

1950s Bungalow Retrofit

Alex and Emily

An Open Eco Homes online tour







- **Solar panels 2019 – Contact Solar**
- 21 x 325W panels 6.8kw peak and Zappi home EV car charger.
£7,855
- 4.8kwh pylontech battery storage £2,000
- Estimated yield 6500kwh per year. Estimated electric saving £800
- Delivered 5470-6460kwh per year. Actual electric saving £1,155 in 2022 (25% used immediately, 19% used via battery, 56% exported (earning 5.2p per kwh). Payback time ~8 years.
- Possibly less as better feed in rates in 2023





Ecodan 11.2 KW Heat Pump

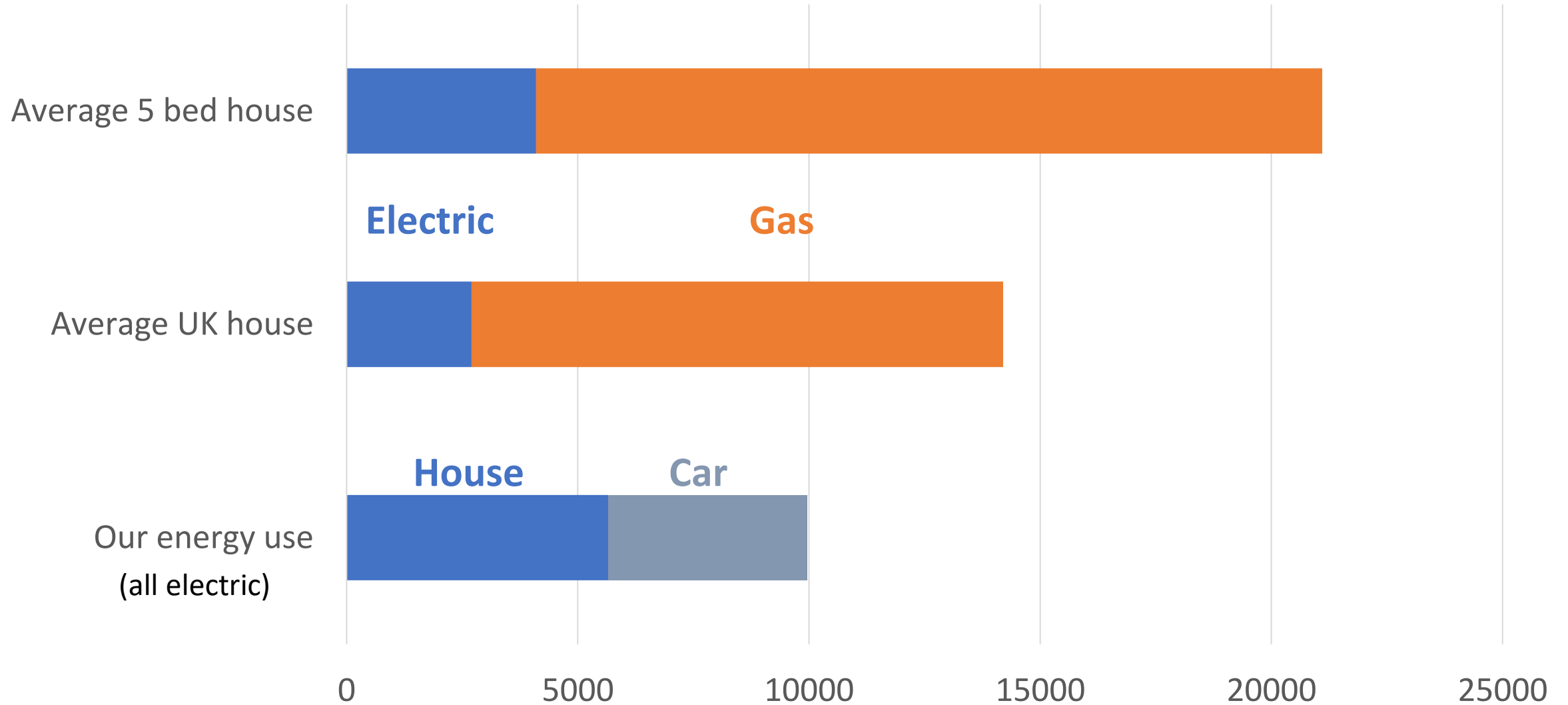






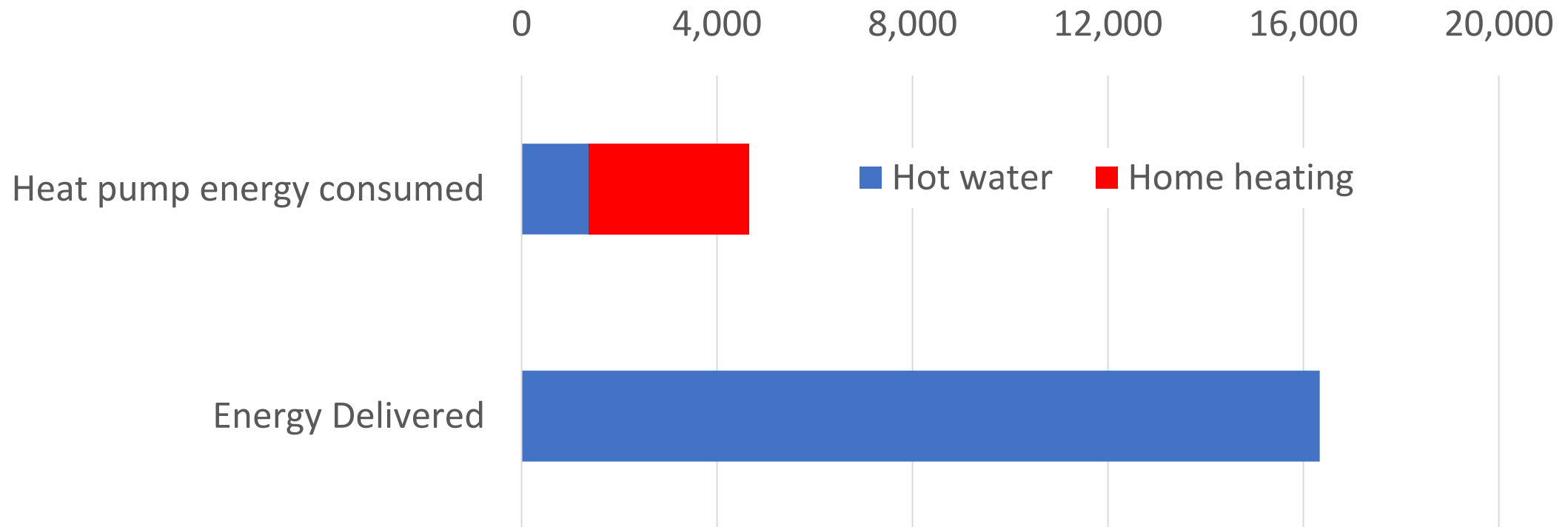
- **Heat Pump 2019 - AOS**
- £11,545 dec 2019
- RHI payments initially £395 a quarter for 7 years but rising with inflation.
 - Total RHI repayment even if inflation stays at 2% for next 4 years = £11,582.
- Predicted Net cost £-37
- Current grant £5,000 but rising to £7,500 imminently

