

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	Lough Borehole Supply PWS
Organisation	Uisce Éireann
Scheme Code	1600PUB4006
County	Laois
Site Visit Reference No.	SV33370

Report Detail	
Issue Date	09/12/2025
Prepared By	Lisa Noone

Site Visit Detail			
Date Of Inspection	21/11/2025	Announced	Yes
Time In	10:30	Time Out	12:10
EPA Inspector(s)	Lisa Noone		
Additional Visitors			
Company Personnel	Uisce Éireann: Linda Doran, Maria Lloyd, Brendan Garry Laois County Council (working in partnership with Uisce Éireann): Tom O'Carroll, Michael Brady		

> Summary of Key Findings

1. The audit found that automatic switchover of the UV units was not functioning, and online monitors for UVT, turbidity and chlorine residual were not operating as required due to issues relating to the plant's variable speed drive. A plan was in place for repair in the days following the audit.
2. Issues with chlorine dosing were identified during the audit and require further investigation.
3. The site specific incident escalation flowchart on display at the plant requires updating.

> Introduction

Lough Borehole Public Water Supply (PWS) produces circa. 1600 m³/day of water serving a population of approximately 1,800 people. Raw water is abstracted from two boreholes located at the Water Treatment Plant (WTP). Treatment consists of primary disinfection via UV and secondary disinfection by chlorination. Raw water from borehole 1 (Garryvacum) is treated by a duty only UV unit and chlorination prior to distribution to Garryvacum Reservoir. Raw water from borehole 2 (Portarlinton) is treated by duty/standby UV units, followed by chlorination before distribution to the network in Portarlinton.

The audit was undertaken to assess Uisce Éireann's performance in producing clean and wholesome water with a focus on the alarms and inhibits in place at the WTP and the procedures in place to ensure appropriate oversight of treatment processes

> Supply Zones Areas Inspected

Both boreholes and treatment processes at the water treatment plant were inspected as part of the audit.



1. Disinfection

1.1

Is the chlorine dosed appropriately?

Answer

No

Comment

1. Plant operators stated that the plant occasionally shuts down due to issues with chlorine dosing.
2. It was observed during the audit that the chlorine pumps and chlorine dosing point for Borehole 1 are located in different parts of the WTP. Plant operators stated that the chlorine dosing issue could be attributed to the distance or differential pressures between the pumps and the dosing point.
3. A large kink was also observed in the tubing which delivers the chlorine to the dosing point which could also be causing dosing issues and should be investigated.



2. Alarms, Inhibits & Oversight Audits 2025

2.1

Is there a documented site specific incident response and incident escalation process?

Answer

Yes

Comment

1. The Uisce Éireann Incident Communication Response Guidance Form was displayed at the WTP.
2. The flowchart included a site-specific trigger level of 80% for UVT with a maximum flow of 55m³/hr. This value does not reflect the operational parameters for the site.
3. Site-specific contact information was also not up-to-date.

2.2

Were online monitors operational?

Answer

No

Comment

1. The UVT monitor for Borehole 2 was showing a continuous reading of 100% UVT which was inaccurate. In addition, plant operators stated that there have been ongoing issues with chlorine residual and turbidity readings, stating that this fault is likely linked to the variable speed drive issues as per Section 1.1.

2.3

Are suitable plant shutdowns/inhibits in place to prevent inadequately treated water entering the distribution network?

Answer

No

Comment

1. There was no automatic switchover of the UV units for Borehole 2. Plant operators stated that this is due to an issue with the variable speed drive which was due to be repaired in the days following the audit. UV units were being manually switched over in the interim.

2.4

Are there appropriate procedures covering verification of alarms and inhibits status following maintenance or other work on site?

Answer

No

Recommendations

Subject	Lough Borehole PWS Audit Recommendations	Due Date	16/01/2026
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> <p>1. Investigate and resolve any issues affecting (i) the variable speed drive and consequently UV units switchover and UVT, chlorine residual and turbidity monitors, and (ii) the chlorine pumps and dosing unit.</p> <p>2. Ensure that the Uisce Éireann Incident Communication Response Guidance Form displayed at the WTP contains site specific information including contacts for escalation and relevant site specific trigger levels protecting critical processes at the WTP.</p> <p>3. Develop a procedure and deliver appropriate training covering the verification of alarms/shutdowns status following maintenance or other works completed at the treatment plant. This procedure should clearly document the corrective actions and set out delegation of responsibilities.</p> <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 the above due date 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>		