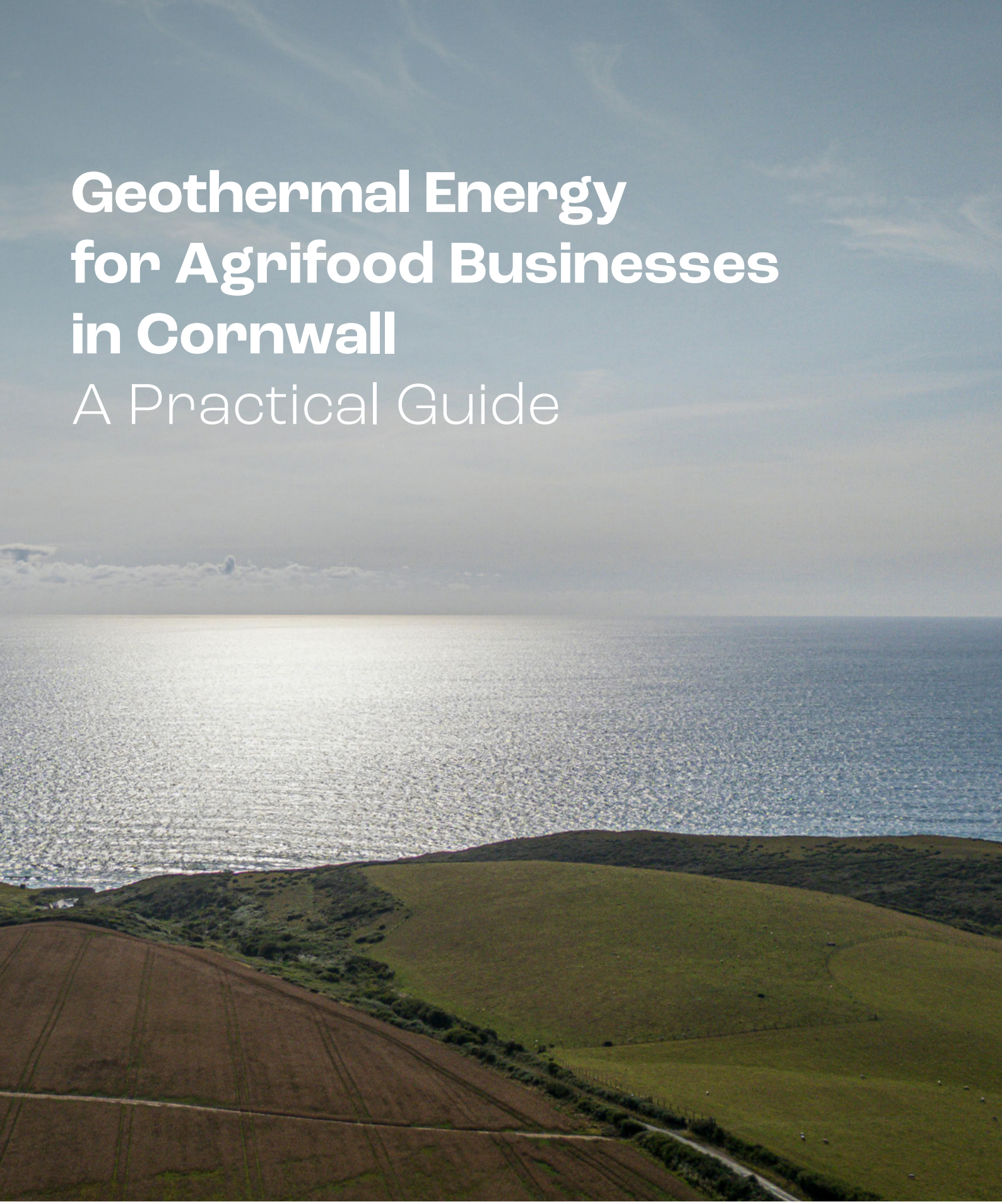
Geothermal Energy for Agrifood Businesses in Cornwall

A Practical Guide



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About this guide

Developed by Eden Geothermal on behalf of Great Cornish Food, this guide is to inform agrifood businesses and stakeholders about geothermal energy and provides practical guidance on its application for decarbonising heat, cooling, and power systems in Cornwall.

Contents

What Geothermal Energy Is and Why It Matters 5

Which Geothermal Option Fits Your Agri-food Business? 10

On site vs cluster/shared infrastructure 14

Matching the geothermal resources with high-energy demand areas 16

If I wanted to develop my own deep geothermal project, how would it work? 18

I don’t have the demand, land or finance to develop my own project – what can I do? 20

Case Studies: Agrifood Businesses Using Geothermal 22

Where are the Current Geothermal Projects in Cornwall? 24

Geothermal questions and answers 26

I’m interested in exploring geothermal for my business, where can I find out more and speak to the experts? 28

Further reading 29

Geothermal makes sense for agrifood businesses

Cornwall's agrifood sector is energy intensive, exposed to volatile prices, and increasingly under pressure to decarbonise without compromising productivity. Geothermal energy offers something rare in the energy system: constant, reliable, locally sourced heat and power that works around the clock whatever the weather.

Once operational, geothermal provides long-term price certainty and operational resilience on a small surface footprint. Cornwall is one of the few places in the UK where both shallow and deep geothermal resources are proven, making this an established technology which can be deployed for the sector today.

The way geothermal is used differs depending on business size and energy demand. What a large processor or grower needs to understand is not the same as what a smaller producer or SME needs to consider.

Geothermal exploration and development are not new to Cornwall. Activity began in the 1980s with the Hot Dry Rocks research programme at Rosemanowes, one of the UK's earliest and most significant geothermal projects. Since then, Cornwall has remained at the forefront of geothermal innovation, with projects ranging from deep geothermal exploration to shallow and mine-water heat systems.

