

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	Inishowen East
Organisation	Uisce Éireann
Scheme Code	0600PUB1022
County	Donegal
Site Visit Reference No.	SV34849

Report Detail	
Issue Date	06/05/2026
Prepared By	Veronica Boland

Site Visit Detail			
Date Of Inspection	16/04/2026	Announced	Yes
Time In	13:55	Time Out	15:45
EPA Inspector(s)	Veronica Boland		
Additional Visitors			
Company Personnel	Uisce Éireann: Diarmuid Feeney, Joseph Gallagher, Stephen McGlynn, Geraldine Friel, Fionnuala Bonner. Donegal County Council (working in partnership with Uisce Éireann): Brian McCallion.		

> Summary of Key Findings

1. There were no plant shutdowns for high and low chlorine residual levels after contact time and the chlorine warning alarms were not active at the WTP.
2. The chemical storage and dosing area require improvements to the infrastructure to protect dosing systems and support effective treatment operations.

Uisce Éireann should submit a report to the EPA on or before 08/06/2026 detailing the actions taken and planned, with timescales, to close out the 6 recommendations in this audit report.

> Introduction

The Inishowen East Public Water Supply (PWS) is supplied by Redcastle water treatment plant (WTP) which produces approximately 1,281 m³/day of treated water, and serves a population of approximately 3,338 people. The raw water source is Lough Fad East. Treatment at the WTP consists of pre-treatment pH correction, coagulation, flocculation, clarification, rapid gravity filtration, chlorination and post treatment pH correction. A source and sanitary survey was carried out and a log treatment requirement of 3 is assigned to the Redcastle WTP.

The audit was undertaken to assess Uisce Éireann's performance in producing clean and wholesome water with a focus on operations.

> Supply Zones Areas Inspected

Treatment processes and chemical storage/dosing facilities at the WTP.



1. Treatment Process Chemicals

	Answer
1.1	Are treatment process chemicals appropriately managed and stored? No
Comment	
<ol style="list-style-type: none">1. The chemical storage and dosing building was observed to be in poor condition and in need of upgrading. Plaster was falling from the ceiling and walls, and as an interim control measure, staff had covered the open-top chemical storage tanks with plastic sheeting to prevent ingress of fallen plaster and debris.2. Uisce Éireann staff advised that the chemical storage building shutter door was creating draughts which in turn was impacting the pre and post pH dosing. In this regard, Uisce Éireann installed heaters and have ordered a replacement roller door.3. Uisce Éireann also advised that an upgrade of the chemical storage tanks and dosing treatment systems is planned.	
Recommendations:	
<ol style="list-style-type: none">1. Progress the upgrade of the chemical storage and dosing infrastructure as a priority to ensure treatment chemicals are protected and chemical dosing at the WTP is optimized.	



2. Operational Audits 2026

	Answer
2.1 Are suitable plant shutdowns/inhibits in place to prevent the entry of inadequately treated water entering the distribution network?	No
Comment	
<ol style="list-style-type: none">1. There are no automatic shutdowns linked to low and high chlorine residual post contact time to ensure target chlorine contact time is achieved and verified at all times as recommended in the <i>EPA Water Treatment Manual: Disinfection</i>.2. While there is a final (treated) water pH monitor, it is not alarmed. Recommendations: <ol style="list-style-type: none">2. Install automatic shutdown based on low and high levels for chlorine post contact time to ensure adequate disinfection.3. Install low and high pH alarms for the final water.	

	Answer
2.2 Are suitable alarm settings in place to alert operators to deteriorating water quality and/or the failure of a critical treatment process?	No
Comment	
<ol style="list-style-type: none">1. There were no pH or turbidity monitors on the coagulation, flocculation, clarification (CFC) treatment process to enable optimization of these treatment processes and to alert operators to any potential issues that may need addressing and prevent carryover to the filtration stage.2. Uisce Éireann advised that warning alarm setpoints are programmed on the chlorine disinfection unit, however, the alarms were not active. The EPA inspector was advised that this was due to an issue with a recent changeover in external contractors and would be addressed by Uisce Éireann. Recommendations: <ol style="list-style-type: none">4. Install appropriate warning alarms on the CFC treatment processes to alert operators of deteriorating water quality or problems with a critical treatment process. Refer to the <i>EPA Manual: Coagulation, Flocculation & Clarification</i>.5. Ensure the warning and action alarms linked to the disinfection system are reinstated to alert operators to potential issues with the disinfection system. These alarms should be set at suitable levels to allow a response preventing inadequately treated water from entering the network.	

	Answer
2.3 Are plant performance trends accessible by operational staff at the water treatment plant?	Yes
Comment	

1. At the time of the audit the EPA inspector was unable to effectively interrogate trend data on the Local Scada system due to poor Wi-Fi connectivity, resulting in freezing of the system. Uisce Éireann advised that plans are in place to upgrade to fibre broadband to address the connectivity issues.
2. The trend data for the 2 no. rapid gravity filters was only available on the WTP PLC. The PLC screen is very small and the trend data was not easy to view. In addition, the PLC limits review of historical data for the rapid gravity filters to a maximum of 24 hours. The operator should have access to the rapid gravity filter trends on the local SCADA to allow necessary interventions to be made should the trends indicate operational problems with the RGFs.

Recommendations:

6. Ensure that operational and supervisory staff have access to all plant performance trend data (including rapid gravity filter performance), both at the WTP and remotely (local and countywide SCADA), to allow early detection of operational issues and timely corrective action.

Recommendations

Actions required by Uisce Éireann

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.

Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the recommendations raised in this report without delay.

Response to Audit Report

Uisce Éireann should submit a report to the EPA on or before the date specified in the Summary of Key Findings detailing the actions taken and planned, with timescales, to close out the recommendations in this audit report.

The EPA advises that the findings and recommendations from this report should, where relevant, be addressed at other public water supplies.

Publication of Reports

Audit reports are published to the EPA's website, www.epa.ie, typically 1 month after the audit report is issued to Uisce Éireann.