



Drinking Water Audit Report

County:	Donegal	Date of Audit:	3 rd April 2017
Plant(s) visited:	Cashelard Drinking Water Treatment Plant	Date of issue of Audit Report:	13 th April 2017
		File Reference:	DW2008/540
		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 December 2014 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 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 Cashelard Water Treatment Plant to prevent THMs formation.
- The upgrade of the Ballyshannon PWS, which is the long-term solution to address the THMs failures at Cashelard PWS, is planned to be completed by Q4 2018.
- The interim measure to connect to the Ballymagoraty supply is in progress with pipeline works complete. The Cashelard PWS will not be made redundant until August 2017 when UV treatment is in place at Ballymagoraty. However, the interim measure will not rectify the THMs issue at Cashelard 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 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 Cashelard Public Water Supply (PWS) is on the EPA's Remedial Action List (RAL), as the supply has continuous THMs failures dating back to September 2008. The source of the supply is taken from Lough Colmcille which is a peaty source where the colour varies seasonally. The raw water passes through a screening chamber at source for the removal of coarse material. Treatment at the plant consists of filtration (via one slow sand filter) and chlorination.

The average flow through the plant is 163 m³/day supplying a population of approximately 400 persons. Since the last EPA's audit in 2009 turbidity monitors have been installed on the raw and final water.

The opening meeting commenced at 9.30 am at Cashelard 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; Noel Mongan, Waterworks Inspector, John Gallagher, Waterworks CT, Martin Gallagher, Area Engineer, Donegal Co. Co; Eddie McGrane, Supervisor, Donegal Co. Co; Paul Lyons, Senior Executive Engineer, 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> <ul style="list-style-type: none"> a. The interim solution as outlined in Irish Water's progress report dated 22nd December 2016 entails an alternative source by connecting the Cashelard PWS to the Ballymagoraty Water Supply and thereby make the Cashelard Water Treatment Plant redundant. b. Since Irish Water's update during the meeting with the EPA on 6th March 2017 the pipeline (1.9 km) interconnection to Ballymagroarty Water Supply is complete and was to be tested late last week. c. The Cashelard 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. d. Irish Water stated that the Cashelard PWS will not be switched over to the Ballymagroarty Water Supply until pressure filters and UV treatment is in place in place at Ballymagroarty due to the <i>Cryptosporidium</i> risk from its Lough Gorman source. It is expected that Ballymagroarty will be upgraded and Cashelard made redundant by the end of August 2017. e. However, as stated in Irish Water's progress report dated 22nd December 2016, this interim measure will not resolve the THMs issue as the Ballymagroarty supply also has a history of THMs failures in addition to turbidity, iron and manganese failures.
<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> <ul style="list-style-type: none"> a. Providing a new WTP at Ballyshannon abstracting from Assaroe lake; b. Decommissioning of existing Ballyshannon WTP; c. New trunk main from Ballyshannon to Kilclane Reservoir to allow supply to Ballymagroarty, enabling the decommissioning of the existing Ballymagroarty WTP; d. A new pipeline from Ballymagroarty to Cashelard to deliver the treated water from Ballyshannon, thus enabling the decommissioning of the existing Cashelard WTP. <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</p>

	<p>directed Irish Water to complete the proposed upgrade works to ensure compliance with the THMs parametric value in the Cashelard PWS as soon as possible but no later than 11th February 2017.</p> <p>During the audit, Irish Water stated that it proposes to replace Cashelard PWS with the Ballyshannon PWS once the Ballyshannon PWS is upgraded. The Ballyshannon upgrade works are proposed to address the THMs issue in Cashelard PWS. The timeframe provided during the audit for completion these works was by Q4, 2018.</p> <p>During Irish Water's meeting with the EPA on 6th March 2017 Irish Water stated that it is at the closing stages of tendering for a contractor and an 18 month construction contract is needed to complete all upgrade works. Irish Water stated there is some uncertainty in meeting the Q4 2018 long-term completion date until the contractors programme is submitted with timelines.</p>
3.	<p>Water Quality - THMs Monitoring</p> <ol style="list-style-type: none"> The audit found that THMs continue to persistently fail 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). THMs are monitored monthly by Irish Water and the most recent THMs results for 2017 were reviewed during the audit. The values reported were 165 µg/l on 09/01/17 and 166 µg/l on 20/02/17.

3. AUDITORS COMMENTS

The EPA issued a Direction to Irish Water on 11th December 2014 requesting Irish Water to submit an Action Programme to address the persistent THMs failures in the Cashelard 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 Cashelard 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 it is investing €15 million to tackle the THMs issue in Cashelard PWS by upgrading the Ballyshannon PWS and thereby making the current water treatment plants at Ballyshannon, Ballymagroarty and Cashelard redundant. However the completion date for the proposed works provided in this report and during the audit is Q4 2018, which goes beyond the Direction deadline of 11th February 2017.

During Irish Water's Meeting with the EPA on 6th March 2017, Irish Water stated that the Direction timeframe would not be met as the proposed long term measure is a large scale investment programme where timeframes are often outside the control of Irish Water and could extend beyond Q4, 2018.

The Cashelard 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

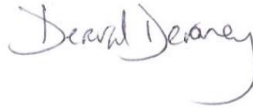
- Irish Water shall carry out the proposed upgrade works as soon as practicable to ensure that the final water is compliant with the THMs parametric value of 100 µg/l as set out in the *European Union (Drinking Water) Regulations 2014* (S.I. 122 of 2014).
- Irish Water shall carry out monitoring for THM following the replacement of the Cashelard PWS with the Ballyshannon 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

13 April 2017