Over several decades, this sustained activity has built a strong local base of practical expertise. Cornwall is home to developers, engineers, geologists and operators with direct experience of designing, drilling, constructing, operating and maintaining geothermal systems. This includes real-world knowledge of planning, regulation, funding, risk management and long-term operation, and is vital to unlocking the potential of geothermal across the region.

What Geothermal Energy Is and Why It Matters

Geothermal energy is the heat beneath the Earth's surface. Wherever you are, the deeper you go, the hotter it gets. The extent of the resource depends on the local geology. In some places, like Cornwall, the heat is closer to the surface so it is easier to access and can be used for generating renewable electricity, and run high temperature processes, but lower grade heat is available everywhere for space heating via heat pumps.

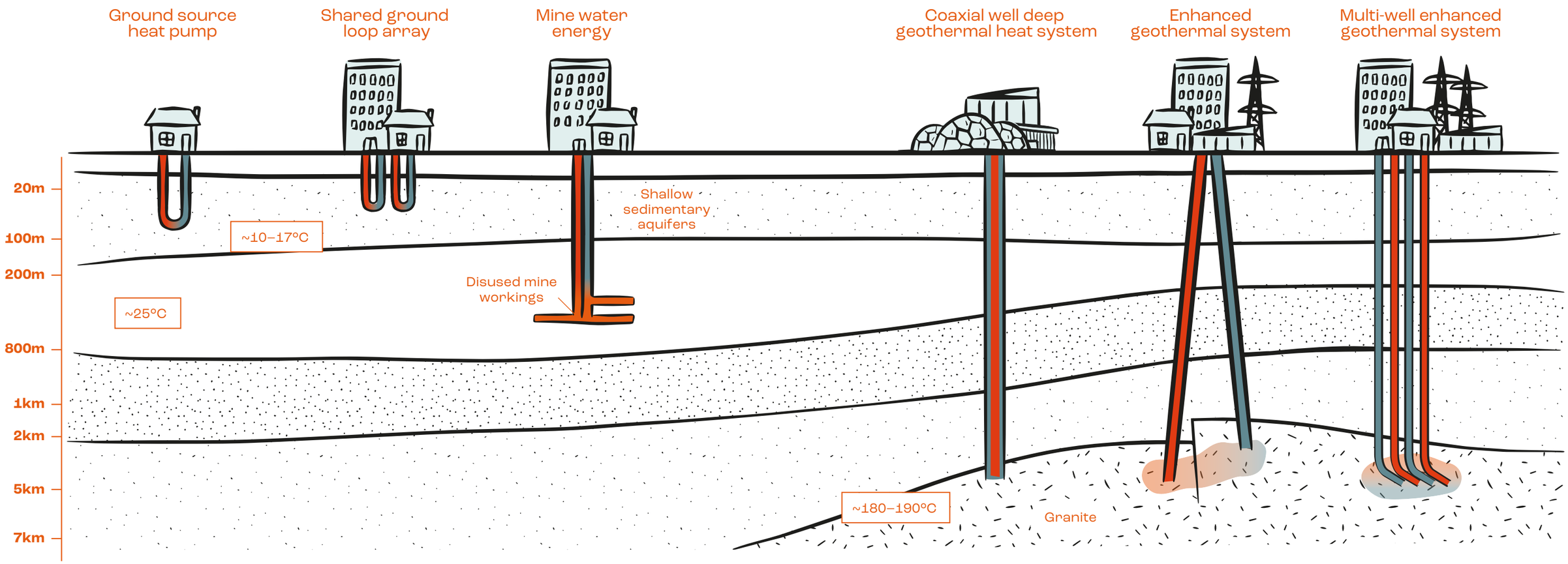
Benefits of geothermal:

- Provides long-term energy price stability and reduces exposure to gas and electricity markets
- Available 24/7, whatever the weather
- In some places, supports high-temperature processes up to 210°C
- Can supply multiple uses from one system (cascaded heat)
- Has a small surface footprint, preserving productive land
- Can supply clusters and food hubs, reducing costs for SMEs
- Reduces carbon emissions by up to 90% against natural gas
- Can extend the production season for growers.

There are several different types of geothermal, from shallow ground source heat pumps to deeper combined heat and power systems.

Ground source heat pumps: heating and cooling

Direct use geothermal heat and power



Shallow geothermal (ground source & mine water)

Depth: Surface to a few hundred metres

Temp: ~10–25°C (boosted via heat pumps)

Best for:
- Space heating and cooling
- Low-temperature processes
- Food storage and packing
- Smaller greenhouses

Key points:
- Available almost everywhere
- Low risk and relatively low cost
- Proven at farm and SME scale
- Ideal for small scale clusters and networks
- OPEX can be challenging in areas with mains gas available, but Coeffficent of Performance (COP) 3-5 depending on the resource, meaning that one unit of electricity yields 5 units of heat, so cost competitive in many areas.

