CeraPhi Energy

An Update to our Geothermal Projects for Decarbonised Heat Networks

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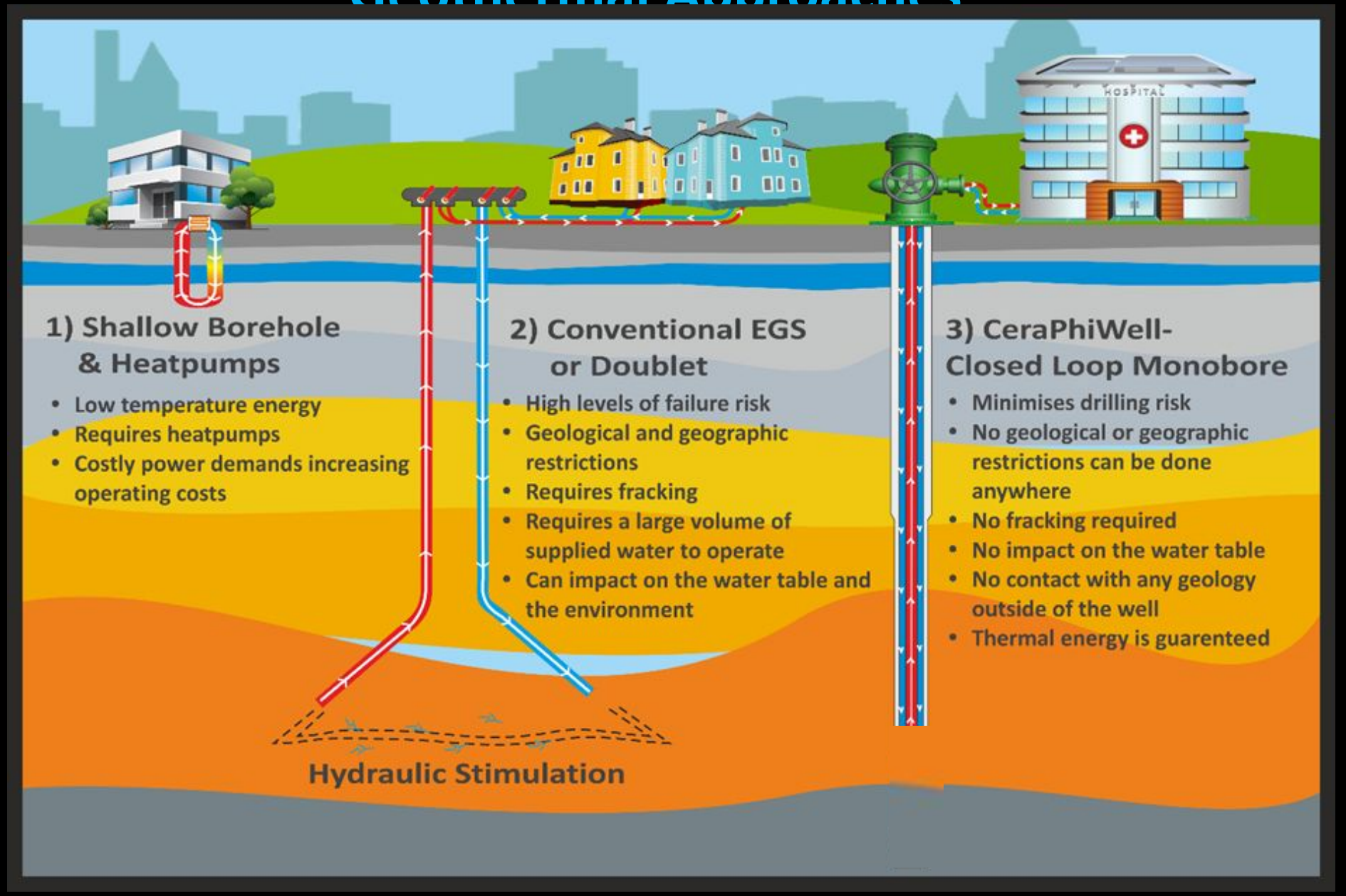
Source : CeraPhi Energy

Geothermal Approaches

The CeraPhi Energy approach has been developed to maximise longevity & predictability of the heat that is planned to be extracted and managed.