Annual Energy use in kWh/year



Heat pump data 2022

Energy consumed and delivered by heat pump 2022 kWh/year









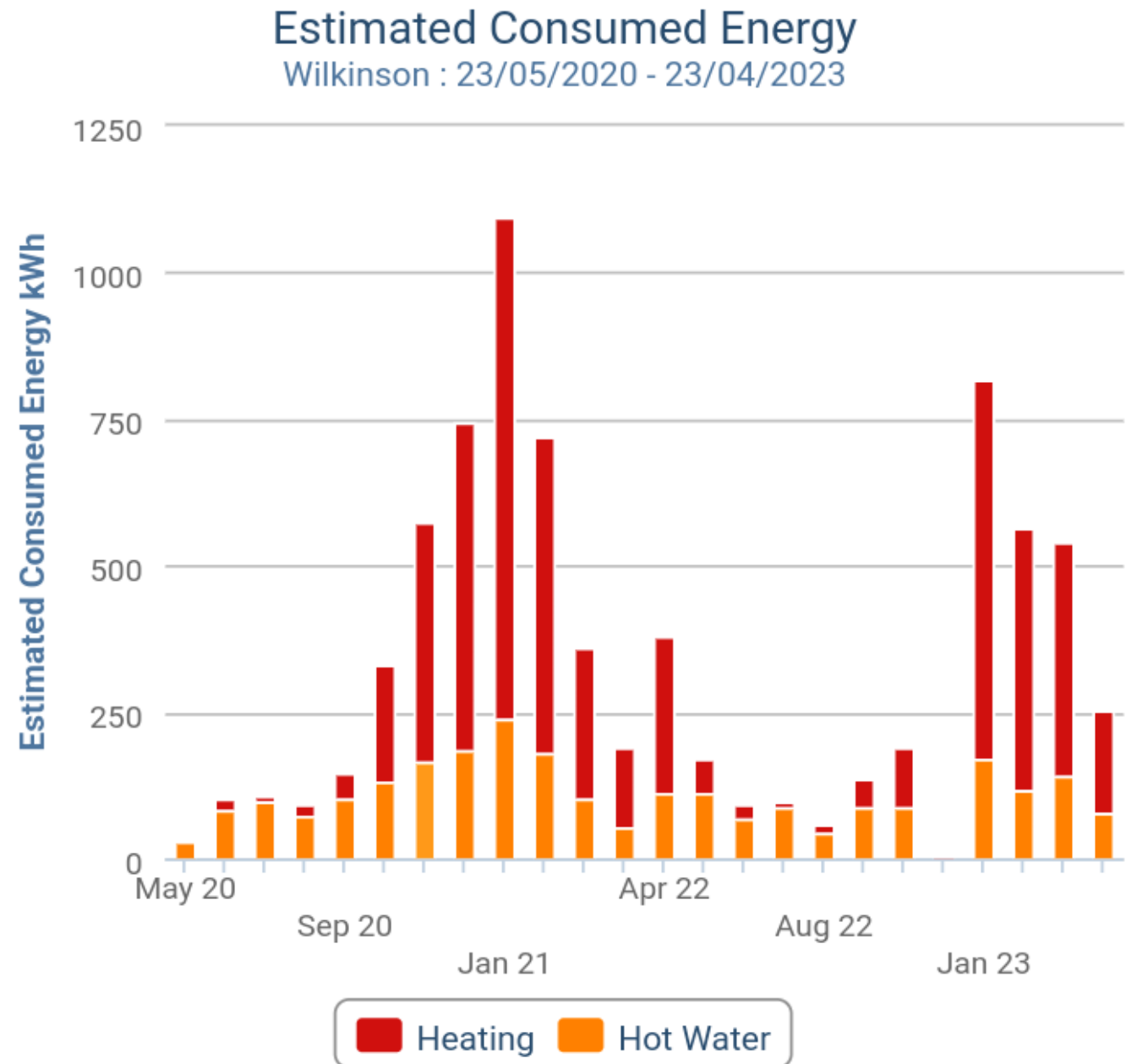
MVHR – DIY installation.

3 amateurs, 4 days.

£3079

November data missing from heat pump due to new WiFi router, but it looks promising.

