

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	Milford PUB
Organisation	Uisce Éireann
Scheme Code	0600PUB1050
County	Donegal
Site Visit Reference No.	SV35265

Report Detail	
Issue Date	15/07/2026
Prepared By	Veronica Boland

Site Visit Detail			
Date Of Inspection	05/06/2026	Announced	No
Time In	13:10	Time Out	15:20
EPA Inspector(s)	Veronica Boland Mary Grimes		
Additional Visitors			
Company Personnel	Uisce Éireann: Martin McAteer, John Gallagher James McHugh, Hugh Kerr, Geraldine Friel, Thomas Gibbons, Tom Doherty, Brendan Gaffey Alanna Doherty. EPS (operating under contract to Uisce Éireann): Aidan Crawford, Aidan O'Malley.		

> Summary of Key Findings

1. Uisce Éireann installed and commissioned a GAC filtration system with UVT monitors to minimise the risk of Trihalomethanes (THM) formation in the Milford public water supply.
2. Satisfactory THM monitoring results were submitted along with UVT trends to verify the effectiveness of the works.

There are no specific recommendations in this audit report for Uisce Éireann to revert to the EPA on.

> Introduction

The Milford PWS abstracts water from Lough Columbkil to produce on average 2,093m³ /day of treated water to a population of 3,827. Treatment at the Milford water treatment plant consists of slow sand filtration, GAC filtration, chlorination and fluoridation.

The supply was on the EPA Remedial Action List (RAL) due to elevated levels of Trihalomethanes (THMs) above the standard in the Drinking Water Regulations. The purpose of the audit was to assess the upgrade works that have been implemented to address the THM issue.

> Supply Zones Areas Inspected

The Milford water treatment plant processes, equipment and controls were inspected as part of the audit.



1. Supply on the Remedial Action List

1.1

		Answer
Do the audit findings support progress made with the Remedial Action List upgrades?		Yes
Comment		
Uisce Éireann has completed a series of upgrade works at the Milford water treatment plant (WTP) to reduce the potential for trihalomethane (THM) formation within the supply network. The following improvements were implemented:		
1. Installation of turbidity warning and inhibits on each of the 6 no. slow sand filters (SSFs). As part of the upgrade works, a turbidity warning alarm setpoint of setpoint of 0.2 NTU with 10 minute time delay and a plant inhibit setpoint of 0.3NTU with 10 time delay were installed on each of the SSFs. At the audit, the SSF turbidity readings (outlet) were: SSF1= 0.047 NTU; SSF2= 0.053 NTU; SSF3= 0.067 NTU; SSF4= 0.66 NTU; SSF5=0.056 NTU; SSF6= 0.060 NTU. Monthly <i>Cryptosporidium</i> monitoring on final water at Milford WTP is on going. 2. Installation and commissioning of 4 no. Granulated Activated Carbon (GAC) filters post the 6 SSFs: - A UVT monitor is installed post each GAC filter, with an automatic alarm setpoint of UVT 90% (0 time delay – automatically alarms when reaches 90%), and with an inhibit setpoint of UVT 88% (0 time delay – automatically shuts down plant at 88%). At the audit, the UVT monitor readings were UVT1 = 98.7%; UVT2 = 95.8%; UVT3= 99.3%; UVT4 = 97.2%. - Each GAC filter unit has a media depth of 2.0 metres, and there are media depth measure gauges installed in each GAC filter. 3 of the 4 no. GAC filters are in service at any one time. - A GAC filter washwater tank (underground) and a separate backwash (settlement) tank were installed. GAC filter backwash can be automatically triggered on headloss or time or initiated manually. Filters have facility to run to waste post backwash. - The backwash water from the GAC filters is returned to the head of works to keep the SSFs covered/wetted. Backwash water from the GAC filters is first sent to the backwash settlement tank where it is allowed to settle for a duration of time prior to return to head of works, and is then pumped back to the head of works (raw water inlet chamber) at a rate of 3m3/h (5% of flow into the WTP). There is an continuous online turbidity monitor on the outlet of the backwash (settlement) tank (pre pump), with an automatic shut off if the turbidity value is >8NTU after 10 minutes (<i>Note: The raw water turbidity inhibit setpoint is 8 NTU, 10 minute time delay</i>). - Final water turbidity inhibit installed of 0.3 NTU with 3 minute time delay.		
The upgraded WTP started to supply Milford PWS on 26 March 2026. THM formation potential and TOC removal results from the process proving stage were submitted to the EPA indicating that the upgraded WTP is achieving an average TOC removal efficiency of 63.5%. Results prior to the upgrade works indicated the TOC removal was on average 21%. At the audit, Uisce Éireann representatives stated that monitoring for TOC removal and THMs in Milford WTP final water and network will continue for at least a further 6 months.		
Uisce Éireann representatives stated that the reduction in organic load due to the WTP upgrade resulted in significantly higher chlorine residuals at the network extremities—achieved without increasing chlorine dosing. Consequently, the secondary chlorination in the network was switched off on 30 March 2026, and the minimum chlorine residual requirement for the treated water also reduced. Uisce Éireann provided figures on the volumes of chlorine in relation to the primary chlorine pumps and secondary chlorination, a comparison of figures for the week prior to and week post the upgrade, there were a reduction of 190 litres of chlorine required due to the reduction in organics as a result of the upgrade works.		

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.