel new technologies to ensure we get quality faster responses to pollution events, and its use by statutory monitoring agencies
- Enlarging the monitoring programme to cover all known swimming areas, not just the main historical ones

- Reviewing and updating the sampling on a multi-annual basis to ensure all aspects of the bay are monitoring and pollution events are identified and properly mitigated for

This monitoring would be done in consultation with the local agencies such as the EPA, HSE, Dublin City Council and Dun Laoghaire Rathdown County Council, to ensure that any additional sampling builds on existing data sets, so that users of the bay ultimately have access to daily water quality reports from which they can make their own decisions on whether to use the amenity or not.

Beach closures for the most part happen during the bathing season, yet we know from Irish Water that the majority of pollution events happen outside of this season, thus putting an increasing population of swimmers at risk of serious illness and potential future claims, as all the local authorities have a duty of care to the users of their local amenities.

The heavy rain we have had at the end of January 2021 , linked with the storm surge in Dublin Bay and significant wave action (over 5m Hmax recorded in Dublin bay Sat 30th January), this would have led to massive oxygenation of the water column and mixing of any pollutants in the water due to the overflows that go into Dublin Bay. Users of the bay know that swimming straight after a heavy rainfall event is not a wise idea but this needs to be founded on quantitative data of quality, not just from the inflow of three rivers in DCC but rather all the inflows into the bay, including the overflow in Dun Laoghaire which made the news 28th January 2021 (see image below from Dun Laoghaire East Pier at the end of January 2021), which clearly had wastewater due to the large amount of birds feeding.



Medium - Longer Term Measures

These measures fall outside the scope of this document and in order to make informed decisions the data on the extent of the problem is needed.

What is clear is that more investment is immediately needed in the water infrastructure for the Greater Dublin Region. This will need more capital investment and changes to operational procedures for the waste water infrastructure. Measures could include:

Improve operational management of the Ringsend Plant to reduce public health risks. All year round operation of the Ultra Violet Plant at the Ringsend Plant would be a good start.

Earlier investment in such infrastructure. Completion of waste water treatment investment is lagging as shown by the current status of the Ringsend plant upgrade and the delayed start of the new Clonsaugh plant.

Accelerate the current upgrade at the Ringsend plant. This is due for completion by 2025; we believe the deadline is optimistic and unlikely to be achieved. Current contracts with the main contractors for the Ringsend Plant upgrade, should be reviewed to see how delivery can be brought forward.

Resolve the planning debacle for the new Clonshaugh plant; this plant is urgently needed and has no planning permission.

Implement real time testing using next generation buoy based sensors which can test many times each day and transmit results via 5G telecommunications networks.

These and other measures need to be taken as a matter of urgency.

Appendices

Appendix 1 Source Documents

Environmental Reports

[2019 EPA Report](#)

[WAB Sept 2020](#)

[Annual Environmental Report 2018 Ringsend](#)

[Annual Environmental Report 2019 Ringsend](#)

EU + Irish Legal Sources

The management of bathing water quality and repealing Directive 76/160/EEC DIRECTIVE 2006/7/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 February 2006

S.I. No. 79 of 2008 BATHING WATER QUALITY REGULATIONS 2008

Research Projects

UCD www.acclimatize.eu

Irish Water Data

Ringsend WwTp Storm water overflows from the storm tank 2017-2020 (supplied to SOS Dublin Bay 15.1.2021)

Appendix 2 SOS Dublin Group Committee Members

The following individuals have worked in a voluntary capacity to prepare this report;

Gerry Jones, MBA, Company Chairman and Non-Executive Director

Peter Whelehan, BA Hons (Psychology), Managing Director, DMCM

Philip Lee, BCL, Masters EU Law, Solicitor, Partner and Executive Chairman at Philip Lee Solicitors

Charlotte O’Kelly, M.Sc. Applied Oceanography, Managing Director at Techworks Marine

Dr John Kavanagh, Ph.D Chemistry

Sophie Jones, Bachelor of Retail & Finance and eCommerce expert

herein defined and referred to as “the Authors”.

The group would like to acknowledge the assistance of the following organisations;

Irish Water,

HSE

EPA,

Dublin City Council,

Dun Laoghaire Rathdown County Council

Dublin Bay Task Force

UCD Acclimatise

DCU

Appendix 3 Legal Memorandum

Philip Lee

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01 February 2021

Our Ref: PL

Dear Mr. Jones,

We have reviewed the Bathing Water Directive (the “Directive”)^[1] and the Irish Implementing Regulations (the “Regulation”)^[2].

In summary and for reasons we explain below, there is a very strong case to argue that the “bathing season” for Dublin Bay should be increased from the current statutory period of June to September to a 12-month season. In respect of the “bathing water”, the Regulation requires the Local Authority to carry out **monthly** testing as a minimum. Both the Directive and the Regulation require active public participation in the determination of what constitutes a bathing water and indeed both the EPA and the Minister have the power to impose or give directions in relation to the local authorities exercise of its powers under the Regulation. For this reason, it would be important to engage with our local authorities, the Minister and the EPA to ensure, prior to the next decision on monitoring of bathing water, that the necessary changes are made. This may necessitate pointing out that the current Irish statutory definition is not compliant with the Directive namely that the season is no longer June to September but is a 12-month season.