This approach has been developed to minimise risk, reduce CAPEX and ensure projects are attractive enough to secure investment.

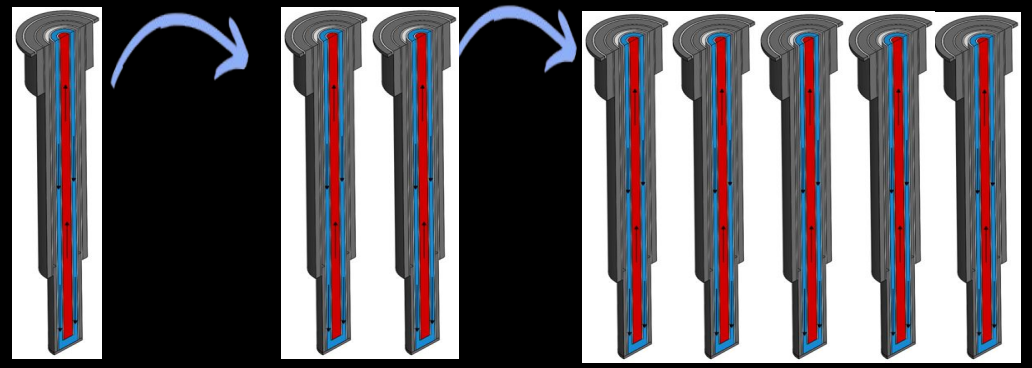


Source : CeraPhi Energy

Scalability

CeraPhi offers multiple solutions with modules for scale up packages

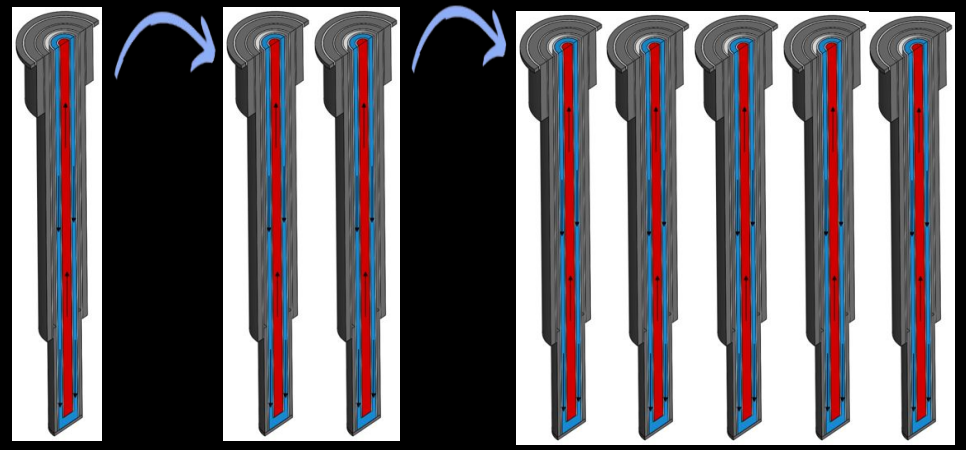
CeraPhi 500 (or 600)



50-70 kW 100-140 kW 250-350 kW

Current 500-600m deployments incorporate a double loop or a triple loop configuration