- Air quality better
- No Damp





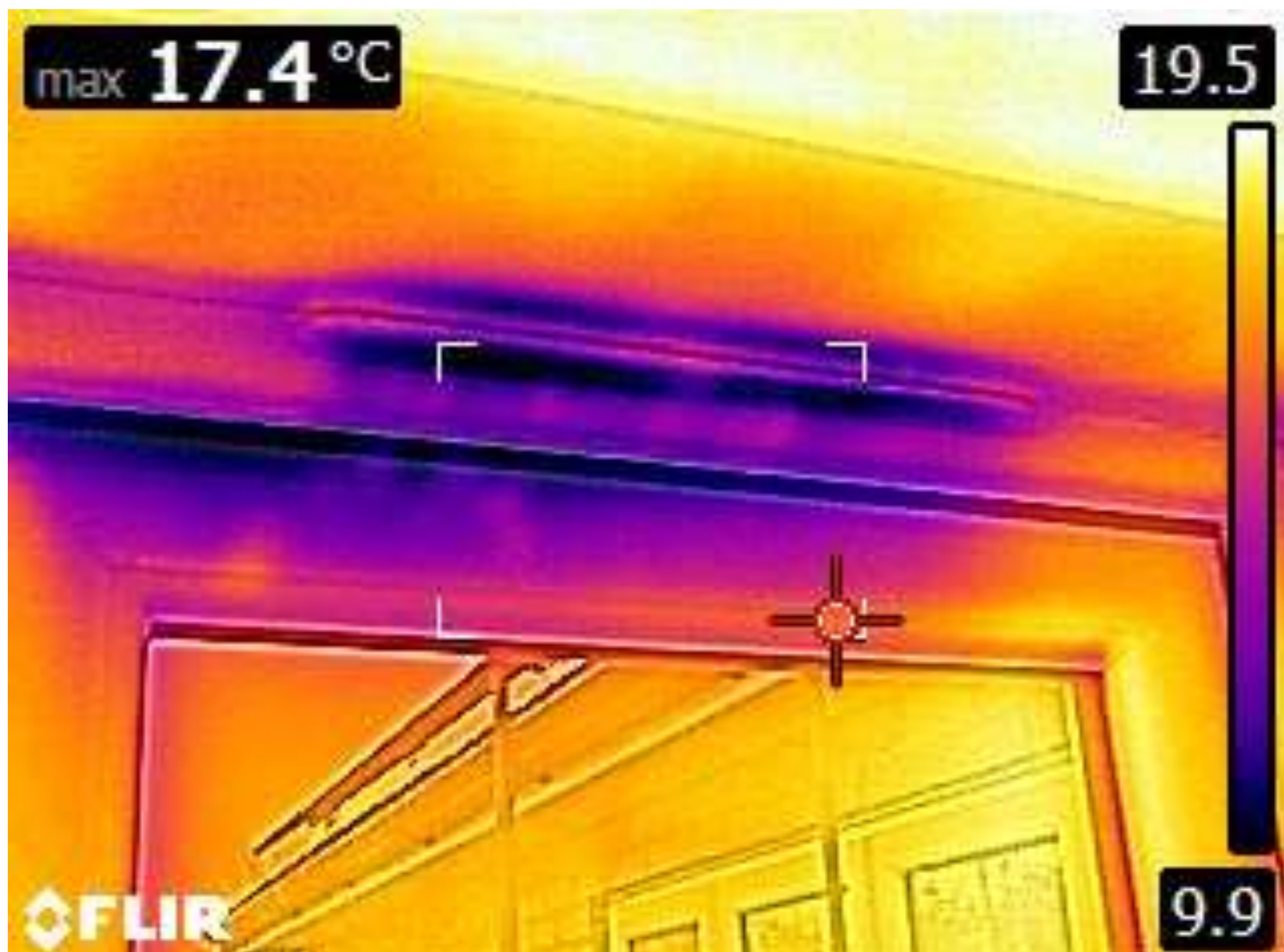
max **17.4** °C

