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	Bantry Derryginagh
Organisation	Uisce Éireann
Scheme Code	0500PUB4101
County	Cork
Site Visit Reference No.	SV34837

Report Detail

Issue Date	30/04/2026
Prepared By	Maeve McHugh

Site Visit Detail

Date Of Inspection	26/03/2026	**Announced**	Yes
Time In	10:00	**Time Out**	12:00
EPA Inspector(s) **Additional Visitors**	Maeve McHugh Sean O'Leary		
Company Personnel	Uisce Éireann: Alan Harrington, Claire Hurley. Cork County Council (working in partnership with Uisce Éireann): Diarmuid O'Mahony.		

Summary of Key Findings

1. The recommendations of the prior audit carried out in 2018, regarding (a) automated switchover of the UV disinfection system and (b) appropriate management of the treatment plant sludge and wastewater; have not been implemented at Bantry Derryginagh Water Treatment Plant (WTP).

2. There are no warning level alarms in place for residual chlorine after contact time.

3. There is no plant shutdown in place based on final water turbidity.

Uisce Éireann should submit a report to the EPA on or before 28/05/2026 detailing the actions taken and planned, with timescales, to close out the eleven recommendations in this audit report.

Introduction

The Bantry Derryginagh Public Water Supply (PWS) supplies an average of 792 m3/day, serving a population of 1,757. It is a single surface water supply, gravity-fed by the nearby Lough Bofinna. The EDEN volume and population figures are incorrect and should be updated as should the scheme source information in EDEN which incorrectly suggests that it has a mixed source.

Treatment at the Bantry Derryginagh Water Treatment Plant (WTP) includes pH balancing with caustic (sodium hydroxide), coagulation (with the dosage of poly aluminium chloride optimised by a streaming current monitor), two rapid gravity filters with manganese dioxide followed by chlorination, UV treatment and fluoridation. UV is used for primary disinfection at the plant.

This audit was undertaken to assess Uisce Éireann's performance in producing clean and wholesome water with a focus on the operation of the plant.

Supply Zones Areas Inspected

The balance tanks, clarifier tanks, rapid gravity filters, chlorine dosing system and UV treatment system at the water treatment plant were inspected.

1. Management and Control

		Answer
1.1	Have the recommendations from the previous EPA audit been satisfactorily addressed?	No

Comment

1. The following recommendations from the previous EPA audit undertaken on 16/11/2018 have not been adequately addressed:

(i) Previous Recommendation: *Irish Water should ensure that there are duty and standby UV disinfection arrangements with automatic changeover in the event of the failure of one of the UV disinfection units. Irish Water should ensure that the UV unit is alarmed and linked to a recording device to ensure that any deviation of the quality of water outside of the validated range for the UV treatment system or failure of the UV disinfection system is immediately detected. Irish Water should submit the complete validation certificate for the current UV unit.*

Update: Based on the Compliance Plan file history it is noted that a standby UV was installed on 07/12/2020 but not yet connected to SCADA and that connection to SCADA was confirmed on 30/06/2023. It was noted at the audit that automatic switchover of the two UV units was intended at 24-hour intervals. The automatic switchover however was problematic and tended to trigger plant shutdowns. For this reason switchover is done manually only. There is a shutdown based on UV dose (40 mJ/cm2 with 3-minute time delay). There is no warning level alarm setting.

(ii) Previous Recommendation: *Irish Water should undertake a review of the current methods for handling and disposal of water treatment sludge and implement suitable measures for the disposal of the sludge.*

Update: No progress has been made to implement suitable measures for the handling and disposal of WTP sludge. The most recent update on file from Uisce Éireann is that 'we are waiting on a Phase 1 Site Assessment to determine project and a timeline will follow'. It was noted at the audit that sludge bleeds from hoppers under the clarifier tanks are done automatically every 2 hours whereas deep scours are done manually once per week. Based on trend data submitted, the filters are backwashed approximately every two to three days. Both sludge and filter backwash water are pumped to an underground tank of 20m3 volume approximately. Due to the size of the underground tank there is limited capacity for any settlement. There is no sludge removal from the plant. Discharge from the underground tank is to a stream which flows by the roadside directly across the road from the WTP. There is no flow meter and no turbidity monitor on the discharge to the stream from the underground tank.

Recommendations:

1. Install an automatic changeover system between duty and standby units of the UV disinfection system without further delay. The system should ensure automatic changeover in the event of the failure of one of the UV disinfection units.

2. Review the current methods of handling and disposal of water treatment sludge to ensure that the practice is not in contravention of the Waste Management Act, as amended. The discharge of water treatment sludge to receiving water, where practiced, should cease immediately. Leachate from stored drinking water sludge should not give rise to environmental pollution.

3. Submit an action programme with timeframes for the proposed interim and long term remedial works to improve sludge handling facilities at the WTP.

2. Operational Audits 2026

		Answer
2.1	Is there a documented alarm response procedure?	No

Comment

1. Uisce Éireann confirmed that there was no site specific documented alarm response procedure.

Recommendation:

4. Ensure that (i) a formal documented site-specific alarm response procedure is in place at the treatment plant and (ii) provide training to relevant staff (including relief and temporary staff) on the requirements of the alarm response procedure.

		Answer
2.2	Are suitable plant shutdowns/inhibits in place to prevent the entry of inadequately treated water entering the distribution network?	No

Comment

1. There are automatic shutdowns on high level turbidity from each of the two rapid gravity filters (0.3 NTUs with a 15 minute delay). There is no shutdown on final water turbidity.

Recommendation:

5. Install an automatic shutdown based on high level turbidity in the final water to prevent the entry of inadequately treated water entering the distribution network.

		Answer
2.3	Are suitable alarm settings in place to alert operators to deteriorating water quality and/or the failure of a critical treatment process?	No

Comment

1. There are no warning level turbidity alarms on individual rapid gravity filters.

2. There are no low or high level warning alarms for residual chlorine at the reservoir outlet.

Recommendations:

6. Install warning level alarms on turbidity for each of the rapid gravity filters.

7. Install high and low warning level alarms on residual chlorine after contact time.

		Answer
2.4	Are treatment processes examined during the audit operating satisfactorily?	No

Comment

1. There are no automated backwashes triggered by turbidity, head loss or time.

2. The filter backwash is controlled manually by the onsite caretaker.

3. A filter turbidity shutdown on 0.3 NTU is in place and results in the filter water running to waste.

4. Hoppers beneath clarifier tanks are bled automatically to the onsite holding tank. Deep scour of the clarifiers with run to waste is carried out manually once a week by the onsite caretaker.

Recommendation:

8. Investigate the feasibility of installing automatic backwashes associated with head loss, turbidity and time on each rapid gravity filter in accordance with the EPA Water Treatment Manual: Filtration.

9. Ensure a formal documented site-specific procedure is in place at the treatment plant to govern all manual aspects of critical processes such as desludging and backwashes.

3. Site Specific Issues

		Answer
3.1	Are the details regarding the supply zone in the EDEN portal correct?	No

Comment

1. The following details in EDEN regarding the supply zone are incorrect: population, volume and source.

Recommendation:

10. Ensure that the details provided in the EDEN portal are correct including population, volume and source.

		Answer
3.2	Are filter media depth gauges clearly visible?	No

Comment

1. The filter media depth gauge on Filter 1 was worn and not clearly visible.

Recommendation:

11. Ensure that all filter media depth gauges are clearly visible.

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.