



# Drinking Water Audit Report

<b>County:</b>	County Kerry	<b>Date of Audit:</b>	03/06/2015
<b>Plant(s) visited:</b>	Lissardboola 1300PUB 1105 (Network); Lisloose 1300PUB1106 (Network)	<b>Date of issue of Audit Report:</b>	09/06/2015
		<b>File Reference:</b>	DW2008/330
		<b>Auditors:</b>	Ms Cliona Ni Eidhin Mr Niall Dunne
<b>Audit Criteria:</b>	<ul style="list-style-type: none"> <li>• The <i>European Union (Drinking Water) Regulations 2014 (S.I. 122 of 2014)</i>.</li> <li>• 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></li> <li>• The recommendations specified in the <i>EPA Drinking Water Report</i>.</li> <li>• The recommendations in any previous audit reports.</li> </ul>		

## MAIN FINDINGS

- i. From the site inspections carried out during this audit, it appeared to the auditors that lead removal have been carried out at all locations identified through the Direction, issued on the 28<sup>th</sup> September 2011.
- ii. Some properties within St Brendan's Park are still failing the parametric lead limit, post remedial works, as Irish Water have replaced the lead mains in these areas and stated that failures are due to internal plumbing. Irish Water should carry out lead monitoring at each location identified, through the Direction, and especially at identified locations with previous exceedance, to determine the level of compliance with the 2014 Drinking Water Regulations.
- iii. Irish Water could not confirm whether all the properties had been given the appropriate health advice as per *EPA Advice Note No. 2: Action programmes to restore the quality of drinking water impacted by lead pipes and lead plumbing*. Irish Water must ensure that appropriate advice is given to consumers as per the advice note.

## 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 and Kerry County Council in complying with the EPA Direction issued on the 28<sup>th</sup> September 2011, for the identification and removal of lead mains in Tralee Co. Kerry. All lead mains identified were required to be removed by the 25<sup>th</sup> December 2013.

Photographs taken by Niall Dunne during the audit are attached to this report and are referred to in the text where relevant.

The opening meeting commenced at 10.30 am at Kerry County Council buildings in Castleisland, Co. Kerry. The scope and purpose of the audit were outlined at the opening meeting. The following locations were visited as part of the audit, St Brendan's Park, Cloonbeg Terrace, Cloonmore Road and Baloonagh Close.

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.

<p>Representing Kerry County Council and Irish Water: (* indicates that person was also present for the closing meeting)</p> <p>Kevin Murphy - IW -Water Engineer. Present at all site visits.</p> <p>Catherine Rice - IW -Compliance Liaison Monitoring Analysts. Present at all site visits.</p> <p>John Kennelly - KCC - Senior Engineer. Present at opening meeting only.</p> <p>John Ahern - KCC - Acting Senior Executive Engineer. Present at opening meeting only.</p> <p>Nóirín O' Connor - KCC - Executive Solicitor. Present at opening meeting only.</p> <p>Shane Moriarty - KCC - Senior Resident Engineer. Present at St Brendan's Park site visit only.</p> <p>Paul Neveralainen - KCC - Executive Engineer. Present only at Cloonbeg Terrace, Cloonmore Road and Baloonagh site visits.</p> <p>Karl Falvey - KCC - Assistant Engineer. Present at all site visits.</p> <p>Representing the Environmental Protection Agency:</p> <p>Cliona Ni Eidhin - EPA Inspector.</p> <p>Niall Dunne - EPA Inspector.</p>
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## 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><b>1.</b></p>	<p><b>History</b></p> <p>a. On the 28<sup>th</sup> September 2011 the EPA issued a Direction to Kerry County Council (KCC) requiring all lead mains within Tralee to be identified, and that identified mains removed by 25<sup>th</sup> December 2013.</p> <p>b. On 30<sup>th</sup> November 2011, KCC submitted a response, identifying 1,484 m of lead mains in Tralee. The locations identified and the proposed dates for completion were; Baloonagh Close 90 m - Q4 2012; Cloonmore Road 123 m - Q3 2013; Cloonbeg Terrace 275 m - Q4 2013 and St Brendan's Park 996 m - Q4 2012 dependant on funding.</p>
<p><b>2.</b></p>	<p><b>Baloonagh Close</b></p> <p>a. KCC had identified that there was 90 m of lead main in Baloonagh Close. Irish Water (IW) confirmed that the works were completed in February 2012.</p> <p>b. There were eight houses connected to the lead main in this area and these according to KCC were all local authority houses. KCC stated that they replaced the lead main and all the internal lead plumbing in these properties.</p>

