

The testing time for boreholes is now

Boreholes for water supply are not simply a fit and forget option. Drilling the bore is simply just the first step as Geoquip Water Solutions notes that annual maintenance is key to keeping the water flowing



Failure to maintain a borehole can lead to a build of bacteria in pipes which will negatively impact how much water can flow

Geoquip Water Solutions believes that investing in a borehole maintenance programme is essential to keep water flowing all year round. Furthermore, the winter season is the perfect time to do this as the attention given to boreholes now will stand the users in good stead for the summer months, when water supplies become much more critical and boreholes need to be pressed into daily action.

For Geoquip Water Solutions, borehole maintenance has four key components: visual checks, testing, cleaning, and surveying.

VISUAL CHECKS

The most obvious starting point (but one which is often overlooked) is a visual check on all borehole systems and equipment.

TESTING

After a visual check has been carried out it is time to carry out a series of physical tests, these include monitoring water flow, checking water levels before and during pumping, and carrying out pressure, quality and yield tests.

If pressure or yield has reduced or the colour of the water has changed, particularly on start-up, (most often to a rusty red) then bacteria may be the culprit. Present in residue and biofilm, bacteria can build up and cause blockages in the pump, pipes, motors and other equipment.

Taking a water sample is a quick way to confirm this. A simple biological activity reaction test (BART) kit makes testing easy and, by identifying the type of bacteria, will ensure the most appropriate treatment solution is used. Testing at six-monthly intervals will help ensure the borehole stays bacteria free.

CLEANING

If bacteria has been identified as the root of a borehole's problems, then treatment is essential to both alleviate the immediate problem and prevent future build-up.

Geoquip's range of BoreSaver borehole cleaning and well rehabilitation solutions is specially designed to dissolve different types of residue, eliminating the opportunity for bacteria to grow and allowing water to flow freely again now and in the future.

Suitable for tackling the build-up of iron bacteria, iron oxide, manganese oxide, calcium carbonate and other minerals, the BoreSaver range is biodegradable and completely safe for potable water, containing a marker that gives an instant all clear to demonstrate that any remaining chemical residue has been removed.

Options include the BoreSaver Ultra C, capable of removing iron and manganese oxide deposits in as little as 24 hours, and the Ultra

C PRO for more severe cases of iron oxide, manganese oxide and iron bacteria contamination. The MultiKleen general all-purpose cleaning treatment completely removes deposits and slime from boreholes, wells, pumps and equipment.

Depending on the severity of the problem, a mechanical clean by jetting and airlifting may also be necessary and Geoquip often works with fellow industry experts to ensure customers receive the best overall solution.

SURVEYING

Sometimes issues such as reduced flow or capacity can be caused by other problems. For example, a blockage or damage caused by debris falling into the borehole and a physical check with a downhole camera will quickly identify any damage.

As the sole European distributor for Laval's industry-leading range of downhole cameras, Geoquip usually recommends the lightweight and portable Laval R-CAM 1000 XLT borehole camera. With a dual view wide-angle colour camera, the operator can see both down and side views and pan around the borehole 360 degrees, giving an instant insight into any problems.

CONCLUSION

Geoquip's Mike Deed summarises: "Borehole maintenance is about a series of checks and balances which tell you if there are any problems and then signpost you towards what needs to be done. Our advice is don't skimp on checking your borehole, investing time now will make sure you are set up and ready to go as soon as you need it." ♥