



Water Borehole Drilling & Installation

Jackson Drilling are able to offer the full water borehole package from determining the depth the hole needs to be drilled to installing the borehole and connecting it up for your own supply. Under current Environment Agency legislation you are allowed to extract 20,000 litres of water per day without requiring a licence.

Stages of work:



Water Borehole Prognosis

A prognosis report detailing water depths, approximate quantities and recommended locations allows Jackson Drilling to accurately quote for the works.



Drilling Works

The borehole is constructed using a suitable rig for the site and geology. Once the borehole has been drilled, it will be lined and capped.



Test Pump & Water Sample

Jackson Drilling will test pump the borehole to determine the yield. A water sample is taken during the pumping and sent to an accredited laboratory for analysis.



Install Pump & Chamber

Utilising the data from the test pump we can install the correct size pump for the borehole. A sealed chamber will be installed around the borehole.



Borehole Installation

The results of the water analysis and end use will determine the final installation. This can include storage tanks, filters and pressure vessels.

Experts in:



Water Borehole Drilling & Installation



Geothermal Drilling & Installation



Site Investigation

Water Boreholes



FREQUENTLY ASKED QUESTIONS

What is a water borehole?

A borehole is a means of penetrating through soils or rock to tap into the natural aquifers below. A submersible pump is then suspended in the hole to pump the water to surface.

Do I need permission?

Not necessarily. The Water Act (2003) has enabled the Environment Agency (EA) to set a threshold of 20m /day (4,400 gallons) regardless of use. Therefore no consent or abstraction licence will be required if you remain within these limits. As the borehole is likely to be greater than 15m in depth, we have an obligation to notify the Natural Environment Research Council of the EA of our intent to construct a borehole, and on completion provide them with the drillers logs of the information gained from the drilling and testing for scientific research purposes and for the British Geological Society database.

Could I increase my usage at a later date?

Yes, you would have to apply for an abstraction licence before you could increase your abstraction rate. It is always recommended to have a meter installed so you can gauge your usage.

How do you know where to drill?

We always recommend having a hydrological/geological prognosis report carried out before undertaking a project of this importance. This will provide us with the necessary information to know where to drill, which drilling method to use, and to what depth to locate an adequate supply.

Does dowsing work?

Yes definitely! But we tend to favour a hydrological/geological prognosis report as it gives us information on the strata we are likely to be drilling which ensures we have the right equipment on site to reach a successful outcome.

How much does a borehole cost?

This largely depends on the type of strata and the depth we would have to drill to. Having the prognosis report carried out will give us this information, which in turn enables us to quote accurately.

Can you drill through any type of ground?

Yes! But believe it or not, the harder the ground the better! Greensands are the biggest problem which unfortunately will reflect on the price, as a lot more equipment is required, along with different techniques to achieve the recommended depth to enable successful installation of the casing and screens.

Are there any restrictions where you can drill?

As long as you own the land, no! Some things to be considered are: the borehole location must be a minimum of 3m away from any building to avoid any structural damage. Ensure there are no overhead or underground services that could be damaged or be of danger. Keep at least 50m away from any potential source of contamination such as septic tanks, slurry pits or similar. Be as close as is sensibly possible to a power supply which will operate the pump, therefore avoiding having to pay for additional metres of expensive armoured cable and also consider where we connect to your existing pipework.

What is the normal depth of a water borehole?

A standard borehole is usually between 50m to 80m deep.

What do I see once the borehole is completed?

A raised chamber (manhole). This will be constructed to the recommendations of the Drinking Water Inspectorate to ensure the borehole is protected against contamination and vandalism.

Where does the pump go?

The pump is a submersible pump and is suspended down the hole on stainless steel cable with HO7RNF water proof electric cable and alkathene riser.

What electric will be required?

Either single phase or three phase.

Does all the controls, electrical connections go in the chamber?

No, we will need a corner of a garage or workshop or similar for this. Some people choose to have a separate building like a small garden shed to house the controls and any other equipment such as filtration units that may be required.

Will the water need to be treated?

In some cases yes but we don't know until we have a water analysis carried out by an accredited laboratory. Regardless of this test we always recommend installing an ultraviolet filter so there is no risk of bacteria entering your supply ensuring your water is safe and of the highest standard.

How long does it take to do the work?

The procedure is in stages. On your request we will commission a prognosis report on your behalf, this usually takes two working weeks. Once we receive this we can then submit an accurate quotation and we will send both to you. If you decide to go ahead we will then book a start date for you. The drilling can take anywhere from two to five days. When the drilling works are completed, we will vacate the site. Another crew will return to carry out the test pumping, construct a chamber and take a water sample to send off for analysis. This usually takes eight to ten days before we get the result. Once we have this we can provide an accurate quotation for the installation works. This usually takes one to two days to install.

How long will a borehole last?

If constructed correctly it can last for several generations.

What do you mean by constructed correctly?

Due to the strata that we may drill through, we will need to line the borehole to protect the pump, as there is always a risk of some loose stones falling from the side of the hole which in turn could 'jam' or damage the pump. We use British Standard DWI compliant screens and casings for this purpose, surrounded by recycled glass.

How reliable are the pumps?

Modern borehole pumps are very reliable, it is unlikely that you will have to remove the pump from the borehole as long as the borehole is constructed correctly, but there are always exceptions to every rule! In most cases this usually happens if there is a lot of Iron in the water which oxidises and in turn builds up around the impellers which will then need cleaning.

Do you offer an annual borehole service of equipment?

Yes we do, but it's not always necessary. If your borehole needs filtration, we would prefer to show you how to replace a filter or a UV bulb rather than charge you for our time.

How much does it cost?

We have a minimal half day charge of £250 + parts. We can only price accurately when we have all your details, such as your location, what equipment you already have installed etc.

Why should we choose Jackson Drilling?

Because we have over 40 years of experience in the drilling of boreholes. We are members of *The Well Drillers Association* which is an organisation that will only award membership after a strict audit and a members vote. We are also members of the *British Drilling Association* who also have a strict membership selection criteria. Our operatives are experienced, qualified and competent drillers who have achieved their Land Drilling National Vocational Qualification Level 2. Most importantly, we are a modest size family business and always strive to please the customer, as we know word of mouth is the best form of advertising.