Deep geothermal (direct use heat & power)

Depth: ~2–5+ km

Temp: 70–210°C+

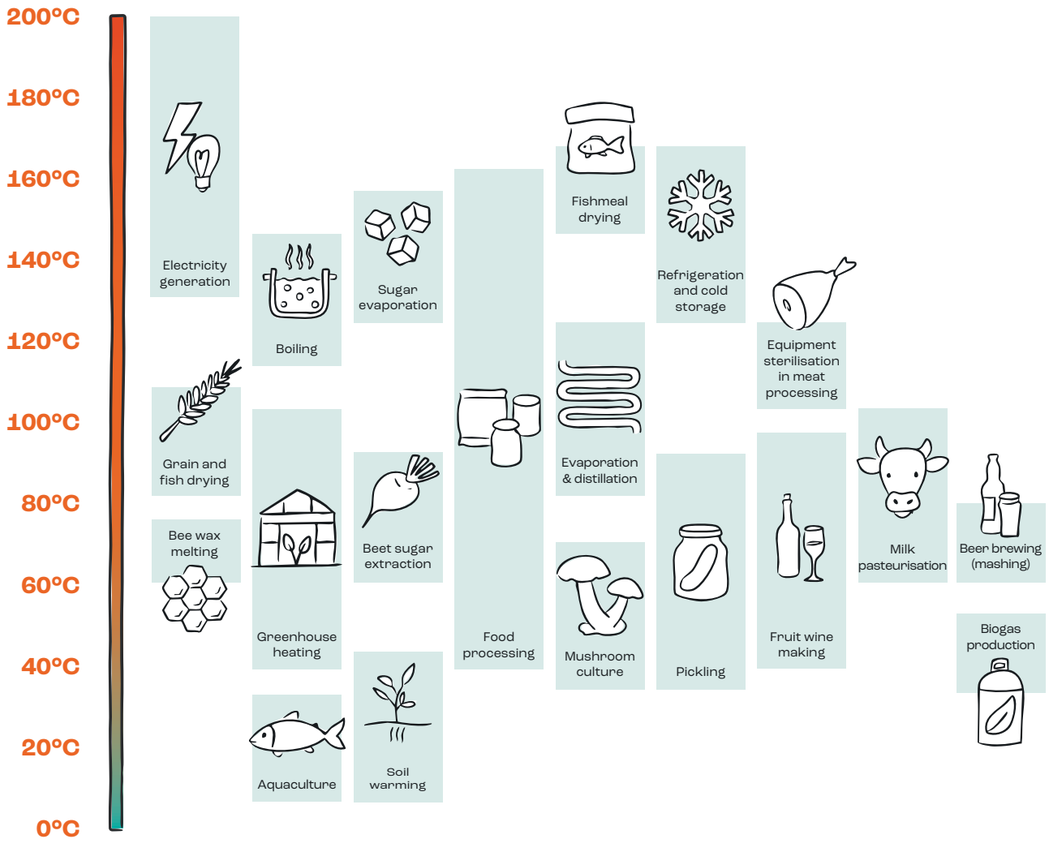
Best for:
- High-temperature industrial heat
- Large energy use
- Continuous processing
- Electricity and/or heat (combined systems)

Key points:
- Proven for use in agrifood applications internationally
- High upfront cost
- Delivers very large, constant energy volumes
- Can anchor industrial clusters
- Particularly well-suited to Cornwall's granite geology

Many businesses can benefit from using geothermal energy. The most important factors are energy use, site geology and ownership to define the type of system that works the best both practically and financially.

Geothermal resources provide electricity to run equipment for food production, processing, cooling, and refrigeration; heat for growing, storing, and processing food and in some cases producing valuable minerals, such as lithium, as a by-product.

Geothermal energy can be used most efficiently by cascading the use of heat, feeding one process or user after another in order of temperature requirement, highest first.



For example, a geothermal electricity plant could supply a heat main at 90°C to feed a close-by tomato dehydrating facility, and then greenhouses to grow the tomatoes. This approach is efficient in energy use, offers an opportunity to share the capital burden between businesses, and also supports more jobs and GVA than a geothermal electricity plant alone.

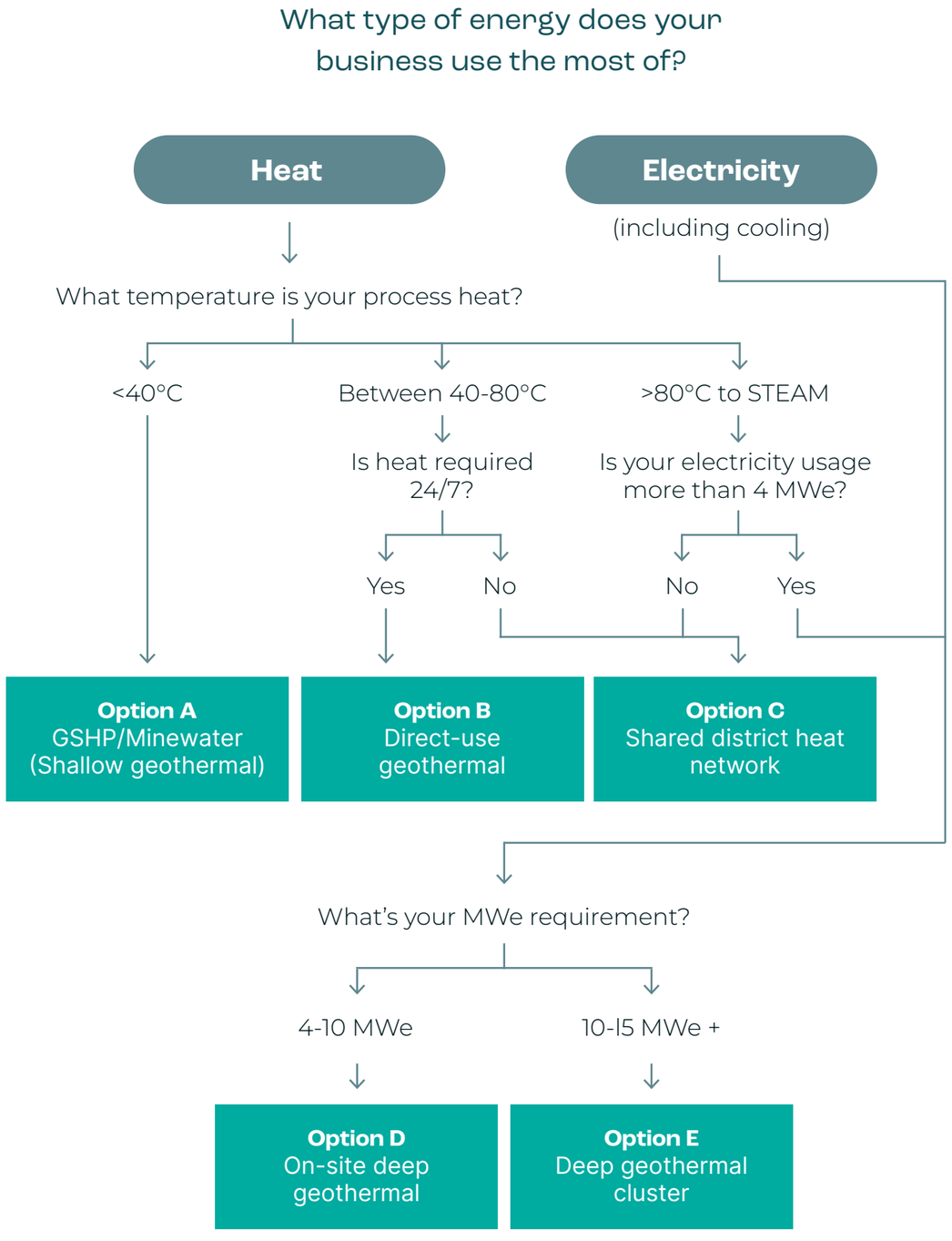
Another example would be in a large scale bakery, where some 210°C geothermal heat is first taken off to generate steam for pre- cooking ingredients, the rest then to produce electricity in an Organic Rankine Cycle generator, for processing and chilling, the rejected heat at 90°C is then used for cleaning, and finally feeds the handwashing circuit at 75°C.