	<p>c. KCC said that the new main was laid in the gardens to the front of the houses. On observation there were visible scars in the footpaths and at the front entrances of the houses, indicating some previous works had been undertaken on the communication pipe. (See photograph 1).</p> <p>d. Subsequent monitoring results for these properties were not available at the time of the audit.</p>
<b>3.</b>	<p><b>Cloonmore Road</b></p> <p>a. KCC identified that there were 123 m of lead main in Cloonmore Road.</p> <p>b. According to IW this work was completed in October 2012.</p> <p>c. According to KCC there was approximately 19 houses connected to the lead main. KCC stated that there were no local authority houses in this area.</p> <p>d. The main was located in two separate alleyways. Each alleyway was located at the side and rear of the houses.</p> <p>e. In one alley way there were visible trench scars in the road surface. In the other, the road had been resurfaced and no trench scars were visible, but new stopcock / water meter chambers were observed (see photograph 2 and 3).</p> <p>f. No monitoring results were available at the time of the audit. KCC were unaware if property owners had been given appropriate advice regarding the removal of internal lead plumbing.</p>
<b>4.</b>	<p><b>Cloonbeg Terrace</b></p> <p>a. In the action plan submitted, 123 m of lead main were identified. According to IW this work was completed in March 2013.</p> <p>b. KCC stated that 30 houses were connected to this main. A section of the main was replaced in 2006 and the remaining 123 m were later replaced in 2013.</p> <p>c. The new main was laid within a green area and along the road outside the houses. Trench scars to the stop cocks were visible. (See photographs 4 and 5).</p> <p>d. KCC could not confirm whether residences at these properties had been given the appropriate advice re removal of internal lead plumbing. KCC stated that none of these houses were local authority houses.</p> <p>e. During the audit, no monitoring results were available for these locations.</p>
<b>5.</b>	<p><b>St Brendan's Park.</b></p> <p>a. KCC identified 996 m of lead main in St. Brendan's Park. The main was a shared main located at the rear of properties. According to KCC the contract for the works was signed on the 06<sup>th</sup> October 2014 and the works complete on the 31<sup>st</sup> March 2015.</p> <p>b. KCC stated that prior to the works internal surveys at each premises were carried out.</p> <p>c. KCC stated that all the valves from the cast iron main feeding the lead mains was turned off; the valves on the lead mains were turned off and that all lead customer connections to the stock cocks were severed at the rear of the houses.</p> <p>d. KCC stated that the two options used to replace the lead connections were;  Option 1) Directional drilling from the street underneath the houses to the stopcock at the rear of the property, the lead from the stock cock to the sink, if present, was not removed.  Option 2) Externally fixing ducting and an insulated pipe to the premises. Then connecting the pipe to the cold feed in the attic and reversing the flow through the existing pipe to the sink. Lead pipe from the attic to the sink, if present, was not removed. This method was generally employed where the external stop cock at the rear of the property could not be accessed.</p> <p>e. KCC stated that no houses within the estate were local authority houses.</p> <p>f. KCC confirmed that appropriate health advice was delivered to every premise in the estate in November 2014.</p> <p>g. IW stated that they since 27<sup>th</sup> February 2012 that they have monitored 33 premises in St Brendan's Park for lead, 26 failed the parametric limit.</p> <p>h. Following the works, the HSE advised KCC to monitor half the number of original premises sampled. KCC sampled 14 houses, eight failed the parametric limit, and four of these failed the limit after 10 minutes of flushing.</p>

	<ul style="list-style-type: none"> <li>i. KCC also gave the EPA a copy of the as built drawings; these drawings showed new HDPE mains were laid to front of the houses where lead mains were previously identified.</li> <li>j. St Brendan's Park was visited as part of this audit. At the locations where KCC had originally identified lead mains, trench scars were observed in the roadways and on the footpaths leading to the water stopcocks. External plumbing was also observed on the outside of some properties (see photograph 6 and 7).</li> </ul>
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### 3. AUDITORS COMMENTS

On the 28<sup>th</sup> September 2011 the EPA issued a Direction to Kerry County Council requiring that all lead mains within Tralee were identified, and that the identified mains removed by 25<sup>th</sup> December 2013. Kerry County Council identified lead in the following locations, Baloonagh Close, 90 m; Cloonmore Road, 123 m; Cloonbeg Terrace, 275 m and St Brendan's Park, 996 m.