CeraPhi 1500

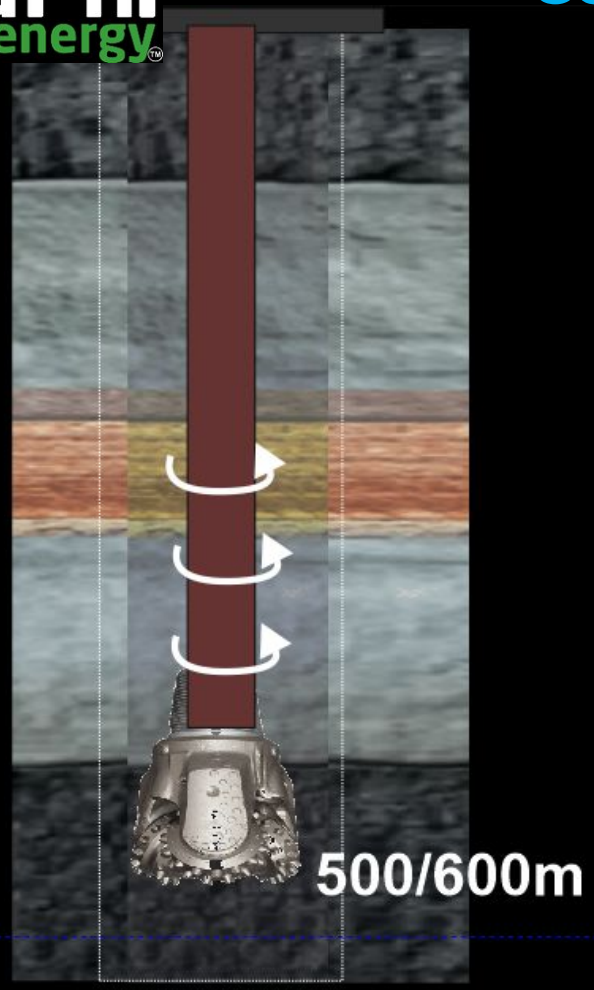


200 kW 400 kW 1 MW

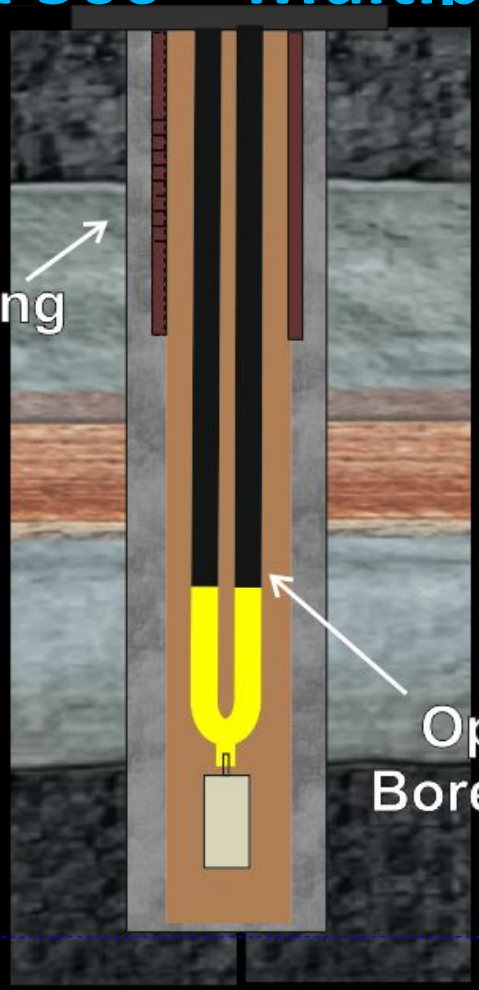
CeraPhi 1500 systems are deployed with a single coaxial in a fully cased well.

