



PRESS RELEASE

Eden Geothermal hotting up as drilling goes past halfway mark

The pioneering Eden Geothermal energy project is now more than halfway towards its target depth of 4.5 kilometres.

Drilling into the granite at the home of the world-famous Biomes near St Austell in Cornwall began in mid-May this year and is making great progress.

The midway mark of 2.25 kilometres has been successfully surpassed and with drilling continuing at around 70 metres a day, Eden Geothermal Ltd is optimistic that the target depth will be hit in the next two-and-a-half months.

The company has also been greatly encouraged by the temperatures being recorded as drilling goes deeper and due to the 'high heat producing' granite and underlaying, they are confident that when 4.5 kilometres is reached the heat will be in the range of 170-190 degrees.

When drilling of the first well is complete a downhole coaxial heat exchanger will be inserted. Water is injected into the well which is superheated as it meets the layers of granite below.

The hot water will then be pumped back up to the surface. This heat will initially warm Eden's Rainforest and Mediterranean Biomes, offices, kitchens and greenhouses. The same water will then be re-circulated to be superheated and used again.

Scientists working on the project can check the subterranean heat and the geology at different depths by analysing the cooling fluid which is circulated down the well during drilling.

Eden Geothermal Project Manager Max Skerratt said: "Going past the halfway point towards the Earth's crust is a monumental moment for the project, like sailing over the Equator for the first time. The further down we go, the more we are discovering about what lies deep beneath our feet.

"We know that it is very hot down there. The heat of the mud coming back up is telling us that. We know that we can predict specific temperatures at specific depths,

which is super encouraging as we head towards the completion of drilling of the first well.”

Wellsite geologists from Cornwall-based GeoScience Ltd are sampling mineralogy throughout the project to help build on knowledge of the deep geothermal resource. It is hoped this will provide greater understanding of the geology at depth, enabling more resources in the region to become characterised as reserves.

Following a successful first phase at Eden, the next is to drill a second well close to the first to a similar depth of around 4.5 kilometres.

Once complete, the two-well Eden Geothermal project has the potential to supply renewable heat to the Eden Project and neighbouring industries equivalent to the heat used by more than 35,000 homes, or renewable electricity to that consumed by around 14,000 homes.

The Geothermal Project is being delivered by Eden Geothermal Limited (EGL), a three-way partnership between Eden Project Limited, EGS Energy Limited, a leading geothermal development and consultancy group, and BESTEC (UK) Limited, affiliated with BESTEC GmbH, the specialist geothermal developer and drilling advisor.

To drill the first well, EGL secured £17 million funding from a combination of European Regional Development Fund, Cornwall Council and commercial funding from GCP Infrastructure Investments Limited, an investment trust advised by Gravis Capital Management Ltd.

Ends

Case Studies

Max Skerratt - Project Manager

When Max Skerratt joined Eden Geothermal Ltd as Project Manager in February 2020 he brought with him over a decade's worth of experience working in the thriving New Zealand geothermal industry.

As a chartered engineer and professional Project Manager, Max worked on a range of projects incorporating both existing and new-build ventures and has led a team maintaining and modifying conventional and binary-cycle geothermal power stations.

Max's previous employers in New Zealand run six geothermal power stations including Wairakei Power Station which, at 60 years old, is one of the oldest operating geothermal plants in the world.

New Zealand is rich in geothermal with 20 per cent of the country's power coming from the renewable resource so it proved a perfect location for Max to build on his expertise and experience.

His ambition now is that the Eden Geothermal team are successful in finding a strong resource to kick-start a renewable heat industry in Cornwall. After providing enough heat for Eden's Biomes, he hopes Eden Geothermal could supply energy for geothermal spas, greenhouses, aquaculture, heat for industry and district heating as well as electricity for the grid.

Max said: "Geothermal energy really is like a box of chocolates – you never quite know quite what you are going to get. For me, that is what makes it so interesting and exciting.

"A voyage to the centre of the earth to find free power was never going to be easy but here we are at Eden, beyond the halfway point. I'm excited and proud to be involved in this project and part of the team delivering it."

Chris Briggs – Drilling Support Engineer

Chris Briggs is a Drilling Support Engineer at Eden Geothermal Ltd and has more than 20 years of experience in directional drilling work.

Chris moved to the South West to study at Plymouth Polytechnic and has called the area home ever since.

He has worked on geothermal and hydrothermal wells in Germany, Austria and France, including the first sub-horizontal geothermal well in the Paris basin.

Dealing with drills that are up to 26" in diameter and 600kg in weight, Chris sees his role as a chance to build his experience and learn from Eden Geothermal's Drilling Supervisors. He hopes to progress to a Night Drilling Supervisor in time and is keen to remain in the sector.

He said: "Since my first day at Eden Geothermal, I've felt at home and I'm proud to be a part of the team. I am excited about the potential for geothermal to become a significant and important part of the vital transition to a renewable, zero-carbon energy mix.

"This project is particularly exciting as it is close to home. As well as providing direct heat to the iconic Eden Project, it has the potential to create significant new zero-carbon businesses and quality employment opportunities in the region."

In his spare time, Chris is a keen sailor and is competing on the boat Pegasus in the upcoming Fastnet Race, through which he hopes to raise awareness of Parkinson's Disease.

Lucy Cotton – Lead Geologist

Lucy Cotton is the Lead Geologist at Eden Geothermal, working for Falmouth-based GeoScience Ltd.

Born and raised in Truro, Lucy joined GeoScience in 2017 after completing her MSc in Exploration Field Geology at University College, Cork.

She worked as part of the Project Management team at the United Downs Deep Geothermal Power project and also ran and developed the Education and Outreach programme alongside her colleagues at GeoScience.

As Lead Geologist, Lucy and her team study rocks found every five metres deep in the ground to assess what the mineralogy is, and is responsible for informing the drilling team of any changes they need to be aware of.

Lucy sees her role as a journey of exploration and the data the geology team collect helps to create a 3D map of the subsurface and to locate the position the drilling team have reached.

As they move towards the target zone, Lucy will work with the drilling team to determine when they have reached the desired point.

Lucy said: "Eden is held in such high regard within the local community and I am thrilled to play a small part in all the good they do for sustainability. I love that I am involved in driving positive change.

"As a geologist, you are traditionally signposted to work with oil and gas but my passion has always been for green and renewable energy. Working at Eden Geothermal means I can be my true self, using all the core hard rock geology skills built at university for a climate change solution rather than a problem."

August 6, 2021

Caption 1: The rig at the Eden Geothermal site

Caption 2: Max Skerratt - Eden Geothermal Project Manager

Caption 3: Chris Briggs - Drilling Support Engineer at Eden Geothermal Ltd

Caption 4: Lucy Cotton – Lead Geologist at Eden Geothermal

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