

# Site Visit Report

Under the European Union (Drinking Water) Regulations 2014 as amended, the Environmental Protection Agency is the supervisory authority in relation to Irish Water and its role in the provision of public water supplies. This Audit was carried out to assess the performance of Irish Water in providing clean and wholesome water to the visited public supply.

The audit process is a sample on a given date of the facility's operation. Where a finding against a particular issue has been reported this should not be construed to mean that this issue is fully addressed.

| Water Supply Zone               |                          |
|---------------------------------|--------------------------|
| <b>Name of Installation</b>     | West Clare RWS (New WTP) |
| <b>Organisation</b>             | Irish Water              |
| <b>Scheme Code</b>              | 0300PUB1066              |
| <b>County</b>                   | Clare                    |
| <b>Site Visit Reference No.</b> | SV25465                  |

| Report Detail      |                 |
|--------------------|-----------------|
| <b>Issue Date</b>  | 29/04/2022      |
| <b>Prepared By</b> | Orla Harrington |

| Site Visit Detail          |   |                  |       |
|----------------------------|---|------------------|-------|
| <b>Date Of Inspection</b>  | 04/04/2022  | <b>Announced</b> | Yes   |
| <b>Time In</b>             | 10:50   | <b>Time Out</b>  | 12:45 |
| <b>EPA Inspector(s)</b>    | Orla Harrington   |                  |       |
| <b>Additional Visitors</b> |   |                  |       |
| <b>Company Personnel</b>   | Irish Water: Deirdre O'Loughlin, Duane O'Brien, James Fraher<br><br>Clare County Council (working under Service Level Agreement to Irish Water):<br>Derek Troy, Anthony McNamara, Noreen Shannon. |                  |       |

## > Summary of Key Findings

1. Irish Water has not complied with the EPA's Regulation 16(1) Direction, issued on the 28/11/2019, to ensure that the drinking water supplied to the customers on the West Clare Regional Water Supply New Water Treatment Plant complies with the trihalomethane parametric value of 100ug/l by the 31/12/2021. Irish Water have advised the EPA that the projected date of completion of remedial works is 30/06/2022 which is beyond the Direction deadline.
2. The West Clare public water supply is on the EPA's Remedial Action List under two categories: 'Elevated Levels of Trihalomethanes above the Drinking Water Regulations' and 'EPA Audit Observation - Treatment and Management Issues'. The auditor found that all upgrades at the plant were at an advanced stage, which should enable the West Clare public water supply to be removed from the EPA's Remedial Action List, subject to verification of the effectiveness of the works to the satisfaction of the EPA.
3. Trihalomethane levels in the West Clare public water supply continue to breach the limits in the European Union (Drinking Water) Regulations 2014, as amended and it is expected to be the case until all upgrades are complete.

## > Introduction

The West Clare Regional Water Supply (RWS) new water treatment plant (WTP) serves a population of 8,702 with a volume of approximately 10,808 m<sup>3</sup>/day. The source of the supply is Doolough Lake. Treatment consists of pH correction, coagulation, clarification, rapid gravity filtration, chlorination with sodium hypochlorite and fluoridation. There is sludge treatment on-site, consisting of a picket fence thickener and dewatering units.

The purpose of the audit was to determine progress with the EPA's Regulation 16(1) Direction regarding compliance with the trihalomethane (THM) parametric value and to assess the performance of Irish Water in progressing works to remove West Clare public water supply (PWS) from the EPA's Remedial Action List (RAL).

## > Supply Zones Areas Inspected

The audit consisted of interviews with staff and an inspection of the treatment plant to verify progress with the remedial works.