The rationale for the above summary is the definition firstly of “*bathing water*”. The Directive defines bathing water as “*any element of surface water where the competent authority expects a large number of people to bathe and has not imposed a permanent bathing prohibition or issued permanent advice against bathing (hereinafter bathing water)*”.

Secondly, the testing obligations are to be fulfilled during the “*bathing season*”. The Directive defines the “*bathing season*” as “*the period during which **large numbers of bathers can be expected***”.

The Regulation and the Directive both state that “*large number*” means;

“in relation to bathers, a number that the Local Authority considers to be large having regard, in particular, to past trends or to any infrastructure or facilities provided, or other measures taken, to promote bathing”.

The Regulation was adopted in 2008. It is probable that based on trends it would be possible to show that the numbers now bathing throughout the winter months exceeds the numbers that bathed in Dublin Bay during the summer months 12 years ago.

Even if that isn't the case, if data can be accumulated on the actual numbers bathing during the winter, bearing in mind that we are now seeing daily bathing as opposed to weekly or weekend bathing, the cumulative number is likely to be such that it would be possible to argue that it now constitutes a "large number", within the meaning of the Directive.

It is clear from the Directive and the Regulations that there is an obligation on the Local Authority to seek public participation in the implementation of the Regulation. The Directive states in the recital:

*"Appropriate information on planned measures and progress on implementation should be disseminated to stakeholders. The public should receive appropriate and timely information on the results of the monitoring of bathing water quality and risk management measures in order to prevent health hazards, especially in the context of predictable short-term pollution or abnormal situations. **New technology that allows the public to be informed in an efficient and comparable way on bathing waters across the Community should be applied.**"*

The comment in bold does make suggest that fast dissemination through an online App is possible a legal obligation. The purpose of the Directive is the protection of public health and thus contemporaneous or ex ante information is critical as opposed to ex post information.

In addition, Regulation 17 states as follows:

Public Participation

17. (1) *A local authority shall encourage public participation in the implementation of these Regulations and shall ensure the provision of opportunities for the public concerned—*

- (a) to find out how to participate, and*
- (b) to formulate suggestions, remarks or complaints.*

(2) Without prejudice to the generality of paragraph (1), a local authority shall encourage public participation in relation to the establishment, review and updating of lists of bathing waters in accordance with Regulation 4.

(3) A local authority shall take due account of any information obtained in the context of public participation.

Identification of bathing waters

4. (4) *A local authority shall take appropriate measures in accordance with Regulation 17 for public participation in the identification of bathing waters.*

(5) (a) A local authority, or two or more local authorities acting by agreement, may subdivide or, subject to subparagraph (b), group together existing bathing waters in the light of the bathing water quality assessments carried out in accordance with Regulation 11".

In case we need a little force, the Regulation suggests that a breach has consequences for the local authority itself. Regulation 23 states as follows:

“Offences and applications to court

23. (1) *Where a local authority or a private operator (within the meaning of Regulation 22) contravenes or fails to comply with a requirement of these Regulations, the authority or the private operator, as the case may be, shall be guilty of an offence and shall be liable—*

- (a) on summary conviction, to a fine not exceeding €5,000, and*
- (b) on conviction on indictment, to a fine not exceeding €500,000.*

(2) A summary prosecution for an offence under these Regulations may be taken by the EPA or by a local authority.”

This suggests that an immediate plan of action is now required on the basis that swimming in Dublin Bay and certainly swimming in the Dun Laoghaire Local Authority jurisdiction requires a the bathing season to be defined as 12 months and that monthly testing must follow as a minimum.

Finally, where there is a known risk of pollution (as is our case) the Regulation obliges the authority to take “**management measures**” which entails:

“undertaken with respect to bathing water:

- (a) establishing and maintaining a bathing water profile;
- (b) establishing a monitoring calendar;
- (c) monitoring a bathing water;
- (d) assessing bathing water quality;
- (e) classifying bathing water;
- (f) **identifying and assessing causes of pollution that might affect bathing waters and impair the health of bathers;**
- (g) giving information to the public;
- (h) taking action to prevent the exposure of bathers to pollution;
- (i) **taking action to reduce the risk of pollution;**

This could be quite powerful. We would argue that since there *is* a risk, daily monitoring is required so that we can be informed of the risk and/or address the risk by capital investment.

Where the capital investment will take time to achieve the objective of eliminating or greatly reducing health risks caused by pollution of bathing waters, then in the interim substantial monitoring and modelling is necessitated.

Yours sincerely,

Philip Lee
PHILIP LEE

[1] [Bathing Water Directive 2006](#)

[2] [Bathing Water Regulations 2008](#)

Appendix 4 - A selection of testimonials from bathers who have become ill as a result of swimming in Dublin Bay*

"I had a skin and ear infection from swimming"

G. Hanley

"I got a weird thing in my ear after swimming in Seapoint in the Autumn and I am never ill. It actually just cleared up a bit these past few days"

J. Dignan

"I was ill ...from a swim at Seapoint after heavy rain"

S. Turvey

"I only swim June to November at latest still trepidatious about putting the head in to the bay usually swim with head out"

B. Baily

"I got hepatitis, yellow jaundice, at Seapoint"

L. O'Malley

"I got very sick - violently overnight - three weeks ago after a swim at the 40ft"

M. Mulligan

*Names have been changed for GDPR reasons and to protect the privacy of the individuals.