Energy is a critical input at other points in the agrifood value chain, including transportation, value-added processing and retail operations.

Use the decision tree (on the next page) to understand which type of geothermal system could best suit your energy demand and capacity.

Cornwall's agrifood sector can use geothermal energy to cut emissions, reduce energy costs, and strengthen long-term resilience.

Which Geothermal Option Fits Your Agri-food Business?



Option A (On-site)

Shallow geothermal for medium heat demand (<40°C)

This option is for businesses that mainly use HEAT, but at lower temperatures and across multiple uses.

Typical businesses include:

- Food packing and washing facilities
- Vegetable processors
- Aquaculture

These businesses often need heat for hot water, cleaning and hygiene, moderate-temperature processing, and space heating rather than very high-temperature processes. Shallow geothermal systems with heat pumps are well suited to this demand profile and can reliably replace oil or LPG boilers.

This option works well where businesses want a low-risk, proven technology that reduces operating costs and emissions without major changes to production.

Option B (On-site)

Direct use geothermal for high, continuous heat demand (<40°-80°C)

This option is for businesses that continuously use HEAT, but at higher temperatures and across multiple uses.

Typical businesses include:

- Large dairies and creameries
- Breweries and distilleries
- Food processors
- Large glasshouse growers
- Animal feed producers
- Commercial bakeries

These businesses need reliable heat every day, often at higher temperatures, for processes such as pasteurisation, brewing, drying, sterilisation or maintaining controlled growing environments. Deep or medium-depth geothermal can provide constant heat, with cascading use of lower-temperature heat for space heating, cleaning and hot water.

Because demand is steady, geothermal systems can run at high utilisation, improving economics. Larger sites also tend to have the space and long-term land security needed for drilling and heat infrastructure.

Option C (Cluster/Offtake)

Direct use geothermal for high, intermittent heat demand

Like Option B, this option is for businesses that use HEAT at higher temperatures and across multiple uses, but not continuously.

Typical businesses include:

- Dairies and creameries
- Breweries and distilleries
- Food processors
- Animal feed producers
- Commercial bakeries

These businesses need reliable variable amounts of heat every day, often at higher temperatures, for processes such as pasteurisation, brewing, drying and sterilisation.

By clustering with multiple heat users or off-taking the waste heat from a deeper geothermal plant at certain times of the day, users can access high temperature, low-carbon heat without direct capital investment.

Option D (On-site)

On-site geothermal for large, energy-intensive businesses

This option is for businesses that use large amounts of heat and electricity all year round. You control your site long-term and may be subject to electrical grid restraints.

Typical businesses include:

- Large dairies and creameries
- Breweries and distilleries
- Major food processors
- Large glasshouse growers
- Animal feed manufacturers
- Industrial bakeries

These businesses need continuous, reliable heat for core processes such as pasteurisation, brewing, drying, sterilisation or controlled growing. Where electricity and heat are both required, geothermal systems can reduce total energy costs by optimising energy flows. In Cornwall, deeper geothermal systems may also offer opportunities to supply electricity directly or indirectly, improving resilience against grid constraints.

Larger sites are more likely to have space for drilling and energy infrastructure, making on-site geothermal a realistic long-term investment rather than a short-term retrofit.

Option E (Cluster/Shared Infrastructure)

Clustered geothermal anchored by a large business

This option is typically for large energy users located near other agrifood businesses needing electricity and heat.

Typical users include:

- Large processors
- Major growers
- Food parks
- Industrial estates with multiple tenants

Large businesses can act as anchor users, taking much of the electricity and heat, while exporting surplus to neighbouring SMEs. This improves project economics, supports local supply chains and enables smaller businesses to access geothermal without developing their own systems.

This model is particularly relevant in Cornwall, where agrifood activities are often geographically clustered.

