

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	Carrignagower
Organisation	Uisce Éireann
Scheme Code	3100PUB1026
County	Waterford
Site Visit Reference No.	SV31940

Report Detail	
Issue Date	03/03/2025
Prepared By	Sean O'Leary

Site Visit Detail			
Date Of Inspection	11/02/2025	Announced	Yes
Time In	11:00	Time Out	12:15
EPA Inspector(s)	Sean O'Leary Emma Sinnott		
Additional Visitors			
Company Personnel	Uisce Éireann: Denis McGrath Waterford City and County Council (working in partnership with Uisce Éireann): Dave Whelan and Liam Buckley		

> Summary of Key Findings

1. A boil water notice was placed on the Carrignagower Public Water Supply on 05/01/2025 due to elevated turbidity in the raw water. The notice was still in place on the day of the audit. Uisce Éireann said that the elevated turbidity in the raw water spring was probably caused by surface water ingress during adverse weather conditions during an orange weather warning. The audit found that the incident was escalated satisfactorily to the relevant authorities.
2. Turbidity levels had dropped below 1 NTU at the audit and Uisce Éireann were continuing to monitor turbidity trends to assess if the boil water notice can be lifted.
3. The Carrignagower supply has persistent low pH levels in the supply (< 6.5 pH) and is on the Uisce Éireann National pH file. There is no confirmed action programme with timeframe to address the issue.
4. Uisce Éireann advised that this supply is to be prioritised for rationalisation but no timeframe is available yet.

> Introduction

The Carrignagower Public Water Supply (PWS) serves a population of 35 and produces 54 m³/day (EDEN figures).

The source is a spring located adjacent to the treatment plant house. Treatment consists of primary disinfection using ultraviolet (UV) and secondary disinfection using chlorination.

The audit was undertaken to assess Uisce Éireann's performance in producing clean and wholesome water following the imposition of a Boil Water Notice (BWN) on the supply on 05/01/25 which was still in place on the day of the audit.

> Supply Zones Areas Inspected

The UV and chlorination disinfection systems at the water treatment plant were inspected.



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	
<p>1. A boil water notice (BWN) was placed on the Carrignagower supply on 05/01/25 and was still in place on the day of the audit. The BWN was placed due to turbidity rising above 1 NTU in the spring source which meant disinfection was compromised.</p> <p>2. Uisce Éireann said that elevated turbidity in the supply raw water spring was probably caused by surface water ingress during adverse weather conditions during an orange weather warning.</p> <p>3. Uisce Éireann said that raw water turbidity levels are improving and they are monitoring trends to assess if the boil water notice can be lifted. At the audit the turbidity was reading 0.4 NTU.</p> <p>4. The audit found that the turbidity incident was escalated promptly to the relevant authorities.</p>	



2. Source Protection

	Answer	
2.1	Is the abstraction source(s) adequately protected against contamination?	No
Comment		
<p>1. The spring is located in small field surrounded by other grass fields which are used for agricultural purposes. Uisce Éireann were unable to confirm if landowners were written to in relation to their obligations under the European Union (Good Agricultural Practice for Protection of Waters) Regulations 2022, as amended.</p>		



3. Disinfection

		Answer
3.1	Is the UV system suitably validated?	No
Comment		
1. A copy of the validation certificate for the UV disinfection system was not available for review.		



4. Management and Control

		Answer
4.1	Is the water treatment plant resilient enough to cope with significant variations in raw water quality or demand?	No
Comment		
1. There is no treated water storage on the supply.		

		Answer
4.2	Has the protozoal compliance log treatment requirement been identified for the water treatment plant?	No
Comment		
1. Uisce Éireann indicated that the supply has a 3 log treatment requirement subject to completion of a source and sanitary survey.		



5. Site Specific Issues

	Answer
5.1 Are treated water pH results compliant with parametric values?	No
Comment	
<p>1. The Carrignagower Public Water Supply (PWS) is on Uisce Éireann's National pH file due to persistent low pH (< 6.5).</p> <p>2. Uisce Éireann have not confirmed an action programme or timeframe to address the issue.</p>	

Recommendations

Subject	Audit Recommendations	Due Date	03/04/2025
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. Notify the EPA when the boil water notice is lifted.2. Assess the feasibility of installing treated water storage at the supply to improve resilience.3. Provide an update including timeframe for the rationalisation of the Carrignagower water treatment plant.4. Complete (i) a Source and Sanitary Survey to confirm the log treatment requirement for the supply; (ii) provide a timeframe to address any treatment log deficit that exists.5. Liaise with Waterford City and County Council and confirm that relevant landowners have been written to in relation to their obligations under the European Union (Good Agricultural Practice for the Protection of Waters) 2022, as amended.6. Submit validation documentation for the UV disinfection system in use at the treatment plant outlining the validation protocol and validated operating criteria (flow, minimum UV intensity/dose and UVT) under which the system operates.7. Submit a programme of works with timeframes to address the persistent low pH issue in the supply.8. Ensure that information requested by the EPA prior to an audit and/or requested for review on the day of an audit is provided for and made accessible to inspectors promptly. <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 03/04/2025 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>		