Source : CeraPhi Energy

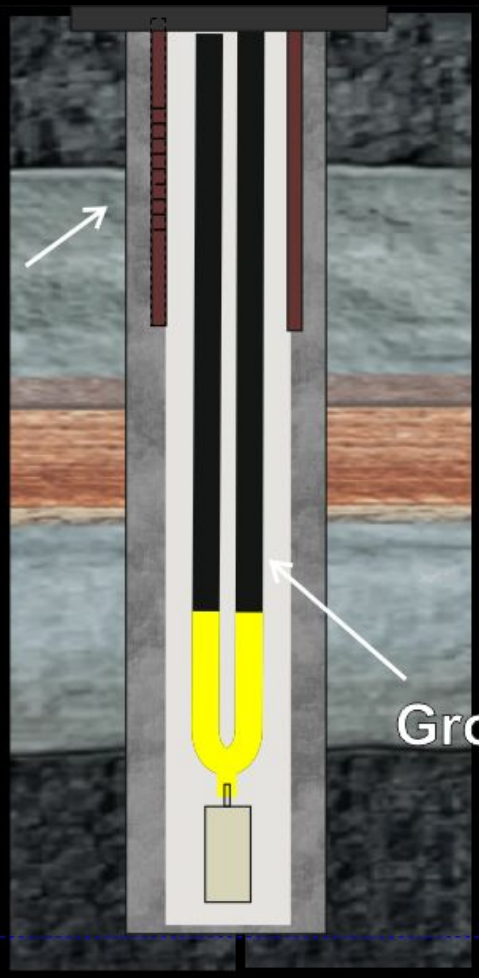
CeraPhi 500 – Multiple Loops



The well is drilled to the depth & diam required



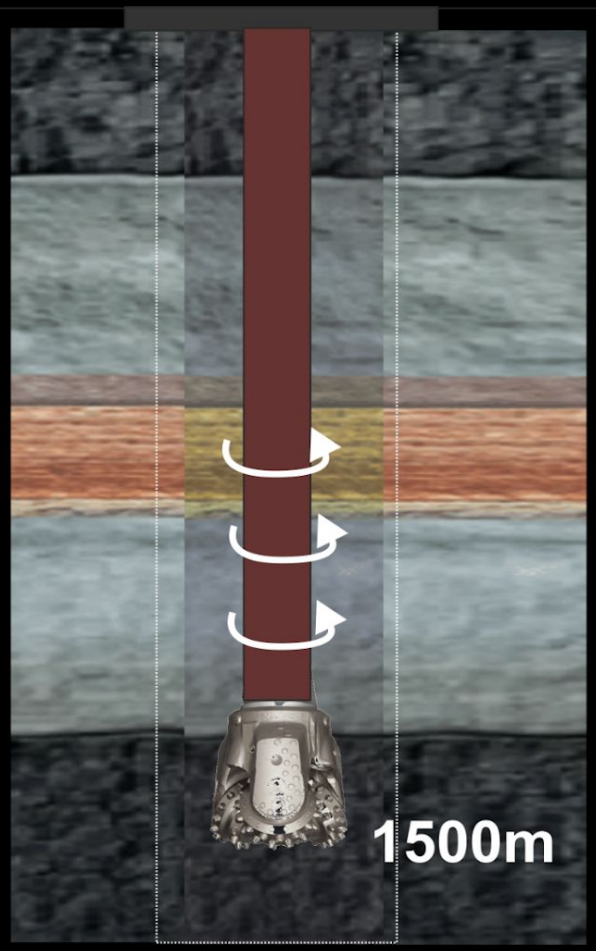
Casing is installed to required depth & multiple loops deployed



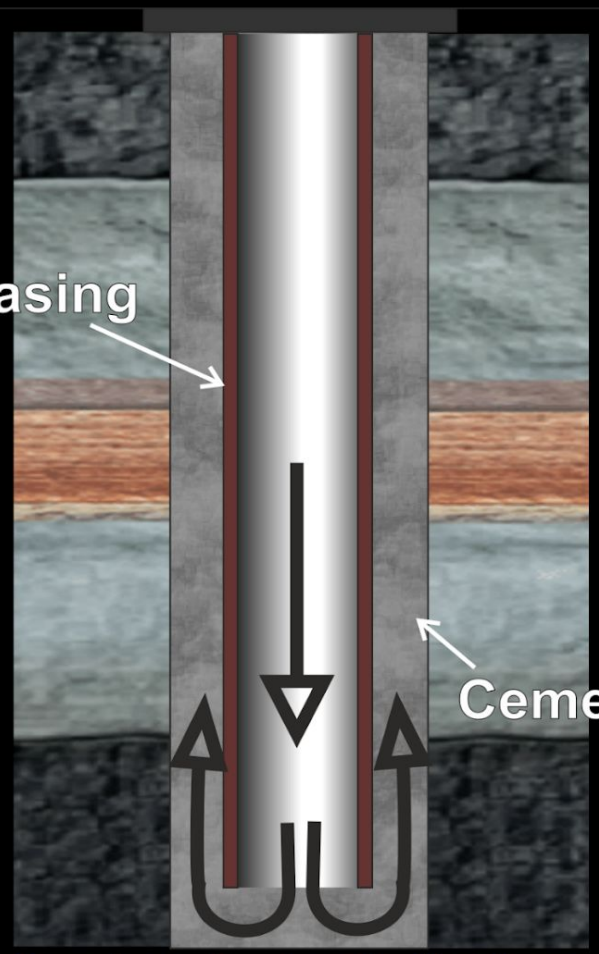
Finally we fully grout the open hole to establish full contact

