

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	
Name of Installation	DCC Zone 2
Organisation	Uisce Éireann
Scheme Code	0700PUB1002
County	Dublin
Site Visit Reference No.	SV33239

Report Detail	
Issue Date	29/10/2025
Prepared By	Michelle Roche

Site Visit Detail			
Date Of Inspection	29/09/2025	Announced	Yes
Time In	11:30	Time Out	13:40
EPA Inspector(s)	Michelle Roche		
Additional Visitors			
Company Personnel	Uisce Éireann: Joseph Moran, Thomas Brennan, Ross Begley, Larry Callaghan and Gerard Goodwin.		

> Summary of Key Findings

- 1) At the time of the audit individual filter turbidity alarms and shutdowns were set at 0.31 NTU, however the requirements set out in the EPA Water Quality Manual: Filtration are for individual filter turbidity to be below 0.3 NTU at all times.
- 2) Individual filter turbidity trend data could not be viewed onsite during the audit due to a fault with the online telemetry system. This issue was not resolved until 20/10/2025. Other critical water quality trend data, including final water turbidity and final water chlorine residual trends were not affected.
- 3) Water quality trends are not reviewed regularly to confirm operational alarms and shutdowns are working as intended and inform decisions on water treatment processes.

> Introduction

Ballyboden Water Treatment Plant (WTP) currently produces approximately 8.5ML/day of treated drinking water for distribution across the Greater Dublin Area. Treated water from Ballyboden WTP mixes with treated water from Ballymore Eustace WTP and Leixlip WTP in varying locations and combinations across Dublin City, based on water demand.

Raw water is drawn from Bohernabreena Reservoir and treatment at the plant includes; pH adjustment, coagulation, clarification, rapid gravity filtration, disinfection with sodium hypochlorite and final water pH correction.

Ballyboden WTP was under a planned shutdown from December 2022 to April 2025 to facilitate the upgrade of the five on site rapid gravity filters. Chemical dosing systems were also upgraded as were controls on the coagulation, flocculation, clarification process.

> Supply Zones Areas Inspected

The audit included interviews with Uisce Éireann operational staff and an inspection of water treatment infrastructure.

Water quality trends requested in advance of the audit were not submitted to the EPA and an issue with the on site telemetry system meant that water quality trends could not be viewed on site during the audit either.



1. Filtration

1.1

Are the filters designed and managed in accordance with EPA guidance?

Answer

No

Comment

1) All five rapid gravity filters were refurbished over the last two years with works completed in April 2025. New sand and gravel filter media was installed to a depth of 1.4m.

2) An alarm set-point summary sheet provided before the audit indicated that individual filter turbidity alarms and shutdowns on all filters was set at 0.25 NTU. On inspection during the audit it was found that individual filter alarm and shutdown set-points were 0.31 NTU. This is above the maximum required individual filter turbidity of 0.3 NTU outlined in the EPA Water Quality Manual: Filtration.

3) Uisce Éireann committed to adjusting the alarm and shutdown set-points directly after the audit. An inspection of real-time filter turbidity readings at the audit showed all filter turbidities were below 0.06 NTU. An early warning alarm is also in place on all filters at 0.2 NTU.



2. Disinfection

2.1

Was the chlorine contact time calculation correct?

Answer

Yes

Comment

1) The chlorine contact time calculation was not available to view on site.

2) Following the audit Uisce Éireann submitted a chlorine contact time calculation for Ballyboden WTP. It was confirmed that the low level chlorine alarm set-point is appropriate to ensure adequate chlorine contact time.



3. Management and Control

3.1

Are instrument calibrations within date?

Answer

No

Comment

1) Not all water quality instruments had up to date calibration stickers in place. Some calibrations are being carried out in house and calibration stickers were missing for these instruments. Calibration records for those instruments were not available to view at the audit either.

3.2

Did treatment process trends demonstrate that data was being captured and recorded at all times?

Answer

No

Comment

1) A fault with the on site telemetry system meant that while real-time data was visible during the audit, historical trend data could not be viewed. Requested trend data was not submitted to the EPA ahead of the audit and it was intended that this information would be viewed onsite.

2) A contractor arrived on site at the end of the audit to try to resolve the issue however the fault was not resolved until 20/10/2025.

3.3

Is there appropriate oversight of plant performance?

Answer

No

Comment

1) Water quality trends are not reviewed regularly to confirm operational alarms and shutdowns are working as intended and inform decisions on water treatment processes.

Recommendations

Subject	Ballyboden Audit Recommendations	Due Date	29/11/2025
Action Text	<p>Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendations without delay.</p> <ol style="list-style-type: none">1. Ensure individual filter turbidity alarm and shutdown set-points are adjusted in accordance with the maximum individual filter turbidity of 0.3 NTU outlined in the EPA Water Quality Manual: Disinfection.2. Ensure that critical water quality trend data is recorded on a suitable online telemetry system and available to view at all times.3. Ensure that critical water quality trend data is regularly reviewed to confirm operational alarms and shutdowns are working as intended and inform decisions on water treatment processes.4. Ensure all water quality verification instruments are calibrated in accordance with the calibration schedule and calibration stickers are visible on the instrument. <p>Actions required by Uisce Éireann</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 29/11/2025 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>		