On site vs cluster/ shared infrastructure

If you are a small or medium-sized business without space or capital:

Shared or cluster-based solutions

SMEs often assume geothermal is out of reach, but shared systems change the equation. By connecting to a shared geothermal heat network, businesses gain access to stable, low-carbon heat without owning or managing the infrastructure.

This works particularly well where several food businesses are co-located and have similar heating or cooling needs.

If you are a large business near smaller producers:

Acting as an anchor user

Large businesses can improve the viability of geothermal projects by acting as an anchor user, using most of the electricity and heat while selling surplus to neighbouring SMEs. This lowers costs for everyone and strengthens local supply chains. Heat can also be supplied to other non-agrifood businesses in close-by towns, leisure centres, schools, hospitals, or new housing developments, as at Langarth Garden Village in Truro.

In Cornwall, this model is increasingly relevant where agrifood clusters are developing, and deep geothermal resources are being tapped.

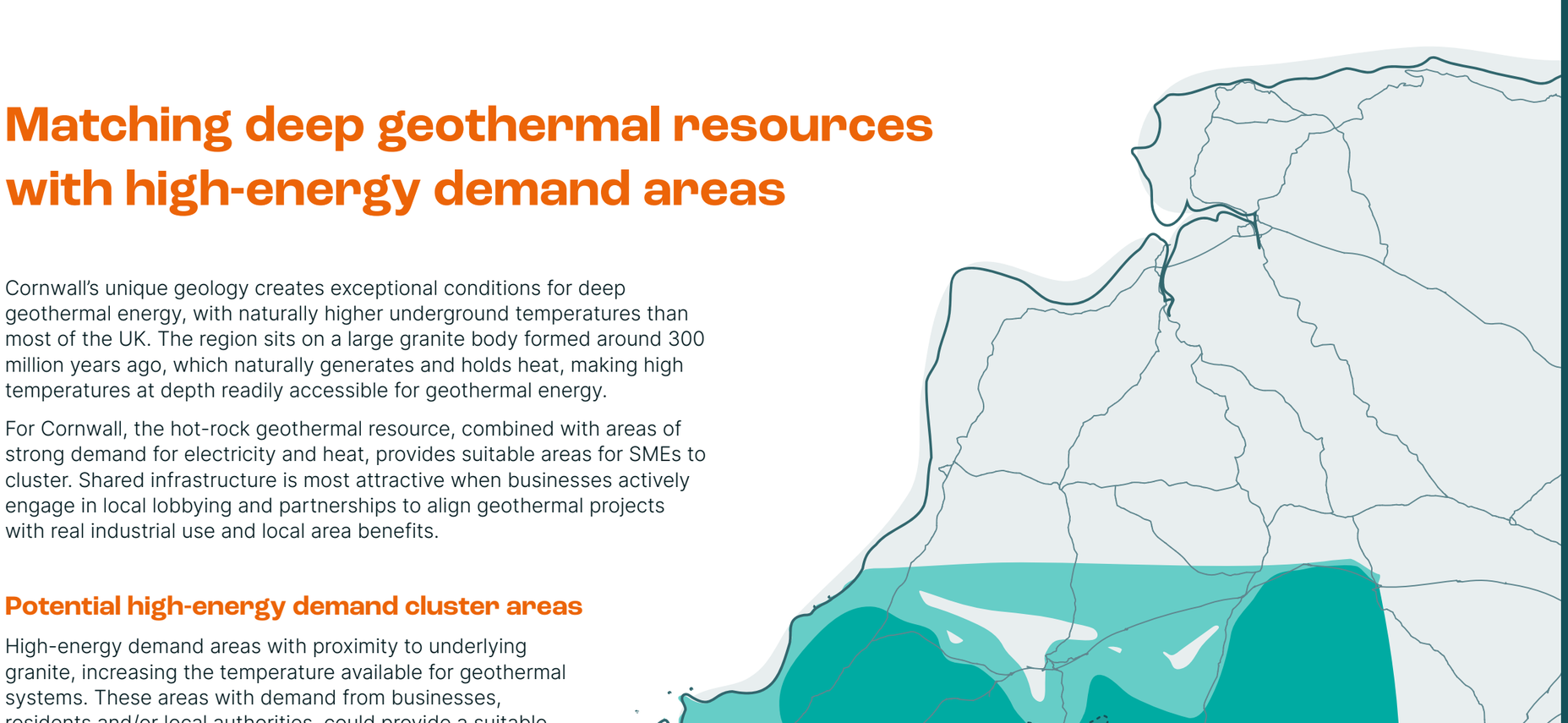
Matching deep geothermal resources with high-energy demand areas

Cornwall's unique geology creates exceptional conditions for deep geothermal energy, with naturally higher underground temperatures than most of the UK. The region sits on a large granite body formed around 300 million years ago, which naturally generates and holds heat, making high temperatures at depth readily accessible for geothermal energy.

For Cornwall, the hot-rock geothermal resource, combined with areas of strong demand for electricity and heat, provides suitable areas for SMEs to cluster. Shared infrastructure is most attractive when businesses actively engage in local lobbying and partnerships to align geothermal projects with real industrial use and local area benefits.

Potential high-energy demand cluster areas

High-energy demand areas with proximity to underlying granite, increasing the temperature available for geothermal systems. These areas with demand from businesses, residents and/or local authorities, could provide a suitable system for district-heating networks.



AgriFarm Hub

A cluster model example

An AgriFarm model comprises a network of distributed agricultural enterprises organised around a central, geothermal-powered Controlled Environment Agriculture (CEA) facility. Each hub would be designed to integrate energy-intensive, high-yield CEA production with smaller market gardens, smallholdings, and related agrifood activities. All participants benefit from shared access to geothermal heat and power, positioning geothermal energy as a strategic infrastructure asset that supports both commercial food production and wider rural and social outcomes.

