Drilling Near North Downs 2022

Who are Cornish Lithium and Rodda's?

Cornish Lithium is an innovative mineral exploration and development company with 50 locally based employees, focused on the environmentally responsible extraction of lithium in Cornwall. Rodda's is a Cornish family run business, based in Scorrier, famous for their Cornish clotted cream. This joint exploration project is to assess the potential of geothermal energy as an alternative heat source that could enable Rodda's to decarbonise some of their operations, alongside the potential production of lithium from the geothermal waters.

What are you drilling for?

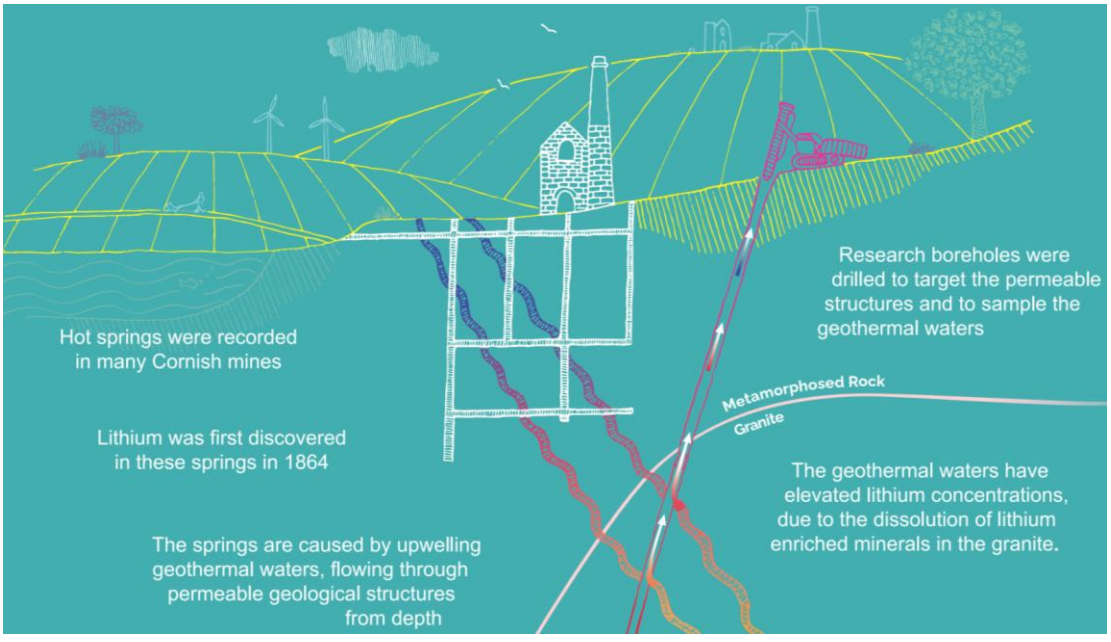
- Lithium is a metal used in batteries for use in electric vehicles and renewable energy storage
- Lithium is dissolved in geothermal waters. These waters circulate naturally in the rock beneath Cornwall
- At present there is no domestic supply of lithium for the UK car industry. This metal is essential as the UK aims for all new vehicles to be electric by 2030, to reduce our carbon emissions and combat climate change
- Geothermal waters are also a potential source of low carbon heat
- In a borehole up to 2,000m (6,500 ft) deep, the water temperature is expected to be approximately 70 degrees Celsius, which could be used to help decarbonise local industries, who require heat as an energy source

When are you drilling?

- Cornish Lithium plans to drill a research borehole at the Rodda's site commencing in autumn 2022
- The programme is expected to last for 6 months, and we are proposing to work in line with Rodda's operational hours, which are 24 hours a day, 7 days per week
- After the drilling programme has finished, we expect to undertake further test work to evaluate how the heat and lithium can be produced from the same geothermal waters

Why North Downs?