## 1. Supply on the Remedial Action List

|  | Answer   |
|--|--|
| 1.1  | Is the Action Programme on track to meet the Remedial Action List completion date? |
|  | Yes  |
| <b>Comment</b>   |  |
| <p>1. The West Clare PWS was placed on the EPA's RAL on 27/10/2017 as a result of persistent THM failures and a second category was added 'EPA Audit Observation - Treatment and Management Issues' in Quarter 2 2021 following an EPA audit on 05/05/2021. The audit found that the plant had serious deficiencies regarding management and control, which included a lack of turbidity alarms and shutdown, automated dosing and switchover, adequate storage and settlement capacity for sludge treatment.</p> <p>2. Irish Water confirmed at the audit that a Design Build Operate (DBO) contract was awarded to Ward &amp; Burke Construction Limited and works commenced on site in August 2020. Irish Water presented a document entitled 'Upgrade of Doolough (New) Water Treatment Plant' version 5 during the audit which explained the project scope of works to be delivered by the contractors with a completion date of 30/06/2022.</p> <p>3. The audit confirmed the following remedial works have been completed at the West Clare RWS (new WTP):</p> <ul style="list-style-type: none"><li>• Polyelectrolyte dosing pumps</li><li>• Flash mixing tank and mechanical mixer</li><li>• Flocculation tank</li><li>• Tube settlers in clarifier</li><li>• Run to waste facility</li><li>• Conversion of single to dual media on 2 of the 6 filters</li><li>• Pipework for new dosing point post filtration</li><li>• Treated water transfer pumps and rising main to West Clare RWS (old WTP)</li><li>• Picket fence thickener</li></ul> <p>4. The auditor noted that remedial works to improve plant performance and address the elevated levels of THMs are at an advanced stage. Irish Water outlined that the required information and data to verify the effectiveness of the works will be collated and submitted to the EPA for assessment, which should enable the EPA to consider the West Clare PWS for removal from the RAL.</p> |  |



## 2. Site Specific Issues

|   | Answer  |    |
|---|---|----|
| 2.1   | Has Irish Water complied with the Direction by the deadline 31/12/21? | No |
| <b>Comment</b>  |   |    |
| <p>A Direction was issued to Irish Water on 28/11/2019 under Regulation 16(1) of the European Union (Drinking Water) Regulations 2014, as amended. The Direction required Irish Water to comply with the THM parametric value of 100ug/l by 31/12/2021. The Direction has not been complied with, however it was evident during the audit that the remedial works are at an advanced stage.</p> |   |    |

|   | Answer  |     |
|---|---|-----|
| 2.2   | Is further information needed to assess compliance with the Regulation 16(1) Direction? | Yes |
| <b>Comment</b>  |   |     |
| <p>1. THMs continue to exceed the parametric value of 100 µg/l as set out in the Drinking Water Regulations 2014, as amended. Since the Direction deadline, there have been THM exceedances found in samples taken on 22/02/2022 and 23/02/2022.</p> <p>2. Three rounds of compliant THM results in the distribution network will be required to assess compliance with the Regulation 16(1) Direction.</p> |   |     |

## Recommendations

|                    |   |                 |            |
|--------------------|---|-----------------|------------|
| <b>Subject</b>     | West Clare RWS (new WTP) Audit Recommendations<br>[04/04/22]  | <b>Due Date</b> | 26/05/2022 |
| <b>Action Text</b> | <p><b>Recommendations</b></p> <p><b>Irish Water is responsible for ensuring a safe and secure supply of drinking water. To address these issues, Irish Water should implement the following recommendations without delay:</b></p> <ol style="list-style-type: none"><li>1. Irish Water should complete the proposed upgrade works detailed in the document 'Upgrade of Doolough (New) Water Treatment Plant' version 5.0 date 16/12/20 to support the proposal for removal of the West Clare PWS from the RAL.</li><li>2. Irish Water should submit verification data, as set out in Section 6 of the <i>EPA Handbook on the implementation of the Regulations for Water Service Authorities for Public Water Supplies</i>, to support the proposal for removal of West Clare PWS from the RAL.</li></ol> <p><b>Follow-Up Actions required by Irish Water</b></p> <p>During the audit, Irish Water representatives were advised of the audit findings and that action must be taken as a priority by Irish Water to address the issues raised.</p> <p>This report has been reviewed and approved by Ruth Barrington, Drinking Water Team Leader.</p> <p>Irish Water should submit a report to the Agency on or before 27/05/2022 detailing how it has dealt with the issues of concern identified during this audit.</p> <p>The report should include details on the action taken and planned to address the various recommendations, including time frame for commencement and completion of any planned work.</p> <p>The EPA also advises that the findings and recommendations from this audit report should, where relevant, be addressed at all other treatment plants operated and managed by Irish Water.</p> |                 |            |