

The very name Dales Water conjures up a picture of sparklingly fresh pure water. Visiting the firm at its Ripon HQ confirms that idea, and there are dozens of their clients who can vouch for that. Two fathers and sons, Nick and Chris Dodds and Eric and Jonathan Dalton, are the directors behind Dales Water Services Ltd, and with many years of experience between them, each has their own responsibilities at the firm.

Established in 1979, Dales Water offers a complete private water supply service. This includes borehole prognosis, borehole drilling for both water and heating, abstraction licensing, pumping installations, pump testing, water analysis and treatment, water pipelines and water well maintenance among other services. Many of the company's clients are livestock farmers, including more and more pig farmers on both indoor and outdoor units.

As water increases in price, more businesses, and that also includes food factories and processing plants, are beginning to realise

that it makes sound economic sense to look at the possibilities of having their own private water supply. Water is important and an expensive resource that's easily influenced by infrastructure and climate. Many pig farmers end up with an expensive, inadequate supply that's restricted in times of good weather.

If you apply for a borehole, you'll receive a

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visit to determine the underlying geology of the site. Not everywhere in the UK is suitable as areas where rocks have undergone high levels of pressure, heating and where pore spaces in the rocks have been squeezed out are not going to be viable for boreholes. In these instances, however, spring water

supplies may exist that can be exploited.

Fortunately, vast areas of our countryside lie on top of rocks of a porous nature, referred to as aquifers, where pore spaces and fractures in the rocks exist and consequently a huge amount of water is present. These aquifers apparently act like giant rain harvesting tanks, only they're bigger, are not subject to surface contamination and are capable of producing water during dry periods when conventional rain water harvesting is inadequate.

This is why Dales Water carries out comprehensive research to identify the potential of a continual water supply. The depth of a well is also dependent on geology so you don't drill too shallow a bore that might dry out. On average, boreholes across the UK will be approximately 60-70m in depth, but of course do vary.

The underlying geology of the site will also influence the water quality that's provided. There are drinking water standards, set by the Drinking Water Inspectorate, for water for human consumption, but pigs are much more tolerant and can safely drink poorer quality water. If, after testing, it's found that the water is still not of a suitable quality, treatment systems exist that can result in a suitable water supply. This just means the capital expenditure is a bit higher and takes a bit longer to recover.

Visiting Dales Water was fascinating and I learned much that I hadn't previously thought about. In the UK, for example, all the water that falls is technically owned by the Government. It's this fact that allows it to retain control over water, meaning no-one can dam a river, harvest the water and cause a user downstream to have no water.

However the UK Government has realised that we're, relatively speaking, a water-rich country, so in 2005 it deregulated controlled water abstractions, including those from boreholes, to allow some water abstraction to take place without obtaining an abstraction licence. No licence is now required if you take less than 20,000 litres/day in England and Wales or 10,000 litres/day in Scotland.

It falls to the farmer, with the assistance of any good drilling company, to establish what their particular circumstance is. If they're a smaller producer they may well fall into the deregulated category, but in most circumstances the modern pig farmer will require an abstraction licence simply because water is used for so many purposes.

The nitty gritty of costs versus savings is an interesting one. Typically, mains water costs between £1.20-1.50 per cubic metre. Water from the borehole is free, however running and maintaining the system will typically cost 10-40p per cubic metre. ☑

**Sam Walton** has been to see a North Yorkshire company that specialises in securing private water supplies for businesses across Britain



# As pure as driven snow



■ On average, a borehole 60-70m deep will be required to hit water from an aquifer in the UK