- North Downs has been identified as a highly prospective area to explore for lithium in geothermal waters from Cornish Lithium's extensive digital model of the geology in Cornwall
- In 2019 Cornish Lithium drilled two successful research boreholes at United Downs, which confirmed that the geothermal waters are significantly enriched in lithium from depths as shallow as 600 m (2,000 ft) beneath the surface
- Cornish Lithium plans to drill a 2,000m (6,500 ft) deep borehole at North Downs to explore the possibility of co-production of lithium and heat
- Rock core will be recovered from this research borehole, which will be used to identify the location of naturally permeable structures in the rock that geothermal water is flowing through
- A borehole pump will be used to obtain water samples from these geological structures, which will be analysed for their lithium concentration
- The temperature profile of the borehole will also be analysed, to understand how the heat can be best used by local industries



A cross-section through a drilling site, showing how we plan to sample geothermal

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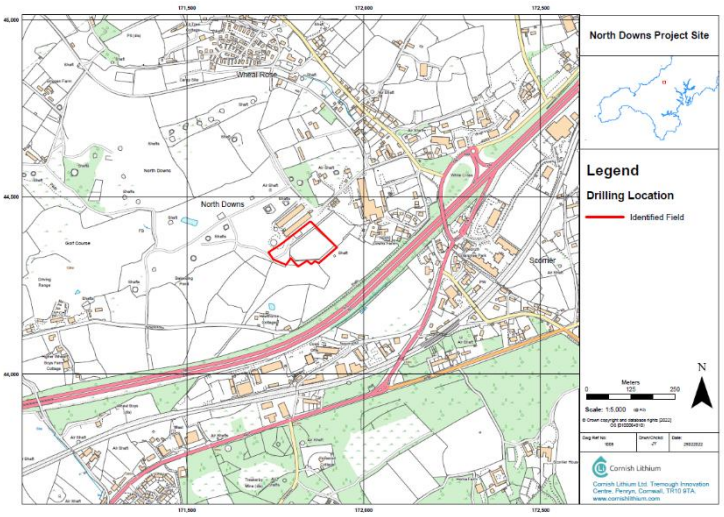
How will this affect me?

The borehole will be drilled by experienced contractors Priority Drilling Company Ltd., who drilled Cornish Lithium's previous exploration boreholes and several similar boreholes across Cornwall.

The work will be permitted by Cornwall Council, under a temporary planning order that outlines strict environmental and operational conditions which Cornish Lithium will adhere to, including:

Where in North Downs?



The drill site will be in the North Downs area, next to Rodda's.

Noise

- The noise of the drill rig is similar to a moving HGV when stood directly by the rig, which reduces with distance. The location of the rig has been carefully selected to minimise noise impact
- The maximum noise limits are set based on background noise surveys taken before drilling
- We will take extra measures to minimise noise, especially

Traffic

- The location is close to the A30, and a traffic management plan will be used for when the drill rig arrives and leaves the drill site to avoid disruption to local traffic; this will be communicated to the local community well in advance

Light

- The drill site has been specifically selected for its location away from residential properties and sensitive habitats
- The programme will follow recommendations from ecologists to minimise light pollution to nearby dwellings and habitats

Dust

- The drilling method uses water to minimise the production of dust
- Any dust which might be created by vehicles will be suppressed with water as necessary

Surface Impact

- The borehole will be drilled using a small mineral exploration rig (see photo from Cornish Lithium's 2019 drill site)
- The approx. 10cm diameter drillhole leaves a minimal surface impact and will be safely capped after use
- After drilling the heat potential will be reviewed, and this could result in a new heat plant, approx. one third of the size of Rodda's current footprint

Permissions

- Agreements are in place between Cornish Lithium and Rodda's, as well as the relevant mineral owners. The drilling will be carried out under a General Permitted Development Order, which will be granted by Cornwall Council

A photo of Cornish Lithium's 2019 United Downs Drilling Site

Contact Us

If you would like more information or have any concerns, please contact the Cornish Lithium drilling team using the contact details below:

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