

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	Carrigart-Downings
Organisation	Uisce Éireann
Scheme Code	0600PUB1044
County	Donegal
Site Visit Reference No.	SV35266

Report Detail	
Issue Date	29/07/2026
Prepared By	Veronica Boland

Site Visit Detail			
Date Of Inspection	04/06/2026	Announced	Yes
Time In	13:30	Time Out	15:20
EPA Inspector(s)	Veronica Boland Mary Grimes		
Additional Visitors			
Company Personnel	Uisce Éireann: John Gallagher, Geraldine Friel, Daniel Duffy, Danny Rogers. Donegal County Council (working in partnership with Uisce Éireann): James McHugh.		

> Summary of Key Findings

1. Carrigart Water Treatment Plant (WTP) was operating satisfactorily on the day of the audit.
2. The majority of the audit recommendations from the previous audit had been implemented with further improvements planned including the installation of a turbidity monitor with appropriate alarms on the rapid gravity filter, implementation of automatic chemical dosing, and provision of WTP performance trend data on the local SCADA system.

> Introduction

The Carrigart-Downings water treatment plant (WTP) produces 459m³/day of treated water, serving a population of 655. Raw water abstraction is from Lough Nambraddan & Lough Nameeltoge. Treatment at the WTP consists of pre-treatment pH correction, coagulation, flocculation, clarification, rapid gravity filtration, post treatment pH correction and disinfection using chlorination.

The Carrigart WTP provides treated water to two supplies: Carrigart-Downings Public Water Supply (PWS) and Cranford-Carrigart-Downings mixed water PWS.

The audit was undertaken to assess Uisce Éireann's progress in actioning previous audit recommendations following an EPA audit in April 2025 and to assess Uisce Éireann's performance in producing clean and wholesome drinking water.

> Supply Zones Areas Inspected

The site areas inspected during the audit included:

- WTP treatment processes
- Chemical storage facilities.



1. Coagulation Flocculation and Clarification (CFC) Stage

1.1

Were the CFC tanks, channels and weirs observed to be clean, level and well maintained during the audit?

Answer

Yes

Comment

1. The clarifier tanks, channels and weirs were well maintained.
2. New clarifier turbidity and pH monitors were installed as part of the WTP upgrade. The monitors were operational and within their calibration/service dates.



2.1

		Answer
	Are the filters designed and managed in accordance with EPA guidance?	No
Comment		
1. Since the last audit, the rapid gravity filter (RGF) at the WTP has been refurbished with new filter media to a depth of 1,190mm and a depth measure gauge has been installed in the RGF. 2. There was no turbidity monitor with appropriate alarms/inhibits installed on the outlet of the RGF. Backwash was manual and still based on time only every 24 hours. There was no slow start or run to waste facilities after backwash. Uisce Éireann representatives stated at the audit that controls and alarms linked to filter operation and return to service following backwash is scheduled to be completed by Q2/2027. 3. <i>Cryptosporidium</i> monitoring is ongoing on a monthly basis.		
Recommendations:		
1. Continue <i>Cryptosporidium</i> monitoring as per the Uisce Éireann Rationale for Determining the Frequency of <i>Cryptosporidium</i> in Public Water supplies until a verified protozoal treatment barrier is in place. 2. Ensure that the filtration stage operates in accordance with the log credit approach as outlined in the <i>EPA Water Treatment Manual: Filtration</i> to include (i) installation of turbidity monitors with appropriate alarms and inhibits on each individual filter (ii) automatic backwashing is linked to turbidity alarm setpoint and (iii) ensure the filters run to waste for an appropriate period of time after backwashing.		



3.1

Have the recommendations from the previous EPA audit been satisfactorily completed?

Answer

No

Comment

1. The Carrigart WTP was undergoing a SCADA upgrade which included installation of a new HMI controller. WTP inhibits have been installed on final water turbidity, chlorine residual (post contact time), and final water pH.
2. The switch to disable the 'Clarified Water pH' inhibit at the WTP has been deactivated.
3. While plant performance trends are available on the countywide SCADA and operational staff can access this information via their mobile phones, plant performance trend data is still not available on the local SCADA/plant computer.
4. The chemical dosing building has been upgraded with insulation, heaters, double glazed windows (to reduce the potential for blockage of chemical dosing lines that can be caused by cold/damp conditions). All chemical dosing pumps (pre and post pH, aluminium, and polyaluminium chloride) were replaced with new pumps. The chlorine dosing pumps automatically switchover every 6 hours, however the other chemical dosing pumps were switched over manually. Uisce Éireann stated at the audit that all chemical pumps are scheduled to be controlled by the newly installed HMI and will be programmed to automatic switchover between duty/standby pumps based on time every 24 hours, or if one pump fails to start or if there is no flow to the pump.
5. A project was undertaken by an external contractor with a focus on jar testing and chemical dosing requirements at the WTP. The project recommendations were to continue with the existing chemical dosing regime/criteria in place at the WTP.
6. New larger soda ash tanks have been installed (5 times increase in capacity of previous tanks) with level sensor, new mixers, and pipework/dosing lines installed.
7. Operational monitoring is ongoing at the WTP, in addition to monthly *Cryptosporidium* monitoring.
8. The Incident escalation sheet was updated with all WTP alarm/inhibit details and staff advised that they had received training on this.

Recommendations:

3. Progress completion of SCADA upgrade at WTP including the provision of plant performance trends on the local SCADA/plant computer at the WTP.
4. Progress the completion of automatic switchover of all chemical dosing pumps.

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.