



# Drinking Water Audit Report

<b>County:</b>	Donegal	<b>Date of Audit:</b>	3 <sup>rd</sup> April 2017
<b>Plant(s) visited:</b>	Fintown Drinking Water Treatment Plant	<b>Date of issue of Audit Report:</b>	13 <sup>th</sup> April 2017
		<b>File Reference:</b>	DW2010/1
		<b>Auditors:</b>	Ms Derval Devaney
<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>• <i>The 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 <i>EPA Drinking Water Report</i>.</li> <li>• EPA Drinking Water Advice Notes No.s 1 to 15.</li> <li>• The recommendations in previous audit reports.</li> <li>• The Regulation 10(4) Direction issued by the EPA on 11<sup>th</sup> December 2014 and associated Action Programme.</li> </ul>		

## MAIN FINDINGS

- i. **Irish Water has not met the requirement of the EPA’s Regulation 10(4)(c) Direction issued on 11<sup>th</sup> December 2014 and associated agreed Action Programme to address THMs failures in the supply by the 11<sup>th</sup> February 2017, as there is insufficient treatment at Fintown Water Treatment Plant to prevent THMs formation.**
- ii. **The upgrade of the Lettermacaward PWS, which is the long-term plan for supplying water to Fintown PWS, is planned to be complete by the end of 2018.**
- iii. **The interim measure to connect Fintown PWS to Glenties PWS is in progress with the installation of a new 4.9 km pipeline underway. The Fintown PWS will not be made redundant until October 2017 when Air Stripping and UV treatment is in place at Glenties WTP to address the THMs issues there. Irish Water state the interim measure will rectify the THMs issue at Fintown PWS.**

## 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 and to determine compliance with the EPA’s Regulation 10(4) Direction issued to Irish Water on 11<sup>th</sup> December 2014 and subsequent Action Programme approved by the EPA on 11<sup>th</sup> February 2015 in accordance with Regulation 10(4) 10(6) regarding compliance with the trihalomethanes (THMs) parametric value.

The Fintown Public Water Supply (PWS) is on the EPA’s Remedial Action List (RAL), as the supply has continuous THMs failures dating back to November 2008 with concentrations up to six times the parameter value of 100 µg/l. The source of the supply is taken from Lough Muck or a mountain stream which feeds Lough Muck (whichever source has the better water quality). The raw water passes

through a rotating 60 micron screen for initial screening. The four granular activated carbon pressurised filters were taken off-line in January 2016 due to a HSQE risk posed. Treatment at the plant consists of air stripping (in an effort to reduce THM concentrations in the supply) and chlorination.

The average flow through the plant is 209 m<sup>3</sup>/day supplying a population of approximately 350 persons.

Since the last EPA audit in 2009 the pressure filters have been taken off-line (since January 2016), THM air stripping was introduced (in September 2013) and there is automatic changeover between the duty and standby chlorine dosing pump.

The opening meeting commenced at approximately 12.30 pm at Fintown Water Treatment Plant. 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 audits observations and recommendations are listed in Section 2 and 4 of this report. The following were in attendance during the audit.

<p>Representing Irish Water:</p> <p>Sarah Casey, IW Analyst; Yvonne McMonagle, IW Compliance; John McElwaine, IW Capital Projects Lead; Hugh Kerr, Chief Technician, Donegal Co. Co. Con O'Donnell, Waterworks Inspector, Donegal Co. Co; Sean Flanagan, Water Inspector, Donegal Co. Co; Brendan Doherty, Electrician, Donegal Co. Co.</p> <p>Representing the Environmental Protection Agency:</p> <p>Derval Devaney, Inspector.</p>
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## 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.*

<p><b>1.</b></p>	<p><b>Interim Solution</b></p> <ol style="list-style-type: none"> <li>a. The interim solution as outlined in Irish Water's 2<sup>nd</sup> progress report dated 23<sup>rd</sup> December 2015 was to connect the Fintown PWS to the Glenties PWS by Q3, 2016 and thereby make the Fintown Water Treatment Plant redundant.</li> <li>b. Irish Water stated during its meeting with the EPA on 6<sup>th</sup> March 2017 that 2.9 km of the pipeline interconnection to Glenties PWS is complete and during the audit Irish Water stated that the pipeline (4.9 km in total) will be complete in April 2017.</li> <li>c. Irish Water stated that the Fintown PWS will not be switched over to the Glenties PWS until air stripping and UV treatment is in place in place at the Glenties WTP due to the THMs failures and <i>Cryptosporidium</i> risk that currently exists in the Glenties supply. Irish Water stated that the Glenties WTP is to be upgraded and Fintown made redundant by the end of October 2017.</li> <li>d. The Fintown Water Treatment Plant (WTP) was in operation during the audit with no upgrade to the treatment process since the Direction was issued on 11<sup>th</sup> December 2014.</li> <li>e. The four granular activated carbon pressurised filters were taken off-line in January 2016 due to a HSQE risk they posed. The EPA was not informed of this action until the day of the audit.</li> <li>f. Irish Water stated it expects this interim measure will resolve the THMs issue as the Glenties supply has a lower level of THMs failures than Fintown PWS and therefore it is expected that the air stripping process proposed for Glenties WTP will be successful.</li> </ol>
<p><b>2.</b></p>	<p><b>Long-term Solution</b></p> <p>The long-term solution as outlined in the approved Irish Water Action Programme dated 11<sup>th</sup> February 2015 included:</p> <ol style="list-style-type: none"> <li>a. Doubling the throughput of Lettermacaward WTP;</li> </ol>

