

# Site Visit Report

Under the *European Union (Drinking Water) Regulations 2023*, the Environmental Protection Agency (EPA) is the supervisory authority in relation to Uisce Éireann and its role in the provision of public drinking water supplies. This audit was carried out to assess the performance of Uisce Éireann in providing clean and wholesome water to the public water supply named below.

The audit process is a sample of the performance of a water treatment plant and public water supply on a given date.

## Water Supply Zone

<b>Name of Installation</b>	Fingal Zone 1
<b>Organisation</b>	Uisce Éireann
<b>Scheme Code</b>	0900PUB1001
<b>County</b>	Dublin
<b>Site Visit Reference No.</b>	SV32866

## Report Detail

<b>Issue Date</b>	19/08/2025
<b>Prepared By</b>	Michelle Roche

## Site Visit Detail

<b>Date Of Inspection</b>	17/07/2025	<b>Announced</b>	Yes
<b>Time In</b>	11:10	<b>Time Out</b>	12:20
<b>EPA Inspector(s)</b>	Michelle Roche		
<b>Additional Visitors</b>			
<b>Company Personnel</b>	Uisce Éireann: Tselo Tlou, Robert Roche, Aaron Murray, Damian Mulvey and Conor Flanagan. Fingal County Council (working in partnership with Uisce Éireann): Frank Hall		

## ➤ **Summary of Key Findings**

1. Alarm dial outs and incident response procedures at Ballycoolin Water Tower were not adequate at the time of the booster chlorination dosing equipment failures that occurred between 05/07/2025 and 07/07/2025.
2. As a result, water quality incidents were not escalated to Uisce Éireann in a timely manner to allow consultation with the HSE and assess the risk to public health in real-time.

## ➤ **Introduction**

Ballycoolin Water Tower receives treated water from Leixlip Drinking Water Treatment Plant (WTP) in County Dublin. The treated water receives a booster chlorination dose (disinfection) on the inlet pipes from Leixlip WTP and a further booster dose on each of the four outlet pipelines. The reservoir is managed and operated by Fingal County Council in partnership with Uisce Éireann.

Booster chlorination has been upgraded at the water tower in recent months switching from sodium hypochlorite to on-site electrochlorination (OSEC). At the time of the audit although the OSEC was fully operational, system control remained with the engineering contractor and had not yet been handed over to Uisce Éireann.

The audit was undertaken to investigate two booster chlorination dosing failures that occurred at Ballycoolin Water Tower between Saturday 05/07/2025 and Monday 07/07/2025.

## ➤ **Supply Zones Areas Inspected**

The audit consisted of interviews with Uisce Éireann and Fingal County Council staff, a review of water quality trends and a walk through of the booster chlorination systems (on-site electrochlorination and back-up sodium hypochlorite) in place at Ballycoolin Water Tower.



## 1. Incident Management

### Answer

1.1	Was the incident suitably alerted to the plant operators, escalated and managed in order to maintain water quality and protect public health?	No
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### Comment

1. Two separate booster chlorination dosing equipment failures occurred at Ballycoolin Water Tower between Saturday 05/07/2025 and Monday 07/07/2025. Alarm dial outs did not function as intended and alarms received by the site upgrade contractor were not communicated to Uisce Éireann or the plant operator.
2. Operational staff dealt with both incidents during routine daily site visits. However, the incidents were not escalated to Uisce Éireann to allow the water quality and public health impacts of the incidents to be assessed in real-time.
3. Uisce Éireann became aware of the incidents on Monday morning 07/07/2025 and immediately consulted with the HSE and notified the EPA as required.
4. A review of water quality trends during the audit found that chlorine residual levels were maintained above the 0.15mg/l low level alarm set-point in three of the Ballycoolin Water Tower outlet pipes. The fourth outlet pipe (Tower Line) recorded chlorine residuals below 0.15mg/l over a 24 hour period from 10:00am on 06/07/2025 until 10:00am on 07/07/2025. The low level alarm did not dial out to the Uisce Éireann National Operations Management Centre (NOMC) or to any other operational staff.
5. At the time of the incident, outlet alarms were in the process for being removed from an old communications system and configured to the NOMC. As a result, there was no alarm dial out in place.
6. Network chlorine residuals were taken on 07/07/2025 at 1:00pm and 4:45pm. Results show that while some sample locations had chlorine residuals below the recommended 0.1mg/l at 1:00pm, all sample locations had adequate chlorine residuals (above 0.1mg/l) by 4:45pm.

## Recommendations

Subject	Ballycoolin Water Tower Audit Recommendations	Due Date	19/09/2025
Action Text	<p><b>Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendations without delay.</b></p> <ol style="list-style-type: none"><li>1. Ensure that at all times alarms are connected to a suitable communication system that dials out to relevant Uisce Éireann staff in a timely manner.</li><li>2. Ensure that an up-to-date incident response procedure is in place at all times. The incident response procedure should include any third parties that have responsibility or oversight over any of the treatment systems at the site.</li></ol> <p><b>Actions required by Uisce Éireann</b></p> <p>During the audit, Uisce Éireann representatives were advised of the audit findings and that action must be taken by Uisce Éireann to address the issues raised.</p> <p>Uisce Éireann should submit a report to the EPA on or before 19/09/2025 detailing the actions taken and planned, with timescales, to close out the above recommendations.</p> <p>The EPA advises that the findings and recommendations from this audit report should, where relevant, be addressed at other public water supplies.</p>		