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	Ardfinnan Regional
Organisation	Uisce Éireann
Scheme Code	2900PUB0102
County	Tipperary
Site Visit Reference No.	SV35952

Report Detail

Issue Date	23/11/2026
Prepared By	Michelle Roche

Site Visit Detail

Date Of Inspection	16/10/2026	**Announced**	Yes
Time In	12:30	**Time Out**	15:00
EPA Inspector(s)	Michelle Roche Andrew Madigan		
Additional Visitors	HSE: Kay O'Connor, Monica Cahill, James O'Neill.		
Company Personnel	Uisce Éireann: Pierce Faherty, Patrick Duggan, Denis McGrath, Eamon O'Gorman, Darren Cleary, Anthony Phelan.		

Summary of Key Findings

1. A Do Not Consume Notice was in place on Ardfinnan Regional Public Water Supply from 09/10/2026 to 19/10/2026 due to elevated aluminum in the final water. Upgrade works completed during that time allowed the DNC to be lifted following verification monitoring. The works completed were; replacement of pipework valves on the rapid gravity filters, replacement of air blowers and new sludge scrapers on the dissolved air flotation units.

2. Uisce Éireann have completed some upgrade works at the treatment plant to address this challenge. Commissioning of the streaming current meter and installation of UV disinfection as a second protozoal barrier remain outstanding. UV disinfection is estimated to be installed by Q1, 2027.

3. A Boil Water Notice (BWN) has been in place on the supply since 07/06/2026 due to intermittent individual filter turbidities above 0.3 NTU. The BWN was lifted on 17/11/2026.

Uisce Éireann should submit a report to the EPA on or before 13/12/2026 detailing the actions taken and planned, with timescales, to close out the three recommendations in this audit report.

Introduction

Ardfinnan public water supply serves a population of 11,494 from Ardfinnan Water Treatment Plant (WTP) which produces approximately 300m3 of treated drinking water per hour. The source of the supply is two mountain streams that blend in the raw water inlet to the WTP. Treatment includes pH adjustment, coagulation, dissolved air floatation, filtration, final water pH correction and chlorination.

The audit was undertaken to investigate the Boil Water Notice that has been in place on the supply since 07/06/2025 and the subsequent Do Not Consume Notice that was in place on the supply from 09/10/2026 to 19/10/2026, affecting 11,494 people. The audit intended to confirm the details of the treatment plant upgrade works completed and planned as submitted to the EPA under the open EPA compliance plan.

Supply Zones Areas Inspected

The audit consisted of interviews with Uisce Éireann staff, a review of water quality trends and a walk through of the Ardfinnan WTP.

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?	Yes

Comment

1. A Do Not Consume Notice (DNC) was placed on Ardfinnan Regional Public Water Supply on 09/10/2026 affecting 11,494 people, due to elevated aluminum in the final treated water.

2. Uisce Éireann first notified aluminum failures above the drinking water regulatory limit of 200ug/l to the EPA on 11/09/2026 which related to samples taken on 09/09/2026. Daily aluminum failures continued to be notified to the EPA with the most recent failure occurring on 17/10/2026. Uisce Éireann held daily consultations with the HSE from the 09/09/2026 in relation to public health impacts.

3. The decision was made by Uisce Éireann, in consultation with the HSE, to issue the DNC on 09/10/2026 for the following reasons:

i) Uisce Éireann were trying to balance carrying out upgrade works at the water treatment plant while achieving compliant drinking water.

ii) The water quantity in the two network reservoirs was low and the network had experienced water outages in the days leading up to the DNC.

iii) The DNC was issued to protect public health, allow network reservoirs refill, maintain supply to consumers, and allow the upgrade works to be completed in a shorter timeframe.

4. The DNC was lifted on 19/10/2026 following completion of upgrade works at the WTP and verification monitoring in the final water and network showed compliant aluminum levels. The upgrade works undertaken included; replacement of pipework valves on the rapid gravity filters, replacement of air blowers on the dissolved air flotation units and new sludge scrapers on the dissolved air flotation units.

5. Daily testing of final water aluminum levels continues to be carried out at the WTP as part of routine water treatment verification monitoring.

2. Source Protection

		Answer
2.1	Is the abstraction source(s) adequately protected against contamination?	No

Comment

1. Ardfinnan Regional Public Water Supply is served by two mountain streams abstracted upgradient of the water treatment plant (WTP) and gravity fed down to the WTP. The chemical composition of the sources, including colour, pH and turbidity, is heavily influenced by rainfall. The chemical composition of the raw water can change very rapidly during a rainfall event and this rapid change can present a short-term challenge to the treatment processes at the WTP. The challenge is the speed with which treatment processes can respond to rapid changes in raw water chemistry during rainfall events.

2. Uisce Éireann have installed raw water run to waste pipework which would allow raw water with highly variable turbidity colour to discharge back to the stream and not enter the WTP in times of heavy rainfall or rainfall after a drought period. The run to waste would allow time for the treatment processes to be appropriately adjusted and adequately treat the raw water.

3. A raw water balancing tank to allow sediment to settle out of the raw water and improve turbidity and colour before the water enters the WTP may also assist.

4. Uisce Éireann confirmed after the audit that the raw water run to waste was fully commissioned on 06/11/2026.

Recommendations

1. Investigate the installation of a raw water balancing tank to provide a buffer against highly variable raw water entering the water treatment plant before treatment processes can be adjusted to adequately treat the raw water.

3. Coagulation Flocculation and Clarification (CFC) Stage

		Answer
3.1	Is the CFC process optimised to respond to changes in raw water quality?	No

Comment

1. The variable nature of the raw water chemistry, particularly during rainfall events, can present a short-term challenge to the CFC processes at the WTP.

2. Uisce Éireann have installed and commissioned a static mixer and made adjustments to the pH adjustment (soda ash) and coagulant (aluminum sulphate) dosing regimes to better cope with rapid changes in raw water chemistry.

3. Uisce Éireann have installed a streaming current meter to further optimise the coagulant dose. Uisce Éireann are currently in the commissioning phase with this piece of infrastructure with an estimated date of Q1, 2027 to have the meter fully operational.

Recommendations

2. Commission the streaming current meter to be fully operational by Q1, 2027.

4. Filtration

		Answer
4.1	Does monitoring indicate that the filters are operating effectively?	No

Comment

1. Water quality trends from July to October 2026 were viewed during the audit and showed individual filter turbidities intermittently above the maximum limit of 0.3 NTU required for effective filtration. Filter turbidities above this limit indicate that the protozoal barrier against protozoa such as *Cryptosporidium* is not adequate.

2. A Boil Water Notice (BWN) has been in place on the Ardfinnan Regional Public Water Supply since 07/06/2026 to protect public health while the issues with intermittent filter turbidities above 0.3 NTU are being addressed. The BWN was lifted on 17/11/2026.

3. Uisce Éireann plan to install UV disinfection as an additional protozoal barrier by Q1, 2027. UV disinfection can operate effectively as a protozoal barrier with turbidities below 1 NTU.

Recommendations

3. Install and commission a validated UV disinfection treatment system, with duty/standby UV units, by Q1, 2027.

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.