



# Drinking Water Audit Report

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| <b>County:</b>           | Leitrim   | <b>Date of Audit:</b>                 | 16 <sup>th</sup> May 2014               |
| <b>Plant(s) visited:</b> | Drumcong PWS<br>Scheme Code<br>1700PUB1248  | <b>Date of issue of Audit Report:</b> | 17 <sup>th</sup> June 2014              |
|                          |   | <b>File Reference:</b>                | DW2014/244                              |
|                          |   | <b>Auditors:</b>                      | Ms Ruth Barrington<br>Mr David O'Connor |
| <b>Audit Criteria:</b>   | <ul style="list-style-type: none"> <li>• The <i>European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014)</i>.</li> <li>• The <i>EPA Handbook on the Implementation of the Regulations for Water Services Authorities for Public Water Supplies (ISBN: 978-1-84095-349-7)</i></li> <li>• The recommendations specified in the EPA Report on <i>The Provision and Quality of Drinking Water in Ireland</i>.</li> </ul> |                                       |   |

## MAIN FINDINGS

- i. **The Drumcong PWS is supplied from a borehole abstraction with no disinfection.**
- ii. **At the time of the audit, the manganese filters (the only treatment provided) were being bypassed.**

## 1. INTRODUCTION

Under the *European Union (Drinking Water) Regulations 2014* 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 drinking water.

Where the text of this report refers to the Water Service Authority, this refers to Irish Water in accordance with Section 7 of the Water Services (No. 2) Act 2013.

The Drumcong PWS supplies an estate of approximately 30 houses at Drumcong Co. Leitrim (population unknown). The staff estimated that about 3 m<sup>3</sup>/day is produced by the borehole. The only treatment provided is a manganese removal filter. There is no disinfection on the supply.

The opening meeting commenced at 10.40 a.m. at Drumcong. The scope and purpose of the audit were outlined at the opening meeting. The audit process consisted of interviews with staff, review of records and observations made during an inspection of the treatment plant.

The audit observations and recommendations are listed in Section 2 and 4 of this report.

The following were in attendance during the audit.

Representing Irish Water: (\* indicates that person was also present for the closing meeting)

Mr Justin Doran – Wastewater Engineer, Irish Water\*

Ms Maeve Coultry – Executive Technician, Leitrim County Council\*

Ms Collette Connolly – Environmental Technician, Leitrim County Council\*

Mr Oliver Galligan – Clerk of Works, Leitrim County Council

Representing the Environmental Protection Agency:

Ms Ruth Barrington – Inspector\*

Mr David O'Connor – Inspector\*

## 2. AUDIT OBSERVATIONS

*The audit process is a random sample on a particular day of a facility's operation. Where an observation or recommendation against a particular issue has not been reported, this should not be construed to mean that this issue is fully addressed.*

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|-----------|---|
| <b>1.</b> | <b>Source Protection</b><br><br>a. The borehole and reservoir are located within an area surrounded by forestry immediately uphill with agricultural land to either side. The houses served by the borehole are located downhill from this area.<br>b. The borehole has been in place for approximately 12 years and the construction details were unknown. The borehole and manganese filtration was installed on behalf of Leitrim County Council to supply a local authority development of initially 19 houses, later increased to 30 houses.<br>c. The wellhead is in a concrete chamber with a metal cover at ground level. There was no evidence of surface water ingress into the chamber at the time of the audit, however the lack of seals and the fact that the cover was flush with the ground surface could lead to a risk of water ingress during wet conditions.<br>d. No <i>Cryptosporidium</i> risk assessment has been done on the source and there has not been any recent catchment work that staff were aware of.<br>e. Land owners have not been written to with regard to their obligations under the <i>European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2014 (SI No.31 of 2014)</i> . |
| <b>2.</b> | <b>Treatment</b><br><br>a. The only treatment in place is manganese filtration, which at the time of the audit was being bypassed. The filtration was installed 7 years ago and the media is due for replacement according to staff. There was no completion date available for this work, which is planned to include the installation of additional filter capacity.<br>b. There is no disinfection in place on the supply.<br>c. There is no means of taking a raw water sample at the borehole before the manganese filter. Samples are taken from consumers' taps in supply.<br>d. There were no microbiological detections in the sample results available at the audit, based on two samples per year since 2008.  |

## 3. AUDITOR'S COMMENTS

The combination of a lack of treatment (disinfection) and an inability to sample raw water at the borehole means that the water supplier cannot demonstrate compliance with Regulation 4 for the provision of clean and wholesome water to consumers.

## 4. RECOMMENDATIONS

### Source Protection

1. The Water Services Authority should use the Cryptosporidium Risk Screening Methodology as outlined in *EPA Handbook on the Implementation of the Regulations for Water Services Authorities for Public Water Supplies (ISBN: 978-1-84095-349-7)* to determine the relative risk of contamination of the supply with *Cryptosporidium*. Following the risk screening the Water Services Authority should identify and implement measures to reduce the risk at the plant.
2. The Water Services Authority should implement the requirements of the *European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2014 (SI No.31 of 2014)* to ensure, unless an alternative setback distance has been set as per Article 17 that:
  - i. Organic fertiliser or soiled water is not applied to land within 100 m of the abstraction point (assuming a population of 50 or more); and
  - ii. Farmyard manure held in a field prior to landspreading is not placed within 250 m of the abstraction point (assuming a population of 50 or more).
3. The Water Services Authority should install a raw water sampling point and carry out regular monitoring on the raw water source prior to filtration/treatment. Monitoring for microbiological parameters, turbidity and UVT should be carried out as an indicator of trends in assessing water quality and to determine the degree of treatment and controls required in the supply.
4. The Water Services Authority should install a suitable seal on the borehole chamber cover, and ensure that the edge of the chamber is above ground level to prevent the ingress of surface water.

### Treatment

5. The Water Services Authority should carry out the necessary works at the manganese filters to bring them back into service and provide the required capacity for manganese removal.
6. The Water Services Authority should install an appropriate disinfection system to provide clean and wholesome water to consumers, having regard to the EPA's *Disinfection Manual*.

## FOLLOW-UP ACTIONS REQUIRED BY IRISH WATER

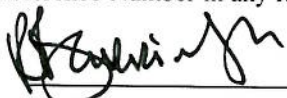
During the audit the Water Services Authority representatives were advised of the audit findings and that action must be taken as a priority by the Water Services Authority to address the issues raised. This report has been reviewed and approved by Mr Darragh Page, Drinking Water Team Leader.

The Water Services Authority should submit a report to the Agency within one month of the date of this audit report detailing how it has dealt with the issues of concern identified during this audit. The report should include details on the action taken and planned to address the various recommendations, including timeframe for commencement and completion of any planned work.

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.

Please quote the File Reference Number in any future correspondence in relation to this Report.

Report prepared by:



Ruth Barrington

Inspector

Date:

17/06/2014

