Drinking Water Quality Regulator for Scotland

Consumer Complaint

Determination

2023/55

Lead

2nd February 2024

1 Basis of complaint

The consumer first contacted the DWQR on the 18th October 2023 to complain that following their replacement of the lead supply pipe to their property, Scottish Water had not replaced all of the lead pipework in its ownership, had connected the renewed pipework to their neighbour's lead pipework, and that their supply was being contaminated with lead. They also alleged that Scottish Water had given 'false' lead analytical data. Further communications stated that there were high levels of lead in the water supply to their property. Following Scottish Water's completion of its investigation into a formal complaint from the customer, DWQR confirmed on the 14th November that it would carry out an independent investigation.

2 Context of complaint

The consumer contacted Scottish Water on the 22nd August to request a lead sample from his property, as they were concerned that Scottish Water's communication pipe supplying their property was lead. Scottish Water took two lead samples on the 31st August 2023, checked the toby in the street and advised that the communication '*appeared to have been renewed*'. The sample results were sent to the consumer on the 5th September; the first draw sample result was 1.8 µg/l lead per litre, and the second was below the laboratory limit

of detection of 1.1 µg/l. Scottish Water advised that since the test results showed that lead levels were less than the regulatory limit of 10 µg/l and Scottish Water's action limit of 5 µg/l, no further work would be carried out. The consumer responded to Scottish Water on the 6th September to advise that the sample results showed that there was lead in his supply, that all pipework within his property was copper, that the communication pipe needed to be replaced, and that lead at any concentration was a danger to health.

Scottish Water responded on the 7th September, offering to sample the supply again, advising that if there were lead pipes on the consumer's property, these would have to be removed by the consumer and their new pipework would be connected to the main by Scottish Water. The consumer reiterated on the 7th September that there was no lead pipework on his property and that his communication pipe had not been replaced *'when other water mains works were carried out'* by Scottish Water.

Following a number of communications between the consumer and Scottish Water, Scottish Water's Public Health Team (PHT) spoke with the consumer on the 8th September, and advised again that since the sample results were below the regulatory standard and below Scottish Water's action level, no further action would be taken by Scottish Water. The PHT Scientist also advised that since the first draw sample contained a lead concentration marginally over the limit of detection, this was indicative of lead within the customer's property. The consumer emailed Scottish Water in response to advise that Scottish Water had still not confirmed if the communication pipe was lead and that he had asked his local authority to take a water sample.

There were a number of further emails and calls between the consumer and Scottish Water, including an enquiry from the consumer on why the communication pipe had not been replaced when the water main had been '*updated*'. On the 13th September Scottish Water advised the consumer that the lead communication pipe would be checked.

On the 18th September the consumer made a formal complaint to Scottish Water and emailed DWQR for the first time. On the 20th September, Scottish Water excavated and found and replaced a lead communication pipe to the consumer's property. It was found that the customer's supply pipe was also lead, and he was advised that it was his responsibility to replace it – this was completed on the 27th September.

On the 27th September the consumer emailed Scottish Water with photographs showing that his renewed pipework had been connected to lead pipework in the network. A number of further emails and telephone communications followed, and then Scottish Water advised that the water from the connecting lead pipe would not enter the consumer's property. Scottish Water also reported that its staff would attend site again to either replace or cap the remaining lead pipework – this needed a road closure.

On the 11th November the consumer sent DWQR test reports from Glasgow Scientific Services for lead samples taken by the customer's local authority on the 10th October – they showed 1.4 µg/l lead for the first draw sample, <0.4 µg/l for the second draw sample, and 0.5 µg/l for the third draw sample.

On the 19th December Scottish Water returned to the consumer's street, renewed lead communication pipes at three neighbouring properties including the one that the consumer's supply had been connected to, and installed two stopcocks.

3 DWQR Assessment of complaint and the actions taken

3.1 Regulation 32 of the Public Water Supplies (Scotland) Regulations 2014 ('the Regulations') sets out specific responsibilities for Scottish Water for copper and for lead. Regulation 32(4) requires Scottish Water to modify or replace Scottish Water's section of pipework if:

(a) Scottish Water has reason to believe that at a consumer's tap there is a risk that lead concentration exceeds 10 µg/l.
or
(b) If the owner of a property has written to or emailed Scottish Water to advise that they intend to replace the pipework in their ownership and would like Scottish Water to replace lead in Scottish Water's ownership.

The first draw sample taken by Scottish Water from the consumer's property on the 31st August had a lead concentration of 1.8 µg/l, and the consumer had not written to or emailed Scottish Water to advise of their intention to replace their pipework. Scottish Water was therefore under no obligation to replace its pipework as required by the consumer, but did

so, and in the process found lead in pipework in the consumer's ownership. I am therefore satisfied that Scottish Water not only complied with Regulation 32(4) but went beyond its statutory duty in this instance. I have examined sample data test sheets from Scottish Water's laboratory and have no reason to believe that the data has been falsified.

