



PRIVATE WATER SUPPLIES – CASE STUDY 2014/14

Treatment requirements at a public building

In September 2014, the Inspectorate was contacted by a local authority for advice on the treatment of water supplying a wedding venue, which accommodates up to 250 guests. Since the premises, (a large converted country house) holds community functions, the supply constitutes a Regulation 9 supply, as a public building. The supply was not being treated at the time of the enquiry.

Although the water was not being used for drinking (bottled water was provided for this purpose), the supply nevertheless fell within the scope of Regulation 2(a) of the Private Water Supplies Regulations. It was being used for food preparation, toilet flushing and hand washing, as well as for showering in the accommodation provided for residential guests. The Drinking Water Directive requires water to be wholesome for domestic purposes and food production, and it is worth noting that food law also requires the use of wholesome water for the preparation of food.

The local authority audit monitoring of this supply revealed that it contained elevated levels of sodium, boron, chloride and fluoride:

Parameter	Initial sample	Resample
Boron	1.1mg/l	-
Chloride	330mg/l	330mg/l
Fluoride	4.6mg/l	4.2mg/l
Sodium	390mg/l	390mg/l

Failures of standards for sodium, fluoride and boron are not trivial and elevated chloride, while an indicator parameter, makes water aggressive to metals including stainless steel and may also lead to water to be unwholesome.

In response to the monitoring results, the local authority sought advice from Public Health England, to assist with their determination of the risk this posed. The local authority were informed that the only health concern was the ingestion of the water through drinking and food preparation and that showering/bathing and hand washing posed no health risk.

Since the water was being used to prepare food, the local authority advised the owner of the property to install a reverse osmosis (RO) treatment system to mitigate the particular risks posed by the elevated set of parameters. However, the cost of an appropriately sized RO unit and the associated installation to remediate this risk was substantial and the owners were very concerned about the financial impact that this would have on their business.



The Inspectorate advised that under these circumstances RO is best used to treat a proportion of the water so that the treated water can then be used to blend the raw water in a tank so that all of the water then complies with the required standards. This means that a smaller sized RO unit could be used, and so reduce costs.

If the cheaper option of a point of use system is installed, the relevant persons must mitigate the risk of consumption (including food preparation) as a minimum. However, it would be a breach of the Drinking Water Directive to use the water for other domestic purposes in the context of *sanitary purposes* (washing/bathing/showering, laundry and toilet flushing), as defined in section 218 of the Water Industry Act.

The local authority accepted the advice of the Inspectorate and an action plan was developed and the risks mitigated.

This case study serves to remind local authorities that the provision of bottled water to consumers supplied by a private supply provides only a temporary restriction to mitigate risks from drinking the water. Furthermore, where the water is being consumed for other domestic purposes such as food preparation at the same premises, the water consumed must be wholesome and comply with the Regulations. In such situations where bottled water is provided for drinking, but a private supply is being used specifically for food preparation, breaches of food law must not be overlooked.

This case study also demonstrates that while the necessary treatment required to mitigate particular risks may be costly, alternative solutions, such as blending should be considered. This may have the advantage of lessening the financial burden on owners. However, where such arrangements are used to remediate risks, additional management and maintenance procedures may be required.

