

# Littlebury Energy Project



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## ***PULL-OUT SUPPLEMENT***

### ***Littlebury Energy Project (LEP): Feasibility Study Update***

We have lift off! This month saw an insightful site visit to Littlebury from the project's technical team, followed by a start of the analysis on Littlebury's energy needs.

### ***Testing the feasibility of a community heat network in Kings Langley***

Learning from similar communities is invaluable, and the Grand Union Community Energy (GUCE) Kings Langley project is an excellent example. It demonstrates how a feasibility study was able to identify a low-carbon solution tailored to the village's specific needs. Understanding Kings Langley's approach can give valuable insights to inform Littlebury's transition to a more sustainable future.

*Read more overleaf .....*



### ***Have questions? Check out our FAQs:***

We are sure a few questions are starting to come to mind! Check out the FAQs on our website to help understand potential outcomes of the study.

<https://lep.swce.co.uk/cef/>

### ***Have views? Help us with the survey!***

You can help the study by responding to our community survey. A paper copy will be delivered in the first week of July, and an online copy is here:

<https://lep.swce.co.uk/fs>

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In 2022, Kings Langley, a village located about an hour southwest of Littlebury, explored solutions for a low-carbon, community-led heating system. The project's main goal was to reduce the village's carbon emissions, which are 30% higher than the UK average, and to manage the high annual heating energy demand.

The project faced challenges such as adapting to various building types, energy price uncertainty, and risks associated with new heating technologies.

## ***What did they discover?***

The team behind the project looked at different ways to heat homes and businesses in an eco-friendly way. They considered using the heat from the nearby canal and even the aquifer (water deep underground) for this purpose.

They evaluated four main options: doing nothing; waiting for hydrogen technology; installing individual heat-pump systems; or creating a community solution. They found the latter two options to be the most suitable.

## Heat Source Options Explored



Air Source



Canal



Boreholes

The **Centralised Community Solution** would utilise a water-source heat pump and an air-source heat pump, involving a 14 km heat network with an upfront cost of £13.7 million, requiring 80% of village households (900 homes) to connect for viability.

A second proposed solution was a **'decentralised Community Solution'**. This approach involves installing individual air-source heat pumps and a SMART micro-

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grid. It would have a lower upfront cost and cause less disruption to the community, needing 50% of village households (550 homes) to connect for it to be viable. However, because this solution is decentralised, it might be less reliable.

After further consideration, they found that using existing wells (boreholes) to access underground water was the most affordable and practical solution. This method could potentially provide up to 5 megawatts (MW) of power to heat homes.

This system promised three key benefits for residents:

- **Reduced Carbon Emissions:** By harnessing renewable energy from the aquifer, the heating system would significantly reduce Kings Langley's carbon footprint.
- **Cost Savings:** Adopting low-carbon heating would give cost savings for residents
- **Reliability and Resilience:** The centralised heating system would provide a reliable and resilient energy supply, mitigating fluctuating energy prices.

## What's next for Kings Langley?

With the feasibility study complete and promising heating solutions identified, the project is now looking at potential implementation. The community group has secured further funding for the second feasibility stage, where the economics and business models are further tested to finalise a delivery path. Continued collaboration between all stakeholders, including the Kings Langley community, will ensure that the final solution meets the needs and aspirations of the village.

### **What's next for Littlebury?**

Our consultants, who also worked on the Kings Langley study, are busy with analysis of Littlebury's energy needs.

And we will be at the **Village Hall Pop-up Pub on July 5th** for a chat



and with copies of our survey.



Contact Littlebury Energy Project (LEP) at [contact@lep.org.uk](mailto:contact@lep.org.uk) or 01799 252501

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## *Plugging in to Home Electric Vehicle Chargers*



It is expected that 80% of new cars will be electric vehicles (EVs) by 2030. For those with off-road parking, charging at home can be economical. Littlebury villager and electrician Andrew Figge gave us some advice on home EV chargers.

**Andrew says:** There are several points to consider:

- Where you prefer to park your vehicle influences where to put your charge point. Will some locations create a trip hazard (perhaps to visitors) when the charging cable is connected? Do you want the charge point to be discreet? Is there reliable WiFi/mobile signal?
- Charge points are tethered (integral charging cable) or untethered (no cable). Some people prefer the look of an untethered unit, but a separate cable is needed for connection. A tethered unit offers a quicker and simpler connection.
- Charge points require a dedicated circuit from the main consumer unit. Routing the new circuit may disrupt the building fabric or décor or may need a trench.
- The existing household consumer unit may require modification or replacement to accommodate the new EV circuit requirements. Often an additional dedicated EV consumer unit is installed next to the existing consumer unit - is there space to install this? Is the main cutout fuse adequate or does it need upgrading?
- If you have or plan to have Solar PV, check whether a model can be integrated to charge the vehicle using any surplus electricity generated.

Andrew adds “Probably my favourite charger is the Myenergi Zappi – I’ve installed several including two in Littlebury. It has good Solar PV integration and seems reliable. I also like the Podpoint Solo and have installed one Easee unit. These are all in the top 4 in the What Car 2023 survey.”

For further details including listed building and planning issues and some villagers’ advice and experience, please see <https://lep.swce.co.uk/category/casestudies/>

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