According to Irish Water the lead main was removed from three locations; Baloonagh Close; Cloonmore Road and Cloonbeg Terrace prior to the 25<sup>th</sup> December 2013 deadline, and that the lead main was removed from St. Brendan's Park on the 31<sup>st</sup> March 2015, 15 months after the deadline set out in the Direction.

From observations it is difficult to fully ascertain whether the lead was removed, however from the visible scars on the roadway and from the new stop cock/ meter boxes it can be ascertained that works had previously been carried out on the water mains in Baloonagh Close; Cloonmore Road and Cloonbeg Terrace.

From the site visit to St Brendan's Park and from the as-built drawings it is clear that works have been undertaken to replace the lead main within St Brendan's Park.

Irish Water should carry out monitoring in all areas where lead was identified, especially in locations with previous lead exceedances, to ascertain lead levels within drinking water at to determine compliance with the 2014 Drinking Water Regulations.

Irish Water should also ensure that appropriate advice is given to consumers where lead remains within the internal plumbing of private properties and as per *EPA Advice Note No. 2: Action programmes to restore the quality of drinking water impacted by lead pipes and lead plumbing*.

### 4. RECOMMENDATIONS

1. Irish Water must confirm that appropriate advice had been given to consumers as per *EPA Advice Note No. 2: Action programmes to restore the quality of drinking water impacted by lead pipes and lead plumbing*, in the identified locations, and where;
  - a) There continues to be lead exceedances;
  - b) Irish Water is aware lead is in the internal plumbing of private properties.
2. Irish Water is requested to submit follow up lead monitoring results for locations where lead mains were identified, especially for properties with previous lead exceedances, to determine compliance with the *2014 Drinking Water Regulations*.

### 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 Mr Darragh Page, Senior Inspector.

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. The report should include the information requested in the above recommendations.

Please quote the File Reference Number 2008/330 in any future correspondence in relation to this Report.

Report prepared by:

*Niall Dineen*

Date:

09/06/2015

Inspector

**Photograph 1 Balloonagh Close; trench scar to stopcock.**





**Photograph 2. Cloonmore Road, trench scar in alley way.**



**Photograph 3: Cloonmore Road, no visible trench scar, but new meter chambers observed.**



**Photograph 4 Cloonbeg Terrace; trench scar**

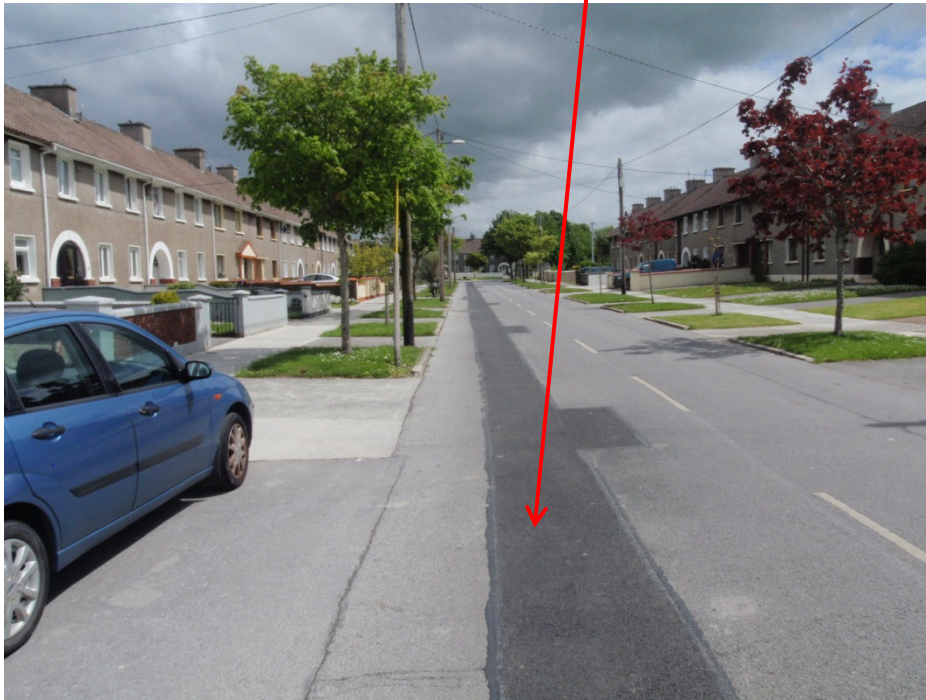


**Photograph 5: Cloonbeg Terrace, trench scar observed at stopcocks.**





**Photograph 6: St Brendan's Park. Trench scar observed.**



**Photograph 7: St Brendan's Park. Trench Scar and external plumbing.**

