



PRIVATE WATER SUPPLIES – CASE STUDY (2010/08)

Spring supply serving a bed and breakfast business – mandatory action

This case study relates to a small supply serving five domestic properties. Spring water is collected in a common chamber from where it flows into intermediate chambers and then to loft storage tanks in each of the properties. Local authorities have five years (by 2015) to risk assess small domestic supplies and this supply had not been visited when the owner of one property, who was planning to start up a bed and breakfast business, requested testing by the local authority. On receipt of such a request, local authorities have a duty to carry out a risk assessment to determine the scope of the monitoring. The underlying reason for the owner's request was a case of water-related illness linked to the supply. In 2008, an otherwise healthy resident (aged 21) had become infected with *Campylobacter*. This pathogen can be transmitted by water and the private supply had fallen under suspicion with advice being given at that time on the safe management and treatment of the water supply.

The requested sample was unsatisfactory, with evidence of faecal contamination: *E.coli* (18/100ml: Coliform bacteria (201/100ml) and *Clostridium perfringens* (49/100ml)). The results triggered the local authority to advise that water be boiled while they investigated by carrying out a risk assessment.



Poorly protected spring source

The risk assessment identified uncontrolled hazards in relation to the source – the collection chamber and intermediate (inspection) chambers were not adequately protected because they did not have water tight covers or vermin proof vents. The supply was not treated and, in addition, the loft storage tanks in each property were not fitted with protective covers and had not been cleaned for some years.

There was evidence of livestock and wildlife in the catchment and around the chambers, therefore faecal matter and pathogens could enter the supply due to the lack of maintenance. Based on the risk assessment, the evidence of

faecal contamination in the water and the fact that in the past a case of water-related illness had not prompted the owners to improve the supply, the local authority concluded that the supply



posed a potential danger to human health. A Regulation 18 Notice was served on all the owners and users restricting the supply (all users were made aware of how to safeguard their health by boiling water before use or by using bottled water). The Notice also set out the required improvement measures; maintenance (covers, screens on vents and the cleaning of chambers and tanks) and a suitable proposal to adequately treat the supply, including a fail-safe mechanism in the event of a power failure or some other form of disinfection equipment failure, together with a written procedure for the maintenance and monitoring of the disinfection equipment. There was no appeal by the owners to this Notice.

This case exemplifies the ineffectiveness of the previous 1991 regulations in relation to protecting human health. Even the most basic of recommended safeguards were absent, despite there having been a case of water-related illness in an otherwise healthy young person using the water supply. The discretionary nature of the previous 1991 regulations meant that owners could disregard health-based advice and local authorities did not have to prioritise action, even when there was a compelling health-based reason for doing so. The introduction of a risk-based approach for small domestic supplies has closed this gap, by making it mandatory for local authorities to act when supplies are clearly unsafe.

