



Drinking Water Audit Report

Local Authority:	Meath County Council	Date of Audit:	18 th October 2013
Plant(s) visited:	Balfeghan PWS, Balfeghan Co. Meath Scheme Code not assigned	Date of issue of Audit Report:	14 th November 2013
		File Reference:	File No. not assigned
		Auditors:	Ms Ruth Barrington
Audit Criteria:	<ul style="list-style-type: none"> • The <i>European Communities (Drinking Water) (No. 2) Regulations, 2007</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 EPA Report on <i>The Provision and Quality of Drinking Water in Ireland</i>. 		

MAIN FINDINGS

- i. There was no disinfection system in place on the supply.
- ii. The risks which nearby agricultural activities and domestic wastewater treatment systems may pose to the supply have not been assessed.
- iii. The borehole chamber was poorly protected from surface water ingress.

1. INTRODUCTION

Under the *European Communities (Drinking Water) (No. 2) Regulations 2007* the Environmental Protection Agency is the supervisory authority in relation to the local authorities and their role in the provision of public water supplies. This audit was carried out in response to the letter from Meath County Council dated 9th August 2013 identifying a number of additional public water supplies in Co. Meath, of which the EPA had not previously been informed.

Balfeghan PWS is a small public water supply serving four houses near Kilcock Co. Meath with an estimated volume of 2 m³/day. The treatment provided is iron filtration only. There is no disinfection system in place. The immediate vicinity of the borehole is in residential and low intensity agricultural usage, with houses served by domestic wastewater treatment systems in close proximity.

Photographs taken by Ms Ruth Barrington during the audit are attached to this report and are referred to in the text where relevant.

The audit process consisted of interviews with staff, review of records and observations made during an inspection of the pumphouse and borehole. The audit observations and recommendations are listed in Section 2 and 4 of this report. The following were in attendance during the audit.

Representing Local Authority: (* indicates that person was also present for the closing meeting)

Ms Aphra Leavy – A/Executive Technician

Mr John Gilsenan – Engineer

Representing the Environmental Protection Agency:

Ms Ruth Barrington – 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.	Source Protection <ul style="list-style-type: none">a. The Water Service Authority has not informed landowners in the vicinity of the borehole of their responsibilities under the <i>European Communities (Good Agricultural Practice for the Protection of Waters) Regulations</i>.b. The WSA was not aware of any risk assessment of nearby domestic wastewater treatment systems in relation to their proximity to a drinking water abstraction.c. The borehole was located in the garden of one of the houses served by the scheme. This house is now privately owned. It was not possible to lift the wellhead cover during the audit so the condition of the wellhead was not examined.d. The manhole cover to the borehole was just above ground level (refer to photograph Ref. No. 022.jpg) and it was the auditor's opinion that there was the potential for surface water to enter the unsealed access hatch. There was heavy rain during the audit and it was observed that as there was no gutter, rain was falling from the roof of the pumphouse onto the wellhead cover.e. Prior to the audit, Water Service Authority staff had searched for records in respect of the borehole construction but were unable to locate any. Staff confirmed during the audit that these searches were to continue as it was possible that retired staff may be able to assist with this information.
2.	Filtration <ul style="list-style-type: none">a. The filters in place are for iron removal only. The filter age was not known at the time of the audit.
3.	Disinfection <ul style="list-style-type: none">a. There was no disinfection system in place at the time of the audit.b. Analysis of a sample taken on 1st August 2013 showed the presence of coliform bacteria in the filtered water (final water). There were no detections for other microbiological parameters.

3. AUDITOR'S COMMENTS

There was no disinfection applied to the Balfeaghan PWS. Analysis in August 2013 showed the presence of bacterial contamination from an unknown source. The WSA should put in place a disinfection system which complies with Regulation 13 of the *European Communities (Drinking Water) (No. 2) Regulations*. The WSA should also ensure that the potential risks posed to the water supply by agricultural activities and domestic wastewater treatment systems are assessed and minimised.

4. RECOMMENDATIONS

Source Protection

1. The WSA should implement the requirements of the *European Communities (Good Agricultural Practice for the Protection of Waters) Regulations 2010 (SI No.610 of 2010)* 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 25m of the abstraction point; and
 - ii. Farmyard manure held in a field prior to landspreading is not placed within 50 m of the abstraction point.
2. The WSA should ensure that the location and status of drinking water abstractions are considered in the selection by Meath County Council of domestic wastewater treatment systems for inspection under the National Inspection Plan.
3. The WSA should carry out regular monitoring on the raw water and should include monitoring for *E. coli* bacteria, as an indicator of trends in assessing water quality and to determine the degree of treatment and controls required in the supply.
4. The WSA should ensure that borehole linings and seals are maintained and that the wellhead is adequately protected, as per the EPA publication "*Advice Note No. 14: Borehole Construction and Wellhead Protection*". In addition, guttering should be provided at the pumphouse to divert rain water away from the wellhead.

Disinfection

5. The WSA should ensure that an appropriate disinfection system is installed which is validated and verifiable at all times. Guidance on the selection of an appropriate disinfection system is provided in the EPA publication "*Water Treatment Manual: Disinfection*".
6. The WSA should ensure that the disinfection system, once installed, is monitored and alarmed with a link to a recording device to ensure that any deviation of the quality of water outside the validated range, or a failure of the system, is immediately detected. A procedure should be put in place defining the actions to be taken in response to the different levels of alarm.

FOLLOW-UP ACTIONS REQUIRED BY THE LOCAL AUTHORITY

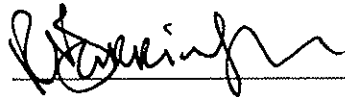
During the audit the Water Services Authority representatives were advised of the audit findings and that action must be taken as a priority by the Water Services Authority to address the issues raised. This report has been reviewed and approved by Mr Darragh Page, Drinking Water Team Leader.

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 Meath County Council.

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

Report prepared by:



Date:

14th November 2013

Ruth Barrington

Inspector



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