Borehole hits the jackpot

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Hot water from Newcastle's geothermal borehole finally gushed to the surface this morning.

During the early hours, the giant drill hit a hot water source thousands of metres below the earth's surface at the Science City site.

This is a major breakthrough in the university's quest to capture geothermal energy and the first deep excavation in the UK since the 1980s. The plan now is to pump the water back up to the surface so that it can heat local buildings.

Professor Paul Younger, Newcastle University, said: "This hot water could be available 24/7 because it doesn't depend on the weather. It is as cheap and as low carbon as it comes."

The drill also went through a coal seam at 660m that nobody knew existed and uncovered fossils thousands of years old, which point to a more tropical past.

Newcastle University geology student Laura Armstrong has been examining fossils that were discovered in a block of limestone over 1,000 metres below the ground.

"It is one of the most exciting things we've found," she said. "These shells and corals suggest that Newcastle was once a tropical environment, like offshore Bahamas."

The next step is for scientists to run tests on the sandstone, which acts as a reservoir for the hot water.

Provided by Newcastle University