

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 | Kinnitty PWS |
| Organisation | Uisce Éireann |
| Scheme Code | 2500PUB1012 |
| County | Offaly |
| Site Visit Reference No. | SV32036 |

| Report Detail | |
|---------------|------------|
| Issue Date | 11/06/2025 |
| Prepared By | Lisa Noone |

| Site Visit Detail | | | |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|
| Date Of Inspection | 28/05/2025 | Announced | Yes |
| Time In | 10:40 | Time Out | 12:00 |
| EPA Inspector(s) | Lisa Noone | | |
| Additional Visitors | | | |
| Company Personnel | Uisce Éireann: Linda Doran, Roisin Byrne, John Daly, Billy Connors, Brendan McEvoy, Michael Carter Offaly County Council (working in partnership with Uisce Éireann): Clodagh Graham | | |

> Summary of Key Findings

1. The audit found that there is no automatic shutdown of the plant in the event of high or low residual chlorine, high turbidity or failure of the UV unit.
2. There are no alarms in place in the event of failure of the UV unit or failure to operate within the validated range.
3. There is no automatic switchover between the chlorine dosing pumps in the event of failure.

> Introduction

Kinnitty Public Water Supply (PWS) produces circa. 200 m³/day of water serving a population of approximately 423 people. Raw water is abstracted from a single borehole located at the Water Treatment Plant (WTP). Raw water abstraction is from a single borehole located at Ballyshane Bridge. Treatment consists of primary disinfection via chlorination in addition to UV treatment. Treated water is stored on site in a reservoir prior to distribution to consumers.

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

Treatment processes at the WTP were inspected as part of the audit.



1. Disinfection

1.1

Are duty and standby chlorine pumps/ UV units in operation?

Answer

No

Comment

1. There is no standby UV unit in place at the WTP in the event of failure of the duty unit.
2. There is no automatic switchover of the chlorine dosing pumps in the event of a failure of the duty pump to protect primary disinfection. Chlorine dosing pumps are manually switched over on a weekly basis.



2. Alarms, Inhibits & Oversight Audits 2025

| | | Answer |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 2.1 | Is there a documented site specific incident response and incident escalation process? | Yes |
| | Comment | |
| | 1. The Uisce Éireann incident escalation flowchart was displayed at the WTP. However, site specific trigger levels for the UVT and UVI were not displayed and contact information was not up-to-date. | |
| | | |
| | | Answer |
| 2.2 | Are suitable alarm settings in place to alert operators to deteriorating water quality or the failure of a critical treatment process? | No |
| | Comment | |
| | 1. There are no alarm settings in place for the UV unit to alert plant operators in the event of failure of the unit or operation outside of the validated range. | |
| | | |
| | | Answer |
| 2.3 | Are suitable plant shutdowns/inhibits in place to prevent inadequately treated water entering the distribution network? | No |
| | Comment | |
| | 1. There is no automatic shutdown of the plant linked to chlorine residual, turbidity or UV, this was raised at the previous EPA audit in 2022 and remains to be completed. | |
| | | |
| | | Answer |
| 2.4 | Is there a documented procedure for responding to specific alarms? | No |
| | | |
| | | Answer |
| 2.5 | Are there appropriate procedures covering verification of alarms and inhibits status following maintenance or other work on site? | No |

Recommendations

| Subject | Kinnitty PWS Audit Recommendations | Due Date | 14/07/2025 |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|
| 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> <ol style="list-style-type: none"> 1. Install automatic shutdown based on low and high levels for chlorine, high levels of turbidity in the treated water, and the UV unit to ensure adequate disinfection. 2. (i) Put in place appropriate alarm settings for the UV unit to alert plant operators in the event of failure of the UV unit or operation outside of the validated range, and (ii) provide details of the log treatment requirement for the supply. 3. Ensure automatic switchover of duty and standby chlorine dosing pumps in the event of the failure of one of the pumps. 4. 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. 5. Develop a procedure and deliver appropriate training (i) covering the verification of alarms/shutdowns status following maintenance or other works completed at the treatment plant, and (ii) for responding to and escalating all alarms generated at the water treatment plant. Both procedures should clearly document the corrective actions and set out delegation of responsibilities. <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 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> | | |