	<ul style="list-style-type: none"> <li>b. Laying approx. 10.7 km of new pipework to supply water from Lettermacaward PWS to Glenties and Fintown;</li> <li>c. Decommissioning of existing Glenties WTP and Fintown WTP.</li> </ul> <p>In accordance with Regulation 10(4) and 10 (6), the Action Programme submitted by Irish Water dated 30<sup>th</sup> January 2015 was amended and approved by the EPA on 11<sup>th</sup> February 2015 and directed Irish Water to complete the proposed upgrade works to ensure compliance with the THMs parametric value in the Fintown PWS as soon as possible but no later than 11<sup>th</sup> February 2017.</p> <p>During the audit, Irish Water stated that it proposes to replace Fintown PWS with the Glenties PWS once the Glenties supply is upgraded. The Glenties upgrade works are proposed to address the THMs issue in Fintown PWS. The timeframe provided during the audit for completion these works is by October 2017.</p> <p>During Irish Water’s meeting with the EPA on 6<sup>th</sup> March 2017 Irish Water stated that the longer term upgrade to connect Fintown and Glenties to Lettermacaward is due by the end of 2018.</p>
<p><b>3.</b></p>	<p><b>Water Quality - THMs Monitoring</b></p> <ul style="list-style-type: none"> <li>a. The audit found that THMs continue to fail to comply with the parametric value of 100 µg/l as set out in the <i>European Union (Drinking Water) Regulations 2014</i> (S.I. 122 of 2014).</li> <li>b. THMs are monitored monthly by Irish Water and the most recent THMs results for 2016 and 2017 were reviewed during the audit. The values reported were 160 µg/l on 28/09/2016, 207 µg/l and 263 µg/l on 08/11/2016, 157 µg/l on 12/12/2016, 73 µg/l on 23/01/2017 and 93 µg/l on 13/02/2017.</li> <li>c. During the audit the water supplier stated that complaint results for January and February 2017 were attributed to the air stripping unit at Fintown WTP and source water quality at this time of year. It was stated that this unit is only capable of removing a certain percentage of THMs that are present in the final water and hence THMs failures continue to occur seasonally when raw water colour is greatest.</li> </ul>

### 3. AUDITORS COMMENTS

The EPA issued a Direction to Irish Water on 11<sup>th</sup> December 2014 requesting it to submit an Action Programme to address the persistent THMs failures in the Fintown PWS.

In accordance with Regulation 10(4) and 10 (6), the Action Programme submitted by Irish Water dated 30<sup>th</sup> January 2015 was amended and approved by the EPA on 11<sup>th</sup> February 2015 and directed Irish Water to complete the proposed upgrade works to ensure compliance with the THMs parametric value in the Fintown PWS as soon as possible but no later than 11<sup>th</sup> February 2017.

Irish Water’s most recent bi-annual progress report dated 22<sup>nd</sup> December 2016 states it is investing up to €15 million to tackle the THMs issue in Fintown PWS by upgrading the Lettermacaward PWS and extending its network thereby making the current water treatment plants at Fintown and Glenties redundant. While the completion date for the proposed long-term works provided in this report is Q4 2018, the interim measure to address THMs in the Fintown PWS by upgrading and connecting to the Glenties Supply is October 2017. The EPA noted during the audit that the interim measures proposed to address the THMs failures in Fintown PWS goes beyond the Direction deadline of 11<sup>th</sup> February 2017. Irish Water’s monitoring reports show THMs continuing to fail to comply with the parametric value of 100 µg/l as set out in the *European Union (Drinking Water) Regulations 2014* (S.I. 122 of 2014).

#### 4. RECOMMENDATIONS

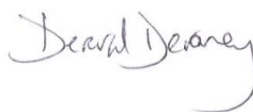
1. Irish Water shall carry out the proposed upgrade works as soon as practicable to ensure that the final water is compliant with the THMs parametric value of 100 µg/l as set out in the *European Union (Drinking Water) Regulations 2014* (S.I. 122 of 2014) and shall notify the EPA when the supply is replaced.
2. Irish Water should carry out monitoring for THM following the replacement of the Fintown PWS with the Glenties PWS to verify the effectiveness of the actions undertaken and submit the results to the EPA.
3. Irish Water shall notify the EPA if there are any further changes to the treatment process of the Fintown PWS.

#### FOLLOW-UP ACTIONS REQUIRED BY IRISH WATER

During the audit Irish Water representatives were advised of the audit findings and that there was a breach in meeting the legal requirements of the Regulation 10(4)(c) Direction issued by the EPA on 11<sup>th</sup> December 2014 and as a result further enforcement action may follow. This report has been reviewed and approved by Mr Darragh Page, Senior Inspector.

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

**Report prepared by:**



**Date:**

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Derval Devaney  
Inspector

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13<sup>th</sup> April 2017