

# Project Update

October 2021



## Dear Neighbours

It's just over a year since work started to prepare the Eden Geothermal site for drilling our first well. Since then, we've posted regular project progress updates on our website and on social media channels, and we've met many of you at our public viewing area. As we approach the end of our first well, we're writing to you to fill you in on our progress, and to let you know what the next steps for the project will be.

You'll find more detail on our website ([edengeothermal.com](http://edengeothermal.com)) about all the topics in this letter, and we're always happy to answer questions on the phone, by email or if you visit our site. Or you can drop in to Trethurgy Village Hall for our forthcoming information event – more details on page 3.

## HOW IS PROGRESS WITH THE FIRST WELL?



The first well will be finished around the end of this month, with the exact date depending on the hardness of the granite and the structures we drill through.

The two key elements for a successful deep geothermal energy system are heat and permeability.

We've got the heat. For the past few hundred metres of drilling we've been having to work really hard to keep conditions in the well cool enough so our tools don't stop working. Great news.

And we've found permeability. Throughout the granite that stretches from Dartmoor to the Isles of Scilly, there are structures called crosscourses, which are naturally fractured geological faults, created by tectonic movement millions of years ago. We've used a combination of mining records, geophysical modelling and geological observations (from both closer to surface and during drilling, using cuttings from the well) to predict the location of one of these - the Great Crosscourse – and we're happy to report that the well has already passed through one part of it and we expect to find another structure in the coming days. We will use these naturally permeable zones as a giant heat exchanger for our two-well system. We'll pass cooler water from the surface down one well, through the natural cracks in the hot rock and then back to surface through the second well. At the surface, we'll use the superheated water to generate electricity and to supply heat to Eden and beyond.

If you haven't been to our viewing area to see the rig yet, please do it soon, before it leaves our site. We'll post updates on our website, on our social media and on local Facebook pages when we have specific dates.



## RIG DEMOBILISATION AND WELL TESTING – OCTOBER 2021 ONWARDS

Very soon after finishing drilling, we'll carry out a short initial 'well test' (lasting 2 – 3 days) using the rig. We envisage that this will be towards the end of October. Depending on the results of this first test, we may run a second, shorter, test, before releasing the rig in early November. The rig will then take 2 – 3 weeks to dismantle and transport off site. (We'll keep neighbours posted about vehicle movements.) We may carry out some further well testing during December or January.

Well tests help us understand the permeability and water flow characteristics of the target zone, so we can work out how a two-well geothermal system will perform, and what its heat and power outputs are likely to be. Essentially, we assess permeability by testing the ability to inject water into the natural fractures (injectivity tests) and to produce water from these fractures (productivity tests). You can find out more about the well tests, and what's involved, on our website at <https://www.edengeothermal.com/the-project/well-testing>

Even low levels of injection and production can lead to adjustment and settling of the natural fractures in the rock, so we anticipate that our seismic monitoring network, installed before drilling started, will detect some microseismicity associated with well testing. Usually, such microseismic events are so tiny that they can't be felt at surface, but they provide us with essential information about permeability and the spatial movement of water within the formation around the well, so monitoring them is a key tool during well testing. Continuously monitoring the real-time data from our seismic network also helps us to manage and control our operations, so that we maintain any microseismicity within limits which do not cause annoyance or disturbance to our neighbours. You can find out more about microseismicity, and how we monitor and control it, in the well testing section and the FAQs on our website at <https://www.edengeothermal.com/the-project/well-testing> and <https://www.edengeothermal.com/resources/faqs/> We'll keep you up to date about exactly what's happening, and when, on our website and social media.

## WHAT ABOUT THE SECOND WELL?

We plan to start drilling our second well in early summer 2022, and we'd like to use the same rig and crew if possible.

To date, EG-1 has taken 5 months to drill. EG-2 will take a similar time, and the process will be essentially the same. It will be positioned next to EG-1, 10m to the east.