Source : CeraPhi Energy

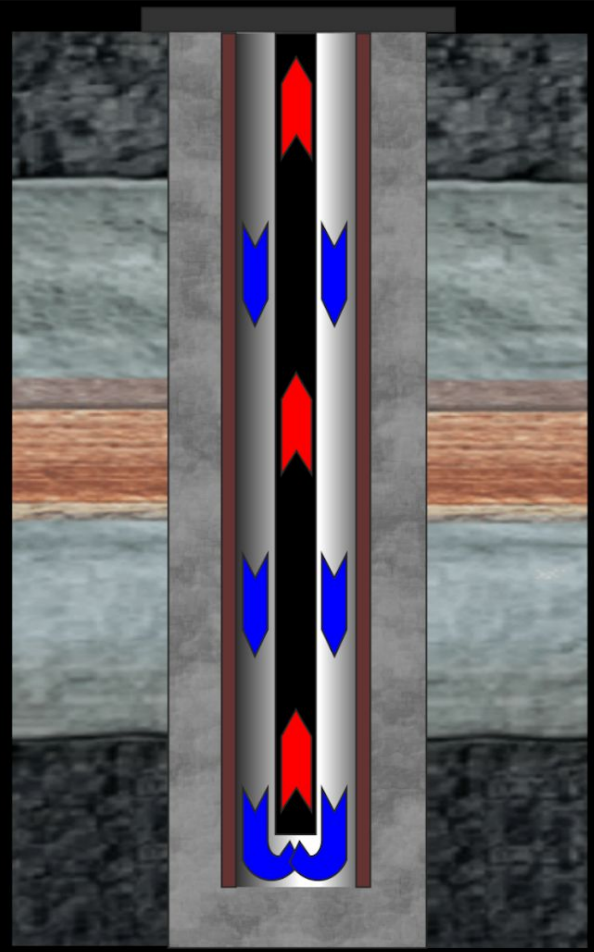
CeraPhi 1500 – Closed Loop Monobore



The well is drilled to the depth required



Casing is installed and cemented into place



CeraPhi Well heat exchange and circulation system installed

Source : CeraPhi Energy

Scunthorpe General Hospital

- Failed Aquifer Installation
- Single Borehole 550m
- Cased to 350m at 8.5” diam
- BHT measured at 22°C
- NHS Trust needed a win

Source : CeraPhi Energy

Scunthorpe General Hospital

- Engineering study undertaken Sept 25
- Site installation works Oct – Dec 25
- Hook-up and plant room works Jan 26
- Commissioning and handover Feb 26