An AI-generated visualisation of a geothermal-enabled AgriFarm Hub, showing a conceptual central greenhouse biome with surrounding market gardens, shared packing and processing facilities, training centre, and residential cottages.
Source: Pauline Found (OpenAI, 2026)

The geological resources and high-energy demand areas, combined with consultancies and developers who are highly experienced in subsurface engineering, makes Cornwall one of the most promising regions in the UK for geothermal heat and power.

If I wanted to develop my own geothermal project, how would it work?

The steps below are designed to help anchor-sized agrifood businesses move from initial interest to a robust, deliverable geothermal project. They focus on reducing risk, building confidence, and aligning geothermal development with core business priorities.

1. **Identify your heat, cooling and power needs:**

   Develop a clear picture of how much energy you use, what temperatures are required, and whether demand is continuous or variable. Anchor projects work best where energy use is high and steady throughout the year.

2. **Assess where geothermal could replace fossil fuels:**

   Look at which processes rely on gas, oil or electricity and where geothermal heat or cooling could be a direct substitute or support multiple uses through heat cascading.

3. **Check geothermal resource availability near your site:**

   Commission an initial desktop assessment to understand whether shallow or deep geothermal is feasible at your location. In Cornwall, this step is well supported by existing data and expertise.

4. **Engage early with geothermal developers and technical experts:**

   Early conversations help shape realistic options, costs and timescales. Developers can also advise on whether your site could act as an anchor for a wider heat network.

5. **Explore funding and finance options:**

   Investigate grants, heat network funding and blended finance. Anchor projects often unlock public funding that would not be accessible to smaller standalone schemes.

6. **Commission a full feasibility study:**

   A detailed feasibility study will confirm technical design, costs, risks, planning requirements and commercial structure. This is the key decision point before major investment.

7. **Consider your role as an anchor for nearby businesses:**

   Assess whether surplus heat could be supplied to neighbouring SMEs, estates or food hubs. Exporting heat can improve project economics and strengthen local supply chains.

8. **Develop a robust business case and delivery plan:**

   Bring together capital costs, operating savings, funding, risk management and potential heat sales. Treat geothermal as a long-term infrastructure investment that supports resilience and growth.

What about a large-scale deep geothermal project?

The type of geothermal system you need depends heavily on the amount and type of energy you require and matching it to the geological resource on the site. If it is suitable for a business to develop their own large-scale project for an on-site deep geothermal system, a detailed analysis of the proposed site would determine the type of system required, using energy use, geology, infrastructure, planning and regulatory factors.

A large-scale geothermal project typically acts as an anchor load and develops through the following stages to manage risk and cost, allowing technical, environmental, and financial uncertainties to be addressed step by step before committing to the most expensive activities, such as drilling and construction.

1. **Business energy appraisal to determine type of geothermal system and model**
   3 months
2. **Early assessment and planning**
   6-9months
3. **Exploration and feasibility**
   9months
4. **Permitting and financing**
   1 year
5. **Drilling and construction**
   18 months
6. **Testing and commissioning**
   6 months
7. **Operation and heat/power delivery**
   <40 years
8. **Monitoring and long-term management**

Some practical considerations when considering a deep geothermal project are:

Demand: What is your energy demand and where could you save energy?

Site selection: Do you have good transport access to the site? Is it in a protected area: for example an Area of Outstanding Natural Beauty or SSSI. Geothermal development is not excluded from protected areas, but it will be a planning consideration.

Planning: Do you own the land or have permission to use it for a subsurface project? Do you own or can you gain access to mineral rights?

Noise/Light pollution: Geothermal drilling will produce noise and light for several months during drilling and construction; do you have residents close by: less than 100m from your site?

Community Engagement: You will need to provide your local community with information on the project.

Surface infrastructure: Do you know how to connect a geothermal well to your current infrastructure and where to find expertise?

Financing: Do you know what funding support is available for geothermal projects? Could you commercialise the project by selling heat to SMEs close by?

I don’t have the demand, land or finance to develop my own project – what can I do?

SMEs and community-based farming with low or intermittent energy use may assume geothermal is out of reach. Shared geothermal systems provide an economically efficient and sustainable way to access stable, low-carbon heat without necessarily managing or owning the infrastructure, especially when several businesses are co-located.

There are several models for shared systems:

A geothermal developer develops a project and provides offtake heat and/or electricity (the larger project could be a hospital or data centre for example)

A group or cluster of businesses develop their own geothermal project and cluster hub, sharing the ownership and infrastructure, or

A publicly funded district heating network that incorporates leisure, retail, housing developments etc. as well as agrifood.

In Cornwall, most agrifood businesses are small or medium-sized. When SMEs show clear, coordinated demand for reliable heat and cooling, they create the conditions that allow geothermal projects to go ahead.

There are several ways SMEs can encourage geothermal projects in your area:

1. **Make your heat/energy demand visible:**

   Clearly articulate your energy usage, when you need it, what temperature you need and your site longevity (or consider whether you are willing to relocate).

2. **Form or join a local heat user group:**

   By collating the above information with other businesses you form a more compelling case for developers, local authorities and funders to invest and support projects.

3. **Express your interest:**

   Engage with developers, local authorities, energy groups. Respond to consultations on heat networks, energy plans and decarbonisation initiatives.

4. **Support larger businesses or Heat Network Proposals:**

   There may be a large business local to you willing to act as an anchor load, support them by explaining what your energy offtake would be and make it clear you would connect if it was available.

5. **Be open to buying heat as a service:**

   For SMEs geothermal works best as a service, not an asset. Be open to long-term heat contracts and shared infrastructure.

6. **Solve real business problems:**

   Geothermal interest can be framed around reducing exposure to energy price volatility, improving efficiencies, lowering operational risk and securing long-term affordable energy prices, as well as decarbonising heat and electricity, where carbon targets are a driver.

