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	Granard
Organisation	Uisce Éireann
Scheme Code	2000PUB1006
County	Longford
Site Visit Reference No.	SV33219

Report Detail

Issue Date	24/10/2025
Prepared By	Derval Devaney

Site Visit Detail

Date Of Inspection	16/10/2025	**Announced**	Yes
Time In	11:00	**Time Out**	13:30
EPA Inspector(s) **Additional Visitors**	Derval Devaney		
Company Personnel	Uisce Éireann (UÉ): Joseph Moran, Maria Lloyd, Keelan O'Grady, Mike Flinter. Longford County Council (working in partnership with UÉ): Eugene Caherly.		

Summary of Key Findings

1. The deterioration of raw water quality, which led to the imposition of a Boil Water Notice (BWN) on 03/10/2025, was responded to, investigated, and escalated appropriately.
2. An accumulation of scum and sludge was observed in the Dissolved Air Flotation (DAF) tank, indicating that cleaning is required.
3. It was not possible to determine if the filters were managed in accordance with EPA guidance as sand media depths were unavailable.

Introduction

The Granard public water supply serves approximately 2,838 people in County Longford. The raw water is abstracted from Lough Kinale and receives the following treatment at Lough Kinale water treatment plant:

- pH correction with sulphuric acid,
- coagulation with aluminium sulphate coagulant,
- clarification in a dissolved air floatation unit,
- filtration across three rapid gravity filters,
- disinfection with sodium hypochlorite, and
- final water pH correction with sodium hydroxide.

The water treatment plant has a design capacity of 2000m3/day and is currently treating an approximate volume of 1400m3/day.

The audit was undertaken in response to an incident that led to the imposition of a Boil Water Notice on 03/10/2025, with a focus on the protozoal barrier at the water treatment plant and Uisce Éireann's performance in restoring the supply of clean and wholesome water. The Boil Water Notice was lifted on 13/10/2025.

Supply Zones Areas Inspected

The audit assessed the coagulation, flocculation, clarification, filtration and disinfection processes, in addition to alarm and automatic shutdown set-points for critical aspects of the water treatment process. Process verification data and trends from continuous online monitors were also reviewed.

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 Boil Water Notice (BWN) was imposed on the Granard Public Water Supply (PWS) in consultation with the Health Service Executive (HSE) on 03/10/2025, due to the deterioration of raw water quality from Lough Kinale following heavy rainfall and stormy conditions on 02/10/2025.
2. The plant operator was alerted to the incident by text at approximately 5:00 p.m. on 02/10/2025 and escalated the matter without delay.
3. In response, the filters and water treatment plant automatically shut down on 02/10/2025 to prevent inadequately treated water from entering the network, as the protozoal barrier had been compromised.
4. Relevant staff attended the WTP from 02/10/2025, during which jar testing was conducted, backwash conditions were altered and the filters monitored closely.
5. The BWN was lifted on 13/10/2025, in consultation with the HSE, following confirmation of satisfactory treatment process conditions and monitoring results.
6. Monitoring trends were reviewed from 01/10/2025. A raw water turbidity monitor is in place; it is not alarmed but is trending on SCADA. The raw water UVT monitor is alarmed but currently not operational. UÉ is awaiting a replacement part to restore its function. In the meantime, daily UVT readings are being taken manually from the raw water.

2. Management and Control

		Answer
2.1	Have the recommendations from the previous EPA audit been satisfactorily addressed?	No

Comment

1. Recommendations 5 and 6 of the EPA audit conducted on 07/11/2024 have not yet been addressed.
2. Procedures - such as those relating to alarm response and verification of alarm settings following on-site works - have yet to be established and relevant training provided (Recommendation 5 in the 2024 audit report).
3. The final water pH is not alarmed to protect statutory limits and water quality targets. (Recommendation 6 in the 2024 audit report).
4. Additionally, the final water UVT monitor is not alarmed. During the EPA's 2021 audit, UÉ stated the Lough Kinale WTP was upgraded to achieve THM compliance for RAL removal. As part of that audit, UÉ reported that the upgrade works included the installation of an online final water UVT monitor, which was alarmed at a set-point below 85% UVT. (Recommendation 6 in the 2024 audit report).
5. The unresolved issues identified under Recommendations 5 and 6 of the 2024 audit report have been carried forward as Recommendations 5 and 6 in this audit report and will be addressed through actions arising from this audit.

3. Protozoal Barriers Audits 2025

		Answer
3.1	Were the protozoal barriers operational during the audit?	Yes

Comment

1. While the protozoal barriers (coagulation using aluminium sulphate, flocculation, and clarification via a dissolved air flotation tank and filtration across three rapid gravity filters) were operational, cork was observed floating in the tanks during the coagulation and flocculation stage.
2. The plant operator stated that the issue was due to degradation of the cork ceiling in the raw water balance/header tank, and that the cork is being removed manually using a net.
3. The Dissolved Air Flotation (DAF) tank at the Coagulation-Flocculation-Clarification (CFC) stage was found to have visible build-up of sludge and residue on the internal pipework and surrounding surfaces.This condition is likely to reduce the efficiency of the treatment process.

		Answer
3.2	Are the filters designed and managed in accordance with EPA guidance?	No

Comment

1. The required filter media depths were provided after the audit and are as follows (i) Silica sand: Design depth = 1200mm and (ii) Gravel media: Design depth: 550mm total (Comprising 150+100+100+200mm of varying grades).
2. However it was not possible to determine if the three rapid gravity filters were being managed in accordance with EPA guidance as details on the actual depth of sand media present in each filter was not available during the audit.

Recommendations

Subject	Granard PWS Audit Report Recommendations 2025	Due Date	24/11/2025
Action Text	**Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendations without delay.** 1. Return the UVT monitor on the raw water line to operational status as soon as possible. 2. Investigate the disintegration of cork from the ceiling of the header tank and assess any impact on the water treatment process or water quality. Implement remedial action to prevent any adverse impact on water quality or treatment performance. 3. Undertake cleaning of the DAF tank at the CFC stage of the water treatment process, including pipework and internal surfaces, without delay. 4. **Filtration** i. Confirm the depth of the filter media in use. Where the depth is unknown or below recommended levels, corrective actions should be taken to verify and, if necessary, upgrade the filter media to design depths as specified in this report, ii. Install a media depth gauge for each filter. 5. Put in place a procedure for: i. site-specific alarm response, ii. verification of alarms and plant inhibits following maintenance or other work on-site, and iii. ensure training is provided to all relevant staff on the procedures. This is an outstanding recommendation from the EPA's audit on 07/11/2024. 6. Install: i. an alarm and plant inhibit on the final water pH online monitor, and ii. an alarm setting of < 85% on the the final water UVT monitor. This is an outstanding recommendation from the EPA's audit on 07/11/2024. **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 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. The EPA advises that the findings and recommendations from this audit report should, where relevant, be addressed at other public water supplies.		