3.2 Following Scottish Water's replacement of the communication pipe and the consumer's replacement of their service pipe, the renewed plastic pipework was connected to neighbouring lead pipework via a plastic fitting to ensure continuity of supply in the area. The consumer expressed concern that their supply connection to neighbouring lead pipework was contaminating their supply. Scottish Water's response to this was that '*water from this pipework won't enter your supply pipe due to branch in place*'. Having examined a photograph of the connection between the renewed pipework and the lead pipe, there does not appear to be a valve which would isolate the consumer's supply from his neighbour's. In theory, a drop in pressure on the supply system could have led to a flow of water from the neighbouring pipework to the consumer's property, but I am unable to quantify that risk. The samples taken by the consumer's local authority showed levels of lead above the laboratory's limit of detection in both first and third draw samples, but they were below regulatory limits and it is not possible for me to definitively comment on the source of this lead in the samples and whether it was from the neighbouring lead communication pipe or any plumbing fittings in the consumer's property.

3.3 Regulation 32(1) requires Scottish Water to treat water in some of its supplies to eliminate or reduce risk from lead to a minimum. In the water supply zone that the consumer's property is in, Scottish Water adds orthophosphoric acid at the supplying water treatment works to satisfy this requirement. Following examination of the sample data for the lead test rig in Scottish Water's network, which is used to check the optimisation of orthophosphoric acid dosing, I am of the view that Scottish Water had effectively optimised the orthophosphoric acid in the area and am content that Scottish Water complied with Regulation 32(1). This chemical dosing may have reduced the solubility of lead in the supply to the customer's property, causing lead levels to be low despite the presence of lead communication and service pipes.

3.4 I have investigated why the consumer's lead communication pipe and those of his neighbours were not replaced when work was carried out on the renewal of the cast iron

main plastic. Examination of Geographic Information System (GIS) records supplied by Scottish Water show that the water main was not replaced, but that an MDPE plastic slip lining technique was used in 2001. Reconnection of communication pipes to the main would still have been required, and it is clear that existing lead communication pipes were reconnected to the slip lined main. This mains refurbishment was carried out before Scottish Water was formed in 2002, and will have been undertaken by West Of Scotland Water Authority; Scottish Water has advised that it has no records of this refurbishment work. While Scottish Water's GIS clearly shows the mains material and the date of its refurbishment, it does not show what materials the communication pipes are made from. I am therefore satisfied that Scottish Water's operational staff will not have known that its communication pipes were lead until excavated.

3.5 The consumer has commented to both Scottish Water and the DWQR that the World Health Organisation's advice is that there is no safe level of lead. Any concerns over the settings of drinking water quality standards should be addressed to the Scottish Government's Water Policy Team at Victoria Quay, Edinburgh, EH6 6QQ.

3.7 Following consideration of the matters discussed in 3.1 – 3.5 above, in relation to the supply to the customer's property, I do not uphold the customer's complaint.

3.8 However, I have concerns that Scottish Water's response to finding lead pipework feeding the consumer's neighbours was inadequate. Guidance on the implementation of Regulation 32 was supplied to Scottish Water by DWQR in December 2022 dwqr-public-supply-regulations-2014-as-amended-consolidated-guidance-version- 2-1-october-2022.pdf . This guidance states on page 42 '*If the investigation concludes that there is lead in the supply pipe or the internal plumbing belonging to the owner, the consumers occupying the premises must be notified and given advice about how to protect their health'*. Additionally, Regulation 17 requires Scottish Water to immediately take action if Scottish Water has reason to believe that water supplied by it is failing or is likely to fail the lead standard, and Regulation 18 requires, amongst other actions, notification to consumers of potential danger to human health. Scottish Water has reported that it did not take any of these actions. The lead communication pipework has now been replaced, but there is evidence that Scottish Water carried out insufficient investigations and notifications. I therefore recommend that Scottish Water contacts the occupiers of the neighbouring properties in writing, to advise that

there had been lead communication pipes, to advise them if they have lead service pipes, to advise on what remedial actions should be taken to replace lead if still present, and to advise if any action is required to protect human health.

4 Recommendations

4.1 Scottish Water to contact the occupiers of the neighbouring properties in writing, to advise:

a) That there had until recently been lead communication pipes in Scottish Water's ownership which have now been removed.

b) Whether they have lead service pipes and if so what remedial actions should be taken to replace lead.

c) If any action is required to protect human health.

4.2 Scottish Water to review its policy on opportunistic findings of lead pipework and to carry out appropriate training for its staff.