## WHAT WILL THE POWER PLANT BE LIKE?



Building a small combined heat and power (CHP) plant at the wellsite will enable us to generate electricity and export heat from the two-well system.

Outline planning permission for the plant was granted in 2010 and 2013, but we're currently working on the detail to satisfy 'reserved matters'. The exact plant specification will depend on the results of well tests, but these artist's impressions (viewable in larger format on our website) give a good sense of what it will look like.

Construction of the plant is likely to start in late 2023 and we would expect it to be operational by early to mid-2024, when it will meet all Eden Project's heat and electricity needs and produce enough surplus electricity for the equivalent of up to 7000 homes.

# Community Information Event

Wednesday 10<sup>th</sup> November 2021, 2.30pm – 7.30pm

## Trethurgy Village Hall

An informal drop-in session, to find out more about the Eden Geothermal Project, meet the team and ask us your questions about all things geothermal.

### Follow our drilling journey in pictures.

Trethurgy resident Malcolm Roberts has recorded every stage of operations on site, and has kindly agreed to add his photographs to our own, to create a complete visual timeline of the project from day one.

### See rock cuttings from the well

We've retained samples of the cuttings drilled out of the well at every 10m interval. Some of the rocks on display will be from nearly 3 miles below ground!

### Find out more about the next stages of the Eden Geothermal Project

Get more information and ask our team about our future programme.

Please park considerately in the village hall car park. Please contact Claire on 01726 806545 or at [cjudd@edengeothermal.com](mailto:cjudd@edengeothermal.com) for more information, or if you have any special requirements to be able to attend.





## PLEASE GET IN TOUCH!

We're very keen to keep our friends and neighbours in the loop about the Eden Geothermal Project, so:

- You can contact our Project Manager, Max Skerratt, by email at [mskerratt@edengeothermal.com](mailto:mskerratt@edengeothermal.com) or by phone on **01726 806544**, with any questions you may have.
- Send your name and email, or postal address, to our Office Manager, Claire, at [cjudd@edengeothermal.com](mailto:cjudd@edengeothermal.com), or phone her on **01726 806545**, if you'd like to be added to our neighbour contacts list. Then we can get in touch with you direct about anything happening on site.
- The Eden Geothermal Community Liaison Group includes representatives from the four parish councils. Contact details are:
  - Roy Taylor (Chair) - roytaylor49@hotmail.com
  - Luxulyan - clerk@luxulyanpc.co.uk
  - St Blaise - townclerk@stblaisetc.co.uk
  - Carlyon - clerk@carlyon-pc.co.uk
  - Treverbyn - treverbyncouncil@gmail.com
- If you haven't already visited the geothermal site, our public viewing area is free to access and is directly opposite the rig, on the footpath / bridleway about 200m inside the main Eden entrance gate. You can park in Cherry car park and walk a short way back towards the entrance. There's information about the project there, and we're always happy to come and speak to you if you let us know when you're coming.
- We keep our website – [www.edengeothermal.com](http://www.edengeothermal.com) – updated with latest progress, and there's lots of general and project-specific information on there, as well as answers to frequently asked questions. We post updates of interest to locals only (about things like traffic movements or emergency drills) on local neighbour Facebook pages: Trethurgy and Friends; Penwithick Community News; Luxulyan Community and PL24 Group. If you have a group you'd like us to add to the list, please let Claire know.

### Eden Geothermal Community Fund

Nine groups from the parishes of Carlyon, Luxulyan, St Blaise and Treverbyn were awarded a grant from the Eden Geothermal Community Fund, for a wide variety of projects to benefit local people and improve the environment or community amenities.

Details of all the projects funded are on our website at <https://www.edengeothermal.com/community-hub/eden-geothermal-community-fund/>

There will be a second round of funding available with our second well. Keep an eye on our website or email [cjudd@edengeothermal.com](mailto:cjudd@edengeothermal.com) to be kept informed.



**European Union**  
European Regional  
Development Fund



**HM Government**



**CORNWALL  
COUNCIL**  
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