7. **Support your local energy sector:**

   Operational geothermal projects in Cornwall already exist, so you can use the wealth of expertise and knowledge on your doorstep.

In practical terms, this makes SMEs central to unlocking geothermal as a sustainable, long-term energy option for Cornwall’s agrifood sector. By working together, through clusters, shared heat networks or local food hubs, smaller businesses can access the same energy resilience and price stability that larger sites achieve on their own.

International Case Studies:
Agrifood Businesses Using Geothermal

Geothermal Horticulture Greenhouses
Netherlands

- 30+ greenhouses in the Netherlands now use direct-geothermal for heating.
- IJsselmuiden well (2012, 1,950 m, 73–74 °C) cut natural gas use by 70–90%, saving 5 M m^3/year.
- Additional 2 km well (2022) saves 9 M m^3 of gas/year.
- Since 2012, 116 million kg CO_2 emissions avoided.
- Produces low-carbon crops, attracting sustainable buyers like La Place.

Geothermal greenhouse projects in the Netherlands demonstrate how collaboration between agrifood businesses can unlock both public and private investment. Groups of growers formed consortia, pooling their own capital, securing bank finance, and leveraging government subsidies to jointly develop shared geothermal heat systems. This approach reduced individual risk, improved project bankability, and enabled long-term access to low-carbon, price-stable heat for year-round food production.

Vapori di Birra Brewery
Sasso Pisano, Italy

- Direct use from adjacent geothermal powerplant
- An exchanger transforms the steam received from the plants into water at about 135°C, which is used in the various stages of the production process.
- 40,000 bottles of beer produced annually
- 25% energy cost reduction

Vapori di Birra shows how agrifood businesses can benefit when geothermal development is shaped by long-term public investment and local partnership. Brewing is highly dependent on steam and hot water, and in Sasso Pisano the availability of geothermal steam provided a direct match to the brewery's energy needs, allowing fossil fuels to be replaced with a stable, local heat source. The business emerged within a wider ecosystem where local authorities, geothermal developers, agriculture, and public bodies worked together to ensure geothermal energy delivered local economic benefits, not just electricity to the grid.

Image source: giornaledellabirra.it

Where are the Current Geothermal Projects in Cornwall?

Existing geothermal projects in Cornwall show that geothermal is a proven, working option to deliver decarbonised heat and electricity.

They demonstrate that the local resource is usable, that planning and regulation can be managed, and that geothermal energy can be delivered reliably over the long term. This reduces uncertainty for businesses considering their own projects.

Getting in touch with existing projects or developers allows businesses to learn directly from real experience, what worked, what didn't, and what to expect in practice. For agrifood businesses, this makes geothermal a practical option to explore now, rather than something in the future.

Eden Project (Eden Geothermal Ltd)

- In operation since 2023
- One well drilled to 5.2km
- Co-axial system
- Providing heat for the Eden Project Biomes, buildings and c.1Ha for greenhouses growing tomatoes, peppers, cucumbers and plants for retail, display and for use in the restaurant kitchens.
- Rum distillery 'Celsius' planned for construction in 2026.
- c. 1 MW Heat
- 72°C delivery temperature
- 1km heat main

Cornish Lithium, Chacewater (Cross Lanes Project)

- Wells being drilled in summer 2026
- Commercial lithium production facility
- Heat as a by-product
- 2 × 2km deep boreholes
- Well temperature of 70°C

United Downs (Geothermal Engineering Ltd)

- Operational in 2026
- Two wells, production well 5.2km, injection well 2.3km
- Primarily electricity production
- Lithium extraction
- 180°C at bottom of production well
- 3MW Electricity (predicted)
- 2 additional sites with planning permission, other sites in progress

Heat the Streets, Stithians (Kensa)

- In operation since 2023
- Networked ground source heat pumps
- 98 homes fitted with heat pumps, 22 for future connections
- 102 boreholes drilled
- Combined heating & cooling system

Langarth Garden Village, Truro

- Ambition for LGV to be net zero energy through heat network and solar PV
- Cornwall Council priorities – affordable homes, sustainability, renewable energy, transport, community, job creation to be embodied by LGV
- District heating network to serve: • up to 47 GWh heat demand on full build out • 3,800 homes (20 year construction) • New commercial • Existing buildings
- Primary heat source - deep geothermal 7.3MWth @80°C

10+ other sites in feasibility stage plus many smaller-scale ground source heat pump projects in Cornwall

Geothermal questions and answers

Does geothermal cause seismicity/ground vibration?

Geothermal projects cause small temporary ground vibrations, known as micro seismicity, mainly during drilling and testing of systems. These are typically well below levels that can be felt at the surface. Projects are carefully designed, monitored and regulated under Mining and Quarrying regulations to minimise risk, and geothermal energy has a strong safety record in the UK and internationally.

Does geothermal drilling go into earth's core?

No. Deep geothermal drilling goes only a few kilometres into the Earth's crust, which is a tiny fraction of the distance to the Earth's core. The core lies about 6,400 km below the surface, far deeper than any geothermal or other engineering project.

Will geothermal cool down the earth?

No. The Earth's crust contains a virtually limitless quantity of heat which is continually replenished by heat conduction from the mantle and core beneath it. Geothermal energy extracts a minute fraction of this.

How much light/noise pollution does a geothermal project produce?

Geothermal projects produce light and noise during the drilling and construction phases, with deep projects being drilled 24/7 for a few months. Lighting and noise are carefully managed to meet planning and environmental standards. Once operational, facilities are typically quiet, have a very small footprint, and are visually comparable to standard industrial or agricultural sites. They have a long lifespan of 30 years or more.

