



Drinking Water Audit Report

County:	Dun Laoghaire Rathdown	Date of Audit:	06/11/2018
Plants visited:	Sandyford Reservoir Woodtown Reservoir Kellystown pumping station Orwell Road booster station Breamer Road booster station Burrow Road Reservoir Rathmichael Reservoir Church Road Reservoir	Date of issue of Audit Report:	15/11/2018
		File Reference:	DW2017/105
		Auditors:	Aoife Loughnane
Audit Criteria:	<ul style="list-style-type: none"> • The <i>European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014)</i>, as amended. • <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> • EPA Drinking Water Advice Note No. 3. • EPA Direction issued on 10/04/2018 under Regulation 16 of the <i>European Union (Drinking Water) Regulations 2014, as amended</i>, which required the upgrade of eight chlorine booster stations in Dun Laoghaire Rathdown by 30/09/2018. 		

MAIN FINDINGS

- i. **Irish Water has completed the upgrade works necessary to comply with the EPA Direction at seven of the eight specified chlorine booster stations in Dun Laoghaire Rathdown. The upgrade of Braemar Road chlorine booster station has been delayed due to difficulties with the power connection to the roadside kiosk. Irish Water should continue to liaise with the ESB to resolve this matter as soon as possible.**
- ii. **Irish Water should ensure that lockable manhole covers are installed at the roadside kiosk booster stations to prevent unauthorised access to the chlorine injection points.**

1. INTRODUCTION

Under the *European Union (Drinking Water) Regulations 2014, as amended*, 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 compliance with the EPA Direction issued on 10/04/2018 under Regulation 16 of the *European Union (Drinking Water) Regulations 2014, as amended*, which required the upgrade of eight chlorine booster stations in Dun Laoghaire Rathdown by 30/09/2018. As required by the Direction, Irish Water submitted a final report to the EPA on 15/10/2018 to confirm the status of the works.

The opening meeting commenced at 9 am at Sandyford Reservoir. 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 booster stations. 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:

Andrew Boylan, Drinking Water Compliance Specialist
Michael Reilly, Drinking Water Compliance Analyst
Trevor Hennessy, SLA Lead for Dun Laoghaire Rathdown
David Henry, Resident Engineer, Nicholas O'Dwyer (on behalf of Irish Water)

Representing Dun Laoghaire Rathdown County Council:

Ben O'Regan, Area Engineer
Hugo van Wyck, Senior Executive Engineer

Representing the Environmental Protection Agency:

Aoife Loughnane, 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>Upgrade of Secondary Disinfection Systems</p> <p>a. The EPA issued a Direction on 10/04/2018 under Regulation 16 of the <i>European Union (Drinking Water) Regulations 2014, as amended</i>, which required the upgrade of eight chlorine booster stations in Dun Laoghaire Rathdown by 30/09/2018, to meet the following criteria:</p> <ul style="list-style-type: none">(i) Duty and standby dosing arrangements shall be in place, with automatic changeover of dosing pumps in the event of malfunction of the duty pump;(ii) Chlorine dosing shall be flow proportional or preferably linked to the residual chlorine monitor, such that any changes in the chlorine demand of the treated water can be responded to automatically by the dosing pumps;(iii) A continuous chlorine residual monitor shall be installed on the treated water leaving the chlorine booster station;(iv) The chlorine monitor shall be linked to an alarm with a dial out to ensure that an immediate response can be made in the event of inadequate or excessive levels of chlorine in the final water;(v) The data from the chlorine monitor shall be archived & reviewed on a regular basis to observe any trends in chlorine demand. <p>b. Upgrade works to meet these criteria have now been completed at the following chlorine booster stations:</p> <ul style="list-style-type: none">(i) Sandyford Reservoir(ii) Woodtown Reservoir(iii) Kellystown pumping station(iv) Orwell Road booster station(v) Burrow Road Reservoir(vi) Rathmichael Reservoir(vii) Church Road Reservoir <p>c. The upgrade works at Braemor Road booster station have not yet been completed due to a delay with the upgrade of the power connection to the site. A new roadside kiosk has been installed with a new chlorine storage tank and HMI control panel. The new dosing pumps are in storage and ready to be commissioned once the power supply issue is resolved. In the meantime, the existing chlorine dosing pumps are being used. There is no automatic switchover between the</p>
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	<p>existing dosing pumps, no chlorine monitor, no chlorine alarm and no link to telemetry. Irish Water is awaiting confirmation from the ESB regarding a timeframe for the power connection upgrade, which is anticipated to be within a matter of weeks.</p> <p>d. With the exception of Braemor Road, the alarms associated with these chlorine booster stations are monitored by Irish Water's National Operational Management Centre.</p>
2.	<p>Site Security</p> <p>a. Five of the eight chlorine booster stations are located at reservoirs where gates and security fencing is in place to prevent unauthorised access.</p> <p>b. Three chlorine booster stations are located in roadside kiosks. The kiosk doors are fitted with tamper proof locks. The access manholes to the chlorine injection points were not locked. This presents a risk of unauthorised access to the chlorine injection points and a potential risk to the security of the water supply.</p>

3. AUDITORS COMMENTS

The audit found that Irish Water has complied with the EPA Direction for the most part, having completed the upgrade works at seven of the eight specified chlorine booster stations in Dun Laoghaire Rathdown. The upgrade of Braemor Road chlorine booster station has been delayed due to difficulties with the power connection to the roadside kiosk. Irish Water should continue to liaise with the ESB to resolve this matter as soon as possible.

The completion of these disinfection upgrade works has significantly improved the safety and security of the water supply to consumers in DLR Zones 2, 6, 7 and 8 water supply zones.

4. RECOMMENDATIONS

1. Irish Water should continue to liaise with the ESB to ensure the power connection to Braemor Road chlorine booster station is upgraded as soon as possible, to facilitate the disinfection upgrade works to meet the EPA's criteria. Irish Water should notify the EPA as soon as the upgrade works have been completed at Braemor Road booster station.
2. Irish Water should ensure that lockable manhole covers are installed at the roadside kiosk booster stations, to prevent unauthorised access to the chlorine injection points.

FOLLOW-UP ACTIONS REQUIRED BY IRISH WATER

During the audit Irish Water representatives were advised of the audit findings and that action must be taken as a priority by Irish Water to address the issues raised. This report has been reviewed and approved by Dr. Michelle Minihan, Senior Inspector, Drinking Water Team.

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

Report prepared by:

Aife Laghuane

Inspector

Date:

15/11/2018