



Drinking Water Audit Report

County:	Donegal	Date of Audit:	3 rd April 2017
Plant(s) visited:	Rathmullan Drinking Water Treatment Plant	Date of issue of Audit Report:	13 th April 2017
		File Reference:	DW2009/172
		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>. • 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> • The recommendations specified in the <i>EPA Drinking Water Report</i>. • EPA Drinking Water Advice Notes No.s 1 to 15. • The recommendations in previous audit reports. • The Regulation 10(4) Direction issued by the EPA on 11th April 2016 and associated Action Programme. 		

MAIN FINDINGS

- Irish Water has not met the requirement of the EPA's Regulation 10(4)(c) Direction issued on 11th April 2016 and associated agreed Action Programme to address THMs failures in the supply by the 28th February 2017, as there is insufficient treatment at Rathmullan Water Treatment Plant to prevent THMs formation.
- The upgrade of the Letterkenny PWS, to include connecting this supply to Rathmullan PWS via an interconnecting pipeline to Milford PWS, is the long-term solution planned to be completed in Q4 2018.
- Irish Water has accelerated elements of the long-term solution to address the THMs issue at Rathmullan PWS by connecting it to the Milford PWS. This interconnection is in progress with pipeline works planned to be complete by the end of April 2017. These interim works will enable the Rathmullan WTP to be decommissioned and will rectify the THMs issue in the Rathmullan 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 11th April 2016 and subsequent Action Programme approved by the EPA on 1st July 2016 in accordance with Regulation 10(4) 10(6) regarding compliance with the trihalomethanes (THMs) parametric value.

The Rathmullan Public Water Supply (PWS) is on the EPA's Remedial Action List (RAL), as the supply has continuous THM failures dating back to April 2010. The source of the supply is taken from Gort Lough where the colour varies seasonally and iron levels are naturally elevated. The raw water is

screened at source for the removal of coarse material. Treatment at the plant consists of rapid gravity filtration and chlorination.

The audit found that the Milford WTP supplies 50% of the water serving the Rathmullan PWS. The Rathmullan WTP provides on average 273 m³/day to its headworks reservoir at Glencross and serves a population of 591 persons. Since the last EPA's audit in 2011 the oxidation process was removed (it proved unsuccessful in dealing with the iron issue at source) and the filter media was replaced.

The opening meeting commenced at 3:30 pm at Rathmullan 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. John McBride, Waterworks Inspector, Donegal Co. Co; John McCarron, Senior Executive Engineer, Donegal Co. Co; Gerry Keeney, Executive Engineer, Donegal Co. Co; James McHugh, 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.

1. Long-term Solution and Accelerated Works

The long-term solution as outlined in the approved Irish Water Action Programme dated 1st July 2016 included:

- a. Providing a new WTP at Letterkenny PWS;
- b. Rehabilitation of water infrastructure and construction of approximately 16 km inter-connecting pipeline to link Letterkenny PWS with adjoining schemes (Cranford, Milford and Rathmullan PWS);
- c. Decommissioning of existing Rathmullan WTP.

Accelerated Works were also outlined in the approved Irish Water Action Programme dated 1st July 2016 which included:

- a. Advance the tendering of interconnections between Rathmullan PWS and Milford PWS;
- b. Cease water production at Rathmullan PWS and supply from Milford PWS to comply with the THMs parametric value;
- c. Commence works in Q3 2016 with construction to be completed by the end of February 2017.

In accordance with Regulation 10(4) and 10 (6), the Action Programme submitted by Irish Water dated 14th June 2016 was approved by the EPA on 1st July 2016 and directed Irish Water to complete the proposed upgrade works to ensure compliance with the THMs parametric value in the Rathmullan PWS as soon as possible but no later than 28th February 2017.

During the audit, Irish Water stated that the Milford WTP supplies 50% of the water serving the Rathmullan PWS and 3.1km of the 3.25 km interconnection has been constructed. Irish Water proposes to replace Rathmullan PWS with the Milford PWS once the pipeworks and associated pumping stations are in place. The timeframe provided during the audit for completion of these

	works was by the end of April 2017.
2.	<p>Water Quality - THMs and Iron 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 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 2017 were reviewed during the audit. The values reported were 157 µg/l on 23/01/17 and 145 µg/l on 20/02/17. c. The audit found that iron continues to persistently fail the parametric value of 200 µg/l as set out in the <i>European Union (Drinking Water) Regulations 2014</i> (S.I. 122 of 2014). d. Iron is monitored monthly by Irish Water and the most recent iron results for 2017 were reviewed during the audit. The values reported were 541 µg/l on 23/01/17 and 548 µg/l on 20/02/17. The results during 2016 were up to five times greater than the parametric value of 200 µg/l.

3. AUDITORS COMMENTS

The EPA issued a Direction to Irish Water on 11th April 2016 requesting it to submit an Action Programme to address the persistent THMs failures in the Rathmullan PWS.

In accordance with Regulation 10(4) and 10 (6), the Action Programme submitted by Irish Water dated 14th June 2016 was approved by the EPA on 1st July 2016 and directed Irish Water to complete the proposed upgrade works to ensure compliance with the THMs parametric value in the Rathmullan PWS as soon as possible but no later than 28th February 2017.

Irish Water's most recent progress report dated 20th March 2017 states Irish Water has a significant on-going investment programme in Co Donegal which includes the rationalisation of the Rathmullan PWS with the Letterkenny PWS and thereby making the current source and water treatment plant at Rathmullan redundant to ensure compliance with the THMs parametric value. However the completion date for the proposed works provided in this report and during the audit is the end of April 2017 which goes beyond the Direction deadline of the 28th of February 2017. Irish Water also stated in their recent progress report dated 20th March 2017 that while works are scheduled for completion by the end of April 2017 the final completion date will be dependent on the final ESB connection. Irish Water's monitoring reports show THMs continuing to persistently 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 and the iron parametric value of 200 µg/l as set out in the *European Union (Drinking Water) Regulations 2014* (S.I. 122 of 2014) and shall notify the EPA when complete.
2. Irish Water should carry out monitoring for THM and iron following the replacement of the Rathmullan PWS with the Milford PWS to verify the effectiveness of the actions undertaken and submit the results to the EPA.

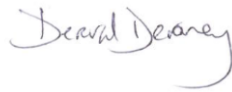
FOLLOW-UP ACTIONS REQUIRED BY IRISH WATER

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 April 2016 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