*Installed depth – 547m *Double loop of 50mm HDPE + 2 extra pipes

*Recovering 14°C *Producing approx. 50kW heat through heat pump

This is now the deepest double loop system in the World

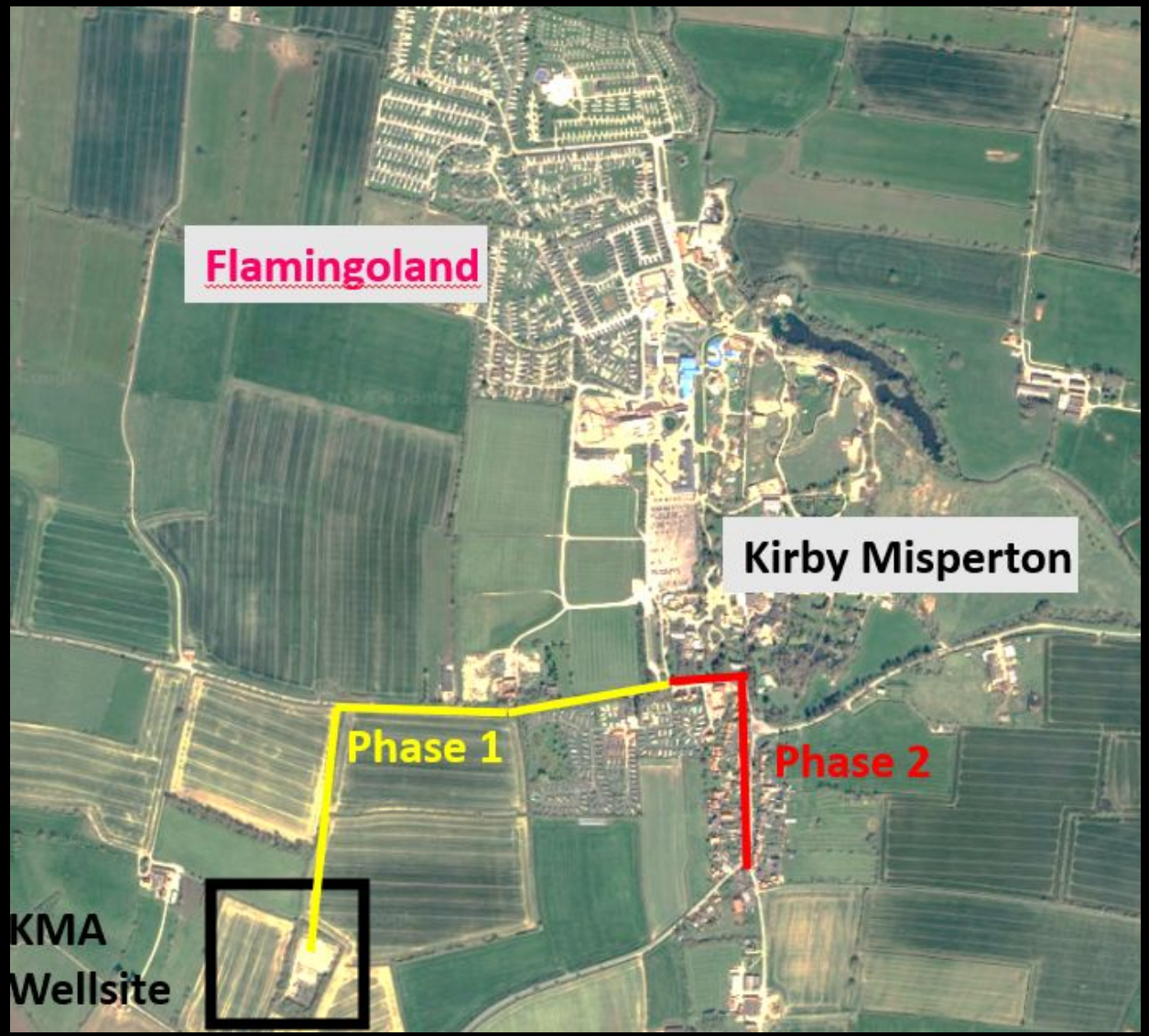
Source : CeraPhi Energy

Kirby Misperton Heat Network

- Small town near demo site
- 150 homes, hotel and theme park
- KM8 fracking well to be re-purposed
- 2 phases planned eventually

Phase 1 to use hotel, offices and
Church as main anchor load plus
10 residences

Phase 2 to run through the town
to connect interested residents
And community centre



Source : CeraPhi Energy

Multiple Projects & Engineering Studies

Pickering Central & Pickering South

- 2 x FEED studies 2024/25 – **New Boreholes/Wells**

2 Schools, Church, Homes, Leisure Centre & Pool, Hotel, Care Home and Residences

Other Local Projects

- 5 x Feasibility studies 2024/25 – **Re-Purposing Gas Wells**

4 local community heat networks fed from redundant wells, design and build a geothermal centre of excellence for training, multiple agricultural applications

Kentwell Hall, Suffolk

- One of the UK's finest Tudor Halls with very old oil fuel heating system
- Need to urgently replace boilers as the interior FM is deteriorating
- Desire to achieve Net Zero and Building preservation
- Challenge as a Grade 1 listed building of major historical significance

Source : CeraPhi Energy