

Southern Bathing Waters

Report to South East Area Committee – 6th January, 2021

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Bathing Water Task Force

In 2019, there were serious concerns about water quality at Merrion Strand and Sandymount Strand. Potential sources of pollution included misconnections, leaks, overflows, surface water runoff, urban wastewater discharges & dog and bird fouling. Two streams coming in from Dun Laoghaire Rathdown were identified as a significant source of pollution.

In November 2019, Dublin City Council (DCC) set up a Task Force including representatives from Irish Water, Department of Housing, Planning and Local Government (DHPLG) and Dun Laoghaire Rathdown County Council (DLRCC). The Task Force meets on a monthly basis and is working to improve water quality on the two beaches and to address other issues. The Council also hosts high level meetings with EPA, HSE and DHPLG on this issue.

The Council is working closely with UCD Acclimatize, a research project which aims to identify the main sources of pollution in Dublin Bay Area, including at Merrion Strand. We are also consulting with several other councils, Inland Fisheries Ireland, DCU and Local Authority Waters Programme Regional Office (LAWPRO).

Both local authorities, along with UCD, carried out an enhanced programme of sampling in the two streams including the collection and analysis of grab samples and the deployment of autosamplers which take samples over a 24-hour period. Results were analysed by UCD Acclimatize and the local authorities. This programme identified a number of key locations where pollution is entering the streams.

The UCD Acclimatize project is studying pollution sources on the streams and the bathing waters. Their studies have shown dog fouling to be an issue, though not the predominant issue, at the beaches. A single incident contributes 3×10^9 (3,000,000,000) ecoli bacteria to the environment, while 1,000 ecoli in a 100ml sample is enough to close the beach. We have erected new signs to highlight this to the public and are working with other sections within DCC to see if management of this issue can be improved.

Irish Water are carrying out surveys in connection with two major drainage studies for this area. These should identify works to the drainage system which will improve water quality in the two streams and the bathing waters but it will be some time before these studies are completed. We are working with Irish Water to see if some works can be carried out before the detailed studies are completed. Irish Water are carrying out a feasibility study on diverting an overflow pumping station away from Sandymount.

The alternative to trying to prevent all pollutants from entering the streams is to provide some form of treatment to remove pollution from the streams. A number of options were considered including UV treatment, Chlorine dosing or construction of long sea outfalls. All of these could remove bacteria from the bathing waters but were ruled out on the basis that they would cause significant environmental or morphological damage. A better treatment option is the use of Integrated

Constructed Wetlands. However, this would require a significant land take in a relatively built up area.

Some of the key actions arising from the work of the Task Force have been:

- Identification of a poorly performing Combined Sewer Overflow which Irish Water will remove before next year's bathing season. The construction contract is due to be signed early this month with works to begin shortly afterwards. This will remove a significant pollutant load from the bathing waters.
- Identification of two areas with significant misconnections to the storm water system which Dun Laoghaire Rathdown are investigating.
- Identification of a blocked sewer (leading to overflows) which Dublin City Council resolved.
- Identification of poor quality private work to a public sewer which Dublin City Council investigated. This was causing blockages (exacerbating overflows) but the blockages have now been cleared and the sewer will continue to be monitored.
- Identification of significant misconnections to the Nutley Stream, which Dublin City Council are investigating. Some have already been removed.
- Installation of a flow and water quality monitor near the outlet of the Elm Park stream. This will give live information on pollutant loads in the stream just before it discharges to the beaches. This will assist us in predicting water quality problems in order to protect public health.

(Note: misconnections occur where sewerage from a building is wrongly connected to the surface water system (and ultimately the streams) rather than the foul sewerage system).

Water quality at Sandymount has improved to the extent that it is now designated "sufficient", meaning that bathing is allowed there and this classification is expected to continue next year. DCC is committed to improving water quality at Merrion Strand. We have identified key problem areas and physical measures needed to improve the bathing water quality. Covid 19 restrictions mean that many of these measures have been delayed. Water quality will continued to be monitored and results posted in hardcopy format in the information cabinet at the bathing water and online at www.dublincity.ie/bathingwater.

Bathing Water Management and Bathing Prohibitions

Please note, the Water Pollution Control (WPC) section of Dublin City Council monitors and reports on the bathing water quality at six bathing locations in our administrative area, namely; Dollymount, North Bull Wall, Half Moon, Shelly Banks, Sandymount & Merrion beaches. Only Dollymount & Sandymount are designated bathing areas and this year since the beginning of the bathing season on June 1st, our water quality sampling has returned a very high number of 'excellent' water quality results. This work is undertaken with powers and responsibilities designated to the local authority by the Bathing Water Regulation, S.I 79 of 2008.

Throughout the bathing season (between 1st June to 15th September), water quality is tested on twenty separate occasions (approximately weekly intervals). Visual inspections (for pollution purposes) are undertaken at the same time.

In the interest of public health, if DCC suspect that the bathing water may become unsuitable for bathing due to foreseeable events (heavy rainfall for example), we will issue a bathing water prohibition in consultation with the HSE. There were three prohibitions and one prior warning at

Sandymount this summer. In some cases prohibitions may subsequently be found to have been unnecessary, but it is considered better to err on the side of caution.

Working with Irish Water and Dun Laoghaire Rathdown, we are about to appoint a specialist service provider to establish a modelling system to predict water quality more accurately. This will be the first time this package has been used in Ireland and it will assist in our efforts to protect public health. We are also developing improved electronic signage to improve information for beach users.

We have recently offered support to a DCU project proposal which aims to provide rapid testing and possibly real time results for bathing water quality. We are also supporting a number of UCD initiatives.

Stormwater Control

In Dublin, most areas are drained by combined sewer systems, which convey Wastewater and Stormwater in a single pipe. This is also common practice internationally. During heavy rainfall, stormwater flows can be several multiples (50+) of wastewater flows and it would not be practical to design piped systems to take this flow. During periods of heavy rainfall, Combined Sewer systems are designed to overflow occasionally and discharge diluted wastewater to nearby water bodies. This is considered good practice as long as the number and volume of overflows is not excessive.

To attempt to remove all overflows would cause an unacceptable level of disruption and take years to design, procure and fund. It would be unlikely to stand up to the kind of Cost Benefit Analysis that now governs public spending.

Much of Dublin's combined system is now at or near capacity meaning unconstrained new development would exacerbate flood risk and overflows of sewage to our rivers and Dublin Bay. Dublin City Council has a policy of mandating Sustainable Drainage Systems in new developments and retrofitting them where possible. These aim to control stormwater at source and to remove pollutants where possible. They are a vital part of our efforts to reduce flood risk, protect our natural water quality and mitigate against climate change.