# 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** | Clashanamid |
| **Organisation** | Uisce Éireann |
| **Scheme Code** | 0500PUB2102 |
| **County** | Cork |
| **Site Visit Reference No.** | SV33010 |

## Report Detail

| | |
|---|---|
| **Issue Date** | 03/10/2025 |
| **Prepared By** | Joanne Creedon |

## Site Visit Detail

| | | | |
|---|---|---|---|
| **Date Of Inspection** | 05/09/2025 | **Announced** | Yes |
| **Time In** | 12:19 | **Time Out** | 12:49 |
| **EPA Inspector(s)**<br><br>**Additional Visitors** | Joanne Creedon | | |
| **Company Personnel** | Uisce Éireann: Claire Hurley, Brian Flinn, Brendan O'Brien, Michael Cussen, Brendan O' Brien.<br>Cork County Council (working in partnership with Uisce Éireann): Joseph Biysl. | | |

## Summary of Key Findings

1. There is only one chlorine dosing pump in place at the plant.

2. There was no chlorine contact time calculation to demonstrate that the target chlorine contact time is being achieved at the plant.

3. A copy of the UV validation certificate should be maintained on-site.

## Introduction

The Clashanamid water treatment plant (WTP) produces approximately 17 m3/d of water serving a population of 19.This audit is an inspection of the Clashanamid WTP and is focused on the disinfection system.

## Supply Zones Areas Inspected

This audit assessed the chlorination and UV disinfection system at Clashanamid WTP.

## 1. Disinfection Audits 2025

| | | Answer |
|---|---|---|
| 1.1 | Is chlorination used for primary disinfection? | No |
| | **Comment** | |
| | Chlorination is secondary. | |

| | | Answer |
|---|---|---|
| 1.2 | Did Uisce Éireann confirm the type of chlorine disinfectant in use? | Yes |

| | | Answer |
|---|---|---|
| 1.3 | Are there duty and standby chlorine dosing pumps in place? | No |
| | **Comment** | |
| | Duty pump only. | |

| | | Answer |
|---|---|---|
| 1.4 | Is there automatic switchover in the event of failure of one of the chlorine dosing pumps? | No |

| | | Answer |
|---|---|---|
| 1.5 | Is the chlorine dosing rate flow proportional? | Yes |

| | | Answer |
|---|---|---|
| 1.6 | Is there a continuous residual chlorine monitor, with alarm, to verify chlorine dosing is taking place at the target level? | Yes |

| | | Answer |
|---|---|---|
| 1.7 | Is there a continuous residual chlorine monitor, with alarm, at a suitable sample location after contact time has been completed? | Yes |

| | Answer |
|---|---|

| | | |
|---|---|---|
| 1.8 | Can data trends from the online residual monitor be viewed on site? | Yes |

| | | Answer |
|---|---|---|
| 1.9 | Are there low and high chlorine alarm settings on each chlorine monitor? | Yes |

**Comment**

Yes, on duty monitor.

| | | Answer |
|---|---|---|
| 1.10 | Is there a documented alarm response procedure for responding to chlorine alarms? | Yes |

| | | Answer |
|---|---|---|
| 1.11 | Have staff been trained on the chlorine alarm response procedure? | Yes |

| | | Answer |
|---|---|---|
| 1.12 | Are chlorine alarms dialled out via a cascade system to allow a timely response by plant operators? | Yes |

| | | Answer |
|---|---|---|
| 1.13 | Is there automatic shutdown of the supply in the event of the chlorine level dropping below the low level or rising above the high chlorine alarm setting? | Yes |

| | | Answer |
|---|---|---|
| 1.14 | Are service due / monitoring instrument calibration dates for the chlorine monitors within date? | Yes |

| | | Answer |
|---|---|---|
| 1.15 | Is the site specific target contact time being achieved? | No |

| | | Answer |
|---|---|---|
| 1.16 | Is the minimum effective contact time of 15 mg. min/l being achieved? | No |

| | | Answer |
|---|---|---|

| | | |
|---|---|---|
| 1.17 | Is the residual chlorine level ≥ 0.1 mg/l at the extremity of the distribution network? | Yes |

| | | Answer |
|---|---|---|
| 1.18 | Is monitoring of network residual chlorine undertaken several times per week? | Yes |

| | | Answer |
|---|---|---|
| 1.19 | Is UV treatment used for primary disinfection? | Yes |
| | **Comment** | |
| | UV is primary. | |

| | | Answer |
|---|---|---|
| 1.20 | Are there duty and standby UV units in operation? | Yes |

| | | Answer |
|---|---|---|
| 1.21 | Is there automatic changeover between the duty and standby UV units? | Yes |

| | | Answer |
|---|---|---|
| 1.22 | Is there automatic shut-off of the supply in the event of UV units failing or operating outside of their validated range? | Yes |

| | | Answer |
|---|---|---|
| 1.23 | Is there continuous monitoring of the UV units to verify operation within validation range at all times? | Yes |

| | | Answer |
|---|---|---|
| 1.24 | Can data trends from the online UV monitor(s) be viewed on-site? | Yes |

| | | Answer |
|---|---|---|
| 1.25 | Is there a documented alarm response procedure for responding to UV alarms? | Yes |

| | | Answer |
|---|---|---|
| 1.26 | Have staff been trained on the UV alarm response procedure? | Yes |

| | | Answer |
|---|---|---|
| 1.27 | Are UV alarms dialled out via a cascade system to allow a timely response by plant operators? | Yes |

| | | Answer |
|---|---|---|
| 1.28 | Are service due / monitoring instrument calibration dates for the UV units within date? | Yes |

| | | Answer |
|---|---|---|
| 1.29 | Is the UV disinfection system validated to an appropriate international standard ? | No |

| | | Answer |
|---|---|---|
| 1.30 | Did UÉ confirm that the UV disinfection system is operating within the validated range? | Yes |

## Recommendations

| | | | |
|---|---|---|---|
| **Subject** | Clashanamid Disinfection Audit | **Due Date** | 03/11/2025 |
| **Action Text** | **Uisce Éireann is responsible for ensuring a clean and wholesome supply of drinking water and should implement the following recommendations without delay.**<br><br>1. Install duty and standby chlorine dosing pumps with automatic switch over in the event of the failure of one of the pumps.<br>2. Submit a calculation of the effective contact time to the EPA and demonstrate that the target contact time is being achieved.<br>3. Ensure that the UV disinfection system is validated to an appropriate international validation standard and that a copy of the validation certificate is maintained.<br><br>**Actions required by Uisce Éireann**<br><br>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.<br><br>Uisce Éireann should submit a report to the EPA on or before 03/11/2025 detailing the actions taken and planned, with timescales, to close out the above recommendations.<br><br>The EPA advises that the findings and recommendations from this audit report should, where relevant, be addressed at other public water supplies. | | |