



Drinking Water Audit Report

County:	Donegal	Date of Audit:	3 rd April 2017
Plant(s) visited:	Portnoo-Narin Drinking Water Treatment Plant	Date of issue of Audit Report:	13 th April 2017
		File Reference:	DW2010/160
		Auditors:	Ms Derval Devaney
Audit Criteria:	<ul style="list-style-type: none"> • The <i>European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014)</i>. • <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> • The recommendations specified in the <i>EPA Drinking Water Report</i>. • EPA Drinking Water Advice Notes No.s 1 to 15. • The Regulation 10(4) Direction issued by the EPA on 11th December 2014 and associated Action Programme. 		

MAIN FINDINGS

- i. **Irish Water has not met the requirement of the EPA’s Regulation 10(4)(c) Direction issued on 11th December 2014 and associated agreed Action Programme to address THMs failures in the supply by the 11th February 2017, as there is insufficient treatment at Portnoo-Narin Water Treatment Plant to prevent THMs formation.**
- ii. **The interim measure to connect the Portnoo supply to Lettermacaward PWS is in progress with pipeline works due for completion by the end of May 2017. This connection, in addition to the installation of tube settlers at Lettermacarward WTP by the end of April 2017, are proposed to rectify the THMs issue at Portnoo-Narin PWS.**
- iii. **The recent THMs failures in the Lettermacaward PWS are to be addressed via an imminent network upgrade in the vicinity of the failures.**

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 11th December 2014 and subsequent Action Programme approved by the EPA on 11th February 2015 in accordance with Regulation 10(4) 10(6) regarding compliance with the trihalomethanes (THMs) parametric value.

The Portnoo-Narin Public Water Supply (PWS) is on the EPA’s Remedial Action List (RAL), as the supply has continuous THMs failures dating back to October 2010. The source of the supply is taken from Lough Birroge. Treatment at the plant consists of filtration (via three slow sand filters) and chlorination.

The average flow through the plant is 116 m³/day supplying a population of approximately 484 persons.

The opening meeting commenced at approximately 11.10 am at Portnoo-Narin 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.

Representing Irish Water:

Sarah Casey, IW Analyst; Yvonne McMonagle, IW Compliance; John McElwaine, IW Capital Projects Lead; Hugh Kerr, Chief Technician, Donegal Co. Co. Michael Breslin, Waterworks Inspector, Donegal Co. Co; Paul O'Donnell, Waterworks Supervisor, Donegal Co. Co.

Representing the Environmental Protection Agency:

Derval Devaney, 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.

<p>1.</p>	<p>Interim Solution</p> <p>a. The interim solution, as outlined in Irish Water's 2nd progress report dated 23rd December 2015, was to connect the Portnoo-Narin PWS to the Lettermacaward PWS and thereby making the Portnoo-Narin Water Treatment Plant redundant. The stated completion date in this progress report was by Q3, 2016.</p> <p>b. In this progress report Irish Water proposed to install tube settlers at the Lettermacaward WTP by Q2, 2016 to provide the extra capacity required to allow the Portnoo-Nairn supply to be connected.</p> <p>c. During the EPA's meeting with Irish Water on 6th March 2017, Irish Water stated that progress with pipe laying was slow due to encountering rock and 500 m of the 4.5 km interconnection to Lettermacaward PWS was complete at that time.</p> <p>d. During this audit, Irish Water stated that the tube settlers will be installed in Lettermacaward by the end of April 2017 and pipe laying will be complete by the end of May 2017.</p> <p>e. During the audit Irish Water stated that Portnoo-Narin PWS will be complaint for THMs once the plant is replaced by the Lettermacaward PWS by the end of May 2017.</p> <p>f. The Portnoo-Narin Water Treatment Plant (WTP) was in operation during the audit with no change to the treatment since the Direction was issued on 11th December 2014.</p>
<p>2.</p>	<p>Long-term Solution</p> <p>The long-term solution as outlined in the approved Irish Water Action Programme dated 11th February 2015 included:</p> <p>a. A doubling of the Lettermacaward WTP capacity;</p> <p>b. Impoundment of Derkmore Lough to increase safe yield;</p> <p>c. Approx. 4km of new pipework to supply Portnoo from Lettermacaward allowing the existing Portnoo WTP to be decommissioned.</p> <p>In accordance with Regulation 10(4) and 10 (6), the Action Programme submitted by Irish Water dated 30th January 2015 was amended and approved by the EPA on 11th February 2015 and directed Irish Water to complete the proposed upgrade works to ensure compliance with the THMs parametric value in the Portnoo-Narin PWS as soon as possible but no later than 11th February 2017.</p> <p>Irish Water's progress report dated 22nd December 2016 states the long-term works will be complete by the end of 2018.</p>

	<p>During the audit Irish Water stated that Portnoo-Narin PWS will be replaced by Lettermacaward PWS once the interim measures (as listed in Point 1 above) are complete. Irish Water stated during the audit that these interim works are proposed to address the THMs issue in Portnoo-Narin PWS. The timeframe provided during the audit for completion of these works was by the end of May 2017.</p>
<p>3.</p>	<p>Water Quality - THMs Monitoring</p> <ul style="list-style-type: none"> a. The audit found that THMs continue to persistently fail to comply with the parametric value of 100 µg/l in the Portnoo-Narin PWS as set out in the <i>European Union (Drinking Water) Regulations 2014</i> (S.I. 122 of 2014). 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 156 µg/l on 13/12/16 and 163 µg/l on 23/01/17. a. The recent THMs failures in the Lettermacaward PWS (126 µg/l on 12/12/16 and 110 µg/l on 10/01/17) were discussed during the audit and Irish Water stated that the cause was attributed to the network. An upgrade in the vicinity of these failed locations in the coming week will address this matter. Irish Water stated it would keep the EPA informed on the progress of this open file (Lettermacaward PWS – THM DW2017/3) and further THM monitoring at these locations.

3. AUDITORS COMMENTS

The EPA issued a Direction to Irish Water on 11th December 2014 requesting it to submit an Action Programme to address the persistent THMs failures in the Portnoo-Narin PWS.

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

Irish Water's most recent bi-annual progress report dated 22nd December 2016 states the upgrade of the Portnoo-Narin PWS is part of a major investment with the expansion of the Lettermacaward WTP to tackle the THMs issue in Portnoo –Narin PWS thereby making the current water treatment plant at Portnoo-Narin redundant. However the completion date for the proposed works provided during the audit is the end of May 2017, which goes beyond the Direction deadline of 11th February 2017. The Portnoo-Narin PWS continues to fail to meet 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 is likely to do so until such time as the supply is replaced.

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 Portnoo-Nairn PWS with the Lettermacaward PWS to verify the effectiveness of the actions undertaken and submit the results to the EPA.

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 11th 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:

Derval Devaney
Inspector

13th April 2017