



PRIVATE WATER SUPPLIES – CASE STUDY 2017/01

Unsubstantiated report of illness from consumption of a private supply

In June 2017, the Inspectorate received a contact from a consumer reporting that she had suffered diarrhoea and other long-term affects after consuming water from a restaurant in a popular tourist spot whilst on holiday in the preceding month. Whilst dining at the restaurant she was informed by staff that the water was sourced from a local borehole. As the designated driver of the group she had not consumed anything other than water whilst at the restaurant, although one other person whom she was with also drank the water in smaller amounts. He too had suffered from diarrhoea the next day, with symptoms lasting for a week afterwards. Having become unwell some months after consuming water, and in some pain she sought medical assistance, including having a number of blood and stool samples analysed. The hospital notes that were subsequently sent to her GP prompted him to ask if she had been on holiday to the Caribbean, as the test results were indicative of those of someone who had drunk from a contaminated water source. Her reason for contacting the Inspectorate was to raise awareness of a potential problem with the water at the restaurant concerned, as she was keen that no one else should feel as unwell as she has during the last six weeks.

In response to the enquiry, the Inspectorate contacted a member of the environmental health team at the local authority responsible for the area where the restaurant was located and suggested that an investigation be carried out. The local authority confirmed that they had not previously been aware of this supply and therefore had not carried out any risk assessment or inspection of the supply since the implementation of the Regulations in 2010, but committed to do so in the next few days. This revealed that the borehole was located at least 25m above any foul water soakaways and that the water was supplied to a nine bedroom hotel with a bar, restaurant and outdoor swimming pool. The water from the borehole flowed directly to a treatment plant room where it passed through a pressure tank with sand filter, cartridge filters and ultraviolet (UV) disinfection before supplying the hotel rooms, bar and kitchen and swimming pool. However the risk assessment was not completed in full and it was never fully established how likely it was that the reported illness was connected to inadequacies of the supply and its maintenance.

Furthermore, despite a potential link between the supply and the reported illness the local authority did not serve a Regulation 18 Notice on the premises owner, (the relevant person), as a precautionary measure, in the short-term, whilst the supply was under investigation.

In August 2017, the Inspectorate received confirmation that the risk assessment was still incomplete due to resourcing issues, but the results of the analysis of drinking water samples collected in July for microbiological parameters from the restaurant in question had met the

regulatory standard. The risk assessment had, however, raised concerns related to the management of the water supply from the borehole and identified that assurance of the quality of the supply relied solely on a single annual check on the UV unit. The local authority felt that the restaurant owners needed to take more ownership in the day-to-day management of the supply and in particular that they should undertake regular checks of the UV unit, which had no failsafe mechanism in place should it stop working. However the local authority did not use any powers of enforcement to facilitate the necessary improvements and no further site checks were made. The Inspectorate noted that the risk assessment stated that samples had not previously been taken by the local authority and the owner of the supply only had the water analysed once in 2015 and this did not include bacteriological testing. The absence of any water quality history was therefore, something of a hindrance in the assessment, proving neither assurance of quality or confirmation of an ongoing risk, and although previously unknown to the local authority the supply has now been added to their record.

The Inspectorate contacted the local authority in March 2018 for an update, and was informed that due to resource constraints the local authority had not investigated further since the summer of 2017. Consequently no clear link between supply deficiencies and the reported illness had ever been fully substantiated one way or the other. The local authority felt that an absence of faecal indicators in the samples taken at the time provided at least some level of assurance that the supply was safe. The Inspectorate noted however that the updated, but incomplete, risk assessment had identified a number of hazards, and associated remedial actions. Although an action plan had been developed it was not clear if this had ever been received by the hotel and restaurant owner and in any case, the local authority had not returned to site to verify that appropriate control measures had been put in place. Furthermore, no further monitoring had been undertaken to check the microbiological quality.

This case study is an example of where a local authority is finding it difficult to discharge its regulatory duties, under current legislation, to protect public health and the reliance on a single negative test to draw conclusion that a supply is safe. Although the local authority did visit the supply and made recommendations for improvements, no further inspections were made to verify that appropriate control measures had been put in place and no further monitoring was undertaken, despite the lack of historical analytical data. Shallow boreholes can be influenced by seasonal and environmental changes as well as the weather, most notably rain. A single sample cannot substitute for robust historical information or risk assessment. The Inspectorate would recommend further investigation to determine that this and other supplies of this nature are consistently safe and reliable. While it is understood that resource limitations will often result in a conclusion being drawn with limited information even in the knowledge of risk (such as the absence of regular checks and failsafes on the UV disinfection), it may be interpreted as a failure to discharge fully a regulatory obligation in a timely manner. Similarly, competency and suitable training on drinking water quality and risk assessments should be prioritised.

Private water supplies must be regulated fully in accordance with the Private Water Supply Regulations, without this undertaking, consumers may not be fully protected at all times. A full and thorough risk assessment must be undertaken to establish the level of risk particularly after a report of illness following consumption of a supply. A single result can be an unreliable indicator of the risk of a supply. A risk assessment is not complete until all appropriate control measures, and

where necessary an action plan, is put in place to mitigate a potential danger to human health. Not to do so may be considered that available powers of enforcement have not been used.