

Is There a Need for Borehole Construction Standards?

BHUC2015 introduced a new format for the afternoon session. Presentations were given by AFNOR, the French equivalent of the BSi, and from DWI. The purpose of these presentations was to give background to some of the problems seen by the regulator for safe drinking water in the UK and how the French have addressed poor quality borehole construction through the development of a formal standard.

What followed was a table top debate led by Envireau Water's James Dodds to examine the issues around poor borehole construction, standards and possible solutions. This briefing presents the output from the debate and proposes a way forward. It should be stressed that this note is James' own interpretation of the debate based on the notes that he took at the time. You may or may not agree, but whatever your view we would be glad to hear and share it.

The following questions were debated in turn:

- **What are the biggest issues experienced by borehole operators?**
- **What are the main construction problems related to boreholes?**
- **What from a construction point of view are the best solutions?**
- **What from an industry point of view are the best solutions?**
- **With respect to any standard or regulatory regime, "Does Size Matter"?**
- **When considering a borehole project or operating a borehole, what does the "operator" need to know?**

In discussing and considering all these questions there were differences between the operators and the contractors supplying services. A common theme was the lack of knowledge within the operators, leading to low budgets and therefore sub-standard completion. Equally operators were frustrated that there was a lack of quality, or standards within the borehole construction industry and that there didn't seem to be "a go to place" for independent advice. Problems associated with below ground wellhead completion and lack of maintenance were commonly cited as the basis of operational problems and frustration with regulation was clear.

In identifying solutions, contractor accreditation and improved operator knowledge reflected the two different sides of the industry. It was clear that the industry as a whole recognised that the confidence in the borehole development (private water supply) industry needed to grow and that this could be achieved by identifying the stakeholders across the breadth of the industry, pooling resources and knowledge, and being transparent in the work that is done.

It was clear that the majority of people across the industry did not think that good construction was related to size. It was as important that a small domestic borehole was constructed to as high a standard as a mineral water bottling borehole. What was also recognised, however, was that the borehole and related systems should be "fit for purpose". A small supply, while constructed properly, may be completed in a simpler way than a system that is part of a more complex process.

A minimum standard must be met by all installations, but the use and quality requirements of a particular water may result in more robust standards being required in some circumstances.

When discussing the final question the views were wide ranging. Experienced operators knew what they wanted and just wanted contractors to do that. Prospective operators felt that the procurement process was difficult because of a lack of information, support and standards. Words that stood out in the discussion were:

RISK TRANSPARENCY TRUST COMPETENCE ACCREDITATION

WHERE DOES THIS TAKE US?

The development of an independent water supply is more than the drilling of a borehole. It involves hydrogeology and siting; design; material selection; pumps and electrics; control systems; water treatment; maintenance; abstraction licensing; Environmental Health risk assessment; to name a few. In some cases these aspects may be very simple or even unnecessary, in others more involved and complicated. In all cases, for successful delivery they must be integrated.

There is a clear and demonstrable need for improved standards for the development of private water supplies in the UK. The regulators, contractors and customer base recognises this. There is a lack of easily available, understandable, non-partisan information that the customer base can access and rely on to inform themselves. This leads to a lack of trust and transparency.

It is not the regulators role to manage and police this process and they have no appetite to do so.

Therefore, the 'industry' must develop and maintain their own guidance and quality standards. The Australian "Minimum Construction Requirements For Water Bores In Australia" may form a good basis to start from – particularly as it is written in Plain English.

Development of appropriate standards and guidance will require an association established by the various industries that are associated with the development of private water supplies, not just drillers. The association will need to be focused on quality and must be a repository for good practice and develop its own good practice guidance, to which membership must adhere and against which they can be independently audited.

The association must accrue benefits to the membership, and this must come primarily from formal recognition from regulators (EA, NRW, SEPA etc, DWI [on behalf of EHOs]) and other trade associations, as well as membership being a requirement in formal procurement processes, whether public or private sector.

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