

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	Broadford PWS
Organisation	Uisce Éireann
Scheme Code	0300PUB1027
County	Clare
Site Visit Reference No.	SV33301

Report Detail

Issue Date	08/12/2025
Prepared By	Orla Harrington

Site Visit Detail

Date Of Inspection	07/11/2025	Announced	Yes
Time In	10:50	Time Out	11:40
EPA Inspector(s)	Orla Harrington		
Additional Visitors			
Company Personnel	Uisce Éireann: Tommy Roche, Liam Horan. Clare County Council (working in partnership with Uisce Éireann): Martin Nugent.		

➤ Summary of Key Findings

1. The previous EPA audit on 16/05/2023 identified the need to prioritise the Broadford Public Water Supply for upgrade under the Uisce Éireann Disinfection Programme. This upgrade includes the installation of a chlorine monitor after contact time has elapsed, addressing any protozoal log deficit and upgrade of the plant's SCADA system. Uisce Éireann provided a completion date of 2030 for this upgrade.
2. Works are underway to address the lack of automatic shutdowns at the water treatment plant and are due to be completed by Quarter 1 2026.
3. The protozoal compliance log treatment requirement for the supply has been assigned a provisional 3 log. Monitoring for *Cryptosporidium* in line with *Uisce Éireann's Rationale for Determining the Frequency of Cryptosporidium Monitoring in Public Water Supplies* is currently taking place for the supply.

➤ Introduction

Broadford Public Water Supply (PWS) supplies a population of 1,597 with a volume of approximately 915 m3/day. Raw water is sourced from two onsite boreholes. Treatment of the combined water consists of chlorination disinfection.

The audit was undertaken to assess Uisce Éireann's performance in producing clean and wholesome water with a focus on progress with the recommendations from the previous audit undertaken by the EPA on 16/05/2023.

➤ Supply Zones Areas Inspected

The audit included an inspection of the water treatment plant and its critical monitoring equipment and controls.



1. Revisits 2025

Answer

1.1	Have the recommendations from the previous EPA audit been satisfactorily completed?	No
Comment		
1. The EPA has been tracking progress by Uisce Éireann against the recommendations of the audit carried out on 16/05/2023. This audit was carried out to verify the reported progress and found that work has been undertaken on site to address recommendations covering automatic switchover between chemical dosing pumps, establishing incident response procedures, installation of a turbidity monitor, contact time calculation and a review of plant alarms and inhibits.		
2. The following recommendations have not been fully completed to date:		
<p><i>No. 1: Prioritise the Bradford Public Water Supply for upgrade under the Uisce Éireann Disinfection Programme. Provide a scope of works and timeframe for completion.</i></p> <p><i>No. 4: Disinfection: (i) install residual chlorine monitors with appropriate alarms / shutdowns to provide continuous verification of contact time.</i></p>		
<p>The management and control of the chlorination process at the plant has been improved since the EPA's previous audit with the installation of automatic switchover between chemical dosing. Uisce Éireann will progress further upgrade works under its Disinfection Programme by 2030, which includes the installation of a chlorine monitor to verify that contact time has been achieved and the connection of the plant to the county SCADA system.</p> <p>There is one chlorine monitor located post dosing, before adequate contact time has been achieved, where a chlorine residual target of 0.5 mg/l is aimed for before leaving the plant. The chlorine monitor was reading 0.70 mg/l on the day of the audit, which is satisfactory. The low chlorine alarm setpoint is set at 0.2 mg/l and is not set at an appropriate level to provide adequate warning of low chlorine levels in the final water leaving the plant. There are no automatic shutdown setpoints provided for residual chlorine in the final water leaving the plant. Uisce Éireann confirmed that automatic shutdown would be installed by Quarter 1 2026. The contact time is achieved within the rising main but before the reservoir. While the contact time calculation demonstrates that all customers on the supply, including those supplied prior to the reservoir receive adequate contact time, there is no chlorine monitor here to validate that the minimum free chlorine concentration is being achieved.</p>		
<p><i>No. 5. Install a turbidity monitor with appropriate alarm settings and inhibits.</i></p> <p>The turbidity monitor has been purchased and installed. However there are no associated alarms or inhibit setpoints on the turbidity monitor. Uisce Éireann confirmed that this will be addressed by Quarter 1 2026.</p> <p><i>No. 6. Confirm (i) the protozoal log treatment requirement for the plant and (ii) confirm how any protozoal log treatment deficit will be addressed.</i></p> <p>Uisce Éireann have assigned a provisional log treatment requirement of 3 log to the source. A peer review is to be undertaken to confirm the score and the log deficit will be addressed under the Disinfection upgrade works scheduled for completion in 2030. At present, monitoring is being carried out in accordance with the <i>Uisce Éireann Rationale for Monitoring Cryptosporidium in Public Water Supplies</i>. There have been no detections to date.</p> <p><i>No. 10. Ensure that (i) the treatment plant is connected to the county SCADA system (ii) that plant process information and trended performance data are available to operational and supervisory staff at the plant and via SCADA (iii) that there are robust systems of reviews and checks on the water treatment plant performance data which should include regular review of SCADA trends by operational and supervisory staff.</i></p> <p>The connection of the plant to the county SCADA system will provide real time visibility of plant performance trends. This work will be completed under the Disinfection upgrade works.</p>		

Recommendations

Subject	Broadford PWS - Audit Report	Due Date	09/01/2026
Action Text	<p>Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendation(s) without delay.</p> <ol style="list-style-type: none">1. Prioritise the Broadford Public Water Supply for upgrade under the Uisce Éireann Disinfection Programme.2. (i) Install residual chlorine monitor with appropriate alarms / shutdowns to provide continuous verification of contact time; (ii) ensure the chlorine readings post dosing meet site specific targets.3. Implement appropriate turbidity alarms and shutdowns at the water treatment plant.4. Confirm (i) the protozoal log treatment requirement for the plant (ii) submit a programme of works to address any log deficit (iii) continue to monitor for <i>Cryptosporidium</i> as per <i>Uisce Éireann Rationale for Determining the Frequency of Cryptosporidium Monitoring in Public Water Supplies</i>.5. Ensure that (i) the treatment plant is connected to the county SCADA system (ii) that plant process information and trended performance data are available to operational and supervisory staff at the plant and via SCADA (iii) that there are robust systems of reviews and checks on the water treatment plant performance data which should include regular review of SCADA trends by operational and supervisory staff. <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 09/01/2026 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>		