

# Site Visit Report

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 the performance of Irish Water in providing clean and wholesome water to the visited public supply.

The audit process is a sample on a given date of the facility's operation. Where a finding against a particular issue has been reported this should not be construed to mean that this issue is fully addressed.

Water Supply Zone	
<b>Name of Installation</b>	Kingscourt PWS
<b>Organisation</b>	Irish Water
<b>Scheme Code</b>	0200PUB0114
<b>County</b>	Cavan
<b>Site Visit Reference No.</b>	SV25553

Report Detail	
<b>Issue Date</b>	10/06/2022
<b>Prepared By</b>	Criona Doyle

Site Visit Detail			
<b>Date Of Inspection</b>	19/05/2022	<b>Announced</b>	Yes
<b>Time In</b>	12:30	<b>Time Out</b>	13:30
<b>EPA Inspector(s)</b>	Criona Doyle		
<b>Additional Visitors</b>	Lorcan Farrell; Patricia Mallen; Denise McElvaney.		
<b>Company Personnel</b>	Irish Water: Peter Gallagher; Yvonne McMonagle.  Cavan County Council (acting under service level agreement to Irish Water): John McDonald; Leon Conoly; Ciaran Fitzgerald; Gary Boyd.		

## > Summary of Key Findings

- (1) Disinfection consists of chlorination and ultraviolet (UV) treatment. The audit found that the disinfection system was operating satisfactorily during the inspection.
- (2) The frequency of residual chlorine monitoring in the network should be increased.

## > Introduction

The Kingscourt Public Water Supply (PWS) produces approximately 737m<sup>3</sup>/d of water serving a population of 3,005 (Eden figures). The audit focused on the disinfection system at the Kingscourt (Lisanisky) WTP. This site was surveyed under Irish Water's Disinfection Programme but was not upgraded under the programme.

## > Supply Zones Areas Inspected

This audit assessed the chlorination and UV disinfection system at the Kingscourt (Lisanisky) WTP.



## 1. Disinfection Programme Audits 2022

		<b>Answer</b>
1.1	Is chlorination used for primary disinfection?	No
		<b>Answer</b>
1.2	Can you establish what type of chlorine disinfectant is used?	Yes
		<b>Answer</b>
1.3	Are there duty and standby chlorine dosing pumps in place?	Yes
		<b>Answer</b>
1.4	Is there automatic switchover in the event of failure of one of the chlorine dosing pumps?	Yes
		<b>Answer</b>
1.5	Is the chlorine dosing rate flow proportional?	Yes
		<b>Answer</b>
1.6	Is the chlorine dosing rate fixed?	Not Applicable
		<b>Answer</b>
1.7	Can IW / LA confirm the target residual chlorine level for the final water leaving the plant?	Yes
		<b>Answer</b>
1.8	Is there a continuous residual chlorine monitor on the final water?	Yes
		<b>Answer</b>
1.9	Can data trends from the online residual monitor be viewed on site?	Yes
		<b>Answer</b>
1.10	Are there low and high chlorine alarm settings?	Yes

		<b>Answer</b>
1.11	Is there an alarm response procedure available on site for responding to chlorine alarms?	Yes

		<b>Answer</b>
1.12	Is there automatic shutdown of the supply in the event of the chlorine level dropping below the low chlorine alarm setting or rising above the high chlorine alarm setting?	Yes

		<b>Answer</b>
1.13	Are service due / monitoring instrument calibration dates for the chlorine monitors within date?	Yes

		<b>Answer</b>
1.14	Is the site specific contact time being achieved ? If answer is NO, proceed to question 15	Not Applicable

		<b>Answer</b>
1.15	Is the minimum effective contact time of 15 mg. min/l being achieved?	Not Applicable

		<b>Answer</b>
1.16	Is the residual chlorine level $\geq$ 0.1 mg/l at the extremity of the distribution network?	Yes
	<b>Comment</b>	
	Monitoring of residual chlorine levels is undertaken weekly at network extremities.	

		<b>Answer</b>
1.17	Is UV treatment used for primary disinfection?	Yes

		<b>Answer</b>
1.18	Are there duty and standby UV units in operation?	Yes

		<b>Answer</b>
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1.19	Is there automatic switchover between the duty and standby UV units in the event of failure of the duty unit?	Yes
		<b>Answer</b>
1.20	Is there automatic plant shutdown in the event of UV units failing or operating outside of their validated range?	Yes
		<b>Answer</b>
1.21	Is there continuous monitoring of the UV units to verify operation within validation range at all times?	Yes
		<b>Answer</b>
1.22	Can data trends from the online UV monitor(s) be viewed on-site?	Yes
		<b>Answer</b>
1.23	Is there an alarm response procedure available on site for responding to UV alarms ?	Yes
		<b>Answer</b>
1.24	Are service due / monitoring instrument calibration dates for the UV units within date?	Yes
		<b>Answer</b>
1.25	Is a copy of the validation certificate for the UV disinfection system available on site ?	Yes
		<b>Answer</b>
1.26	Is there a plate on the UV unit with the validation criteria?	Yes
		<b>Answer</b>
1.27	Did IW confirm that the UV units are operating within the validation range?	Yes

		<b>Answer</b>
<b>1.28</b>	Have all relevant staff received training on the disinfection upgrades?	Not Applicable
<b>Comment</b>		
Not applicable as upgrade works have not been undertaken.		

## Recommendations

<b>Subject</b>	Kingscourt PWS - Disinfection Audit	<b>Due Date</b>	11/07/2022
<b>Action Text</b>	<p><b>Recommendation</b></p> <p><b>Irish Water is responsible for ensuring a safe and secure supply of drinking water. To address these issues, Irish Water should implement the following recommendation without delay.</b></p> <p>1. Irish Water should ensure monitoring of residual chlorine is undertaken several times a week at different points of the network to include the network extremities.</p> <p><b>Follow-Up Actions required by Irish Water</b></p> <p>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.</p> <p>This report has been reviewed and approved by Regina Campbell, Drinking Water Team Leader.</p> <p>Irish Water should submit a report to the Agency on or before 11/07/22 detailing how it has dealt with the issues of concern identified during this audit.</p> <p>The report should include details on the action taken and planned to address the various recommendations, including time frame for commencement and completion of any planned work.</p> <p>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.</p> <p>Please quote the Compliance Plan DW20220051 in any future correspondence in relation to this Report.</p>		