

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	Knockanevin
Organisation	Uisce Éireann
Scheme Code	0500PUB1504
County	Cork
Site Visit Reference No.	SV33222

Report Detail	
Issue Date	12/11/2025
Prepared By	Orla Harrington

Site Visit Detail			
Date Of Inspection	16/10/2025	Announced	Yes
Time In	13:30	Time Out	14:30
EPA Inspector(s)	Orla Harrington		
Additional Visitors			
Company Personnel	Uisce Éireann: Sharon O'Dwyer, Denis Hayes. Cork County Council (working in partnership with Uisce Éireann): Maurice O'Brien		

> Summary of Key Findings

1. On 01/10/2025 a Boil Water Notice was placed on Knockanevin Public Water Supply affecting a population of 20 people due to the inability of the supply to achieve adequate chlorine contact time to guarantee drinking water has been fully disinfected. A contact coil was installed on 06/10/2025 and the Boil Water Notice was rescinded on 15/10/2025 following consultation with the HSE.
2. The chlorine contact time calculation submitted prior to the audit demonstrated that while the final treated water is achieving the World Health Organisation's minimum recommended value of 15 mg.min/l following installation of the contact coil, it fails to achieve Uisce Éireann's site specific target chlorine contact time of 23.40 mg.min/l, to ensure there is a margin of safety in verifying that primary disinfection is being achieved at the plant under all circumstances.
3. There is no turbidity monitor with associated alarms and inhibits in place at the water treatment plant. These are required to prevent the entry of inadequately treated water into the supply.

> Introduction

The Knockanevin Public Water Supply (PWS) supplies an average of 40 m³/day of water, serving a population of 20. The source for the supply is a borehole. Treatment consists of chlorination.

The audit was undertaken in response to the imposition of a Boil Water Notice (BWN) on the supply on 01/10/2025 due to inadequate chlorine contact time. The BWN was rescinded on 15/10/2025.

> Supply Zones Areas Inspected

The borehole, treatment plant and associated equipment and monitors were inspected during the audit.



1. Disinfection

	Answer	
1.1	Is the residual chlorine monitored at a suitable sample location after contact time has been completed?	No
Comment		
<p>1. The calculation sheet showed adequate contact time was being achieved on-site, the calculation included the contact coil and distribution network to the 1st customer. However the existing chlorine residual monitor only samples post contact coil and that sampling point is not located after contact time has been achieved to confirm the effectiveness of the disinfection process.</p>		

	Answer	
1.2	Is there adequate chlorine contact time before the first connection?	Yes
Comment		
<p>1. The audit was carried out in response to the notification of inadequate disinfection due to insufficient contact time in the Knockanevin water supply. The water had insufficient contact time due to the lack of a reservoir and the configuration of the network which led to the placing of a BWN on the supply on 01/10/2025. Uisce Éireann installed a contact coil at the water treatment plant on 06/10/2025 to ensure a minimum chlorine contact time of 15 mg.min/l is achieved. The BWN was lifted on 15/10/2025 following consultation with the HSE.</p> <p>2. Prior to the audit, Uisce Éireann submitted a calculation to show that at a minimum of 0.5 mg/l chlorine in the final water there is a minimum chlorine contact time of 15.89 mg.min/l achieved which is greater than the WHO minimum of 15 mg.min/l before the 1st customer is reached. However, the contact time falls short of the target that Uisce Éireann have set for the site of 23.40 mg.min/l which is a more considered site-specific approach to setting contact time values.</p>		

	Answer	
1.3	Is there a chlorine residual ≥ 0.1 mg/l throughout the network?	Yes
Comment		
<p>1. Records viewed between 22/09/2025 and 13/10/2025 showed that residual chlorine in the network is being monitored several times a week. The records available meet the minimum recommended chlorine residual concentration of 0.1mg/l in the distribution network.</p>		



2. Management and Control

		Answer
2.1	Are suitable plant shutdowns/inhibits in place to prevent the entry of inadequately treated water entering the distribution network?	No
Comment		
1. There is no online continuous turbidity monitor with associated alarms and inhibits in place at the water treatment plant.		

Recommendations

Subject	Knockanevin PWS - Audit Report	Due Date	15/12/2025
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. (i) confirm the location of the chlorine monitor sampling point has been moved to ensure it samples water post contact time; (ii) ensure that the target chlorine contact time for the supply is being achieved and (iii) ensure appropriate alarms and inhibits in place.2. Install a continuous turbidity monitor with the appropriate alarm and inhibits at the water treatment plant. <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 15/12/2025 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>		