Will a geothermal project affect the water table?

Geothermal projects are designed to protect the water table. Boreholes are lined with layers of steel casing and cement to isolate them from groundwater. Geothermal fluids are circulated in a closed loop through a heat exchanger or heat pump and then re-injected back underground, maintaining natural water levels and pressures. Projects are regulated and monitored to ensure no impact on drinking water or local aquifers.

How do I know if geothermal will work at my site?

The suitability of geothermal at a site is confirmed through desktop studies, existing geological data, and on-site investigations such as surveys or test drilling. These assessments evaluate ground conditions, heat potential and access constraints, allowing experts to determine whether geothermal is technically and economically viable for your location.

What is the space requirement for geothermal?

Geothermal systems have a very small surface footprint, with boreholes drilled vertically below ground and equipment housed in compact plant rooms. Land take is very low compared to other renewable energy sources, and capacity is very high (>90%). For example, a 5 MWnet electricity system would produce ~39GWh electricity per year plus ~60GWh of heat at 90°C (allowing for a 40% heat load demand reduction). A 1-1.5Ha site with good access would be sufficient.

Is geothermal fracking?

No. Geothermal development does not produce fossil fuels, or cause potential contamination of aquifers. Adequate heat for most agrifood applications can be obtained by targeting existing fractures in the granite. Where systems require hydraulic fracturing of the granite in order to obtain sufficient flow rates, the risk to the environment is low. Hydraulic fracturing is a non-continuous process, occurs at great depths and does not require the use of harmful chemicals.

How do you get a drilling rig on site?

Drilling rigs are delivered to a geothermal site using standard heavy vehicles and trailers, in modular sections that can be assembled on site. This allows rigs to access tight or restricted locations, and they are set up carefully to minimise disruption to the surrounding area.

Do I need mineral rights for my site?

In some cases. Most shallow geothermal systems only need landowner permission. Deep geothermal projects need mineral rights owner permission for the first vertical 300m depth, and will need to liaise with mineral rights owners of the land parcels beneath which the wells are drilled. All projects follow local planning and environmental regulations.

What about radiation?

Radon and background radiation are naturally present in the granites and clays of Cornwall, so as a precaution, an independent Radiation Protection Advisor would monitor operations. The chemical composition of the water and all waste streams are constantly checked throughout drilling, and when the systems are operational, all water will circulate in a closed circuit so there will be no risk to the water table.

Is geothermal more expensive than other renewables?

Geothermal costs are largely upfront: drilling is expensive. But once developed, geothermal plants are cheap to run. In countries with an established industry, geothermal heat and electricity plants are already cost competitive. If the heat can be used directly, it is cheaper still. The technology is in a phase where substantial cost improvements are occurring right now, with more to come.

I’m interested in exploring geothermal for my business, where can I find out more and speak to the experts?

The organisations and contacts listed below are a starting point for engaging with experts who understand Cornwall’s geothermal landscape and can offer informed, practical guidance.

- **Aquasource (SW) Ltd** – Family business providing water boreholes, ground source heat pumps and wastewater solutions in Mid-Cornwall.
- **Basepower** – Development, delivery and operation of energy systems for industrial and agrifood projects.
- **Blue Flame Ltd** – Heating and renewable energy specialists, installation and maintenance company.
- **Cornwall Council** – Provides planning oversight and funding support, including via the Good Growth programme.
- **Cornwall Mining & Geo-Resources Alliance (CMGA)** – Sector organisation connecting mining, geothermal and resource expertise across Cornwall.
- **Carrak Consulting** – Geo-environmental consultancy focused on land, mining and mineral resource management.
- **Celtic Drilling** – Specialist rotary drilling for water, mining, piling, geothermal and monitoring, using compact rigs for tight access.
- **Cornish Lithium** – Explores and develops lithium resources in Cornwall for the battery supply chain.
- **Eden Geothermal Limited** – Deep geothermal project consultancy and developer.
- **Genius Lab** – Expert GSHP Design & Consultancy
- **GeoScience Limited** – Geothermal consultancy providing technical advice, design and feasibility studies.
- **Geothermal Engineering Limited** – Develops deep geothermal power, heat and lithium extraction projects in Cornwall.
- **Green Gen UK** – Installer of solar, heat pumps, batteries and other renewable energy systems.
- **Ground Consultants Ltd** – Based in Cornwall, offers environmental site assessments to support planning and risk assessment.
- **GroundSearch** – Provides drilling for ground source heat pumps and mining/site investigations using rotary rigs.
- **Kensa Heat Pumps** – UK manufacturer of ground source heat pumps for low-carbon heating.
- **Saxton Drilling** – Experienced in water extraction boreholes and geothermal systems.
- **Southwest Geothermal Alliance** – Regional body supporting feasibility, design and delivery of geothermal systems.
- **SLR Consulting (Truro)** – International sustainability and environmental consultancy with a local Cornwall office experienced in environmental permitting, ESG, impact assessment and geothermal project support.
- **Tony Bennett** – Geothermal Energy Consultant, specialising in deep geothermal and minewater.
- **Wheal Jane Consultancy** – Offers environmental investigations including contamination risk and geotechnical services across Cornwall and the South West.
- **ZLC Energy** – Heat Pump design and installation specialists for domestic and commercial uses.

Further reading:

- Agrifood Strategy & Action Plan
- Cornwall & IoS Local Area Energy Plan
- Cornwall & the Isles of Scilly Farming, Fisheries & Food Insights Report
- FAO – Uses of geothermal energy in food and agriculture, 2025
- EGEC – Geothermal in Industry & Agrifood: Case Studies from Europe, 2025
- IRENA – Powering Agrifood value chains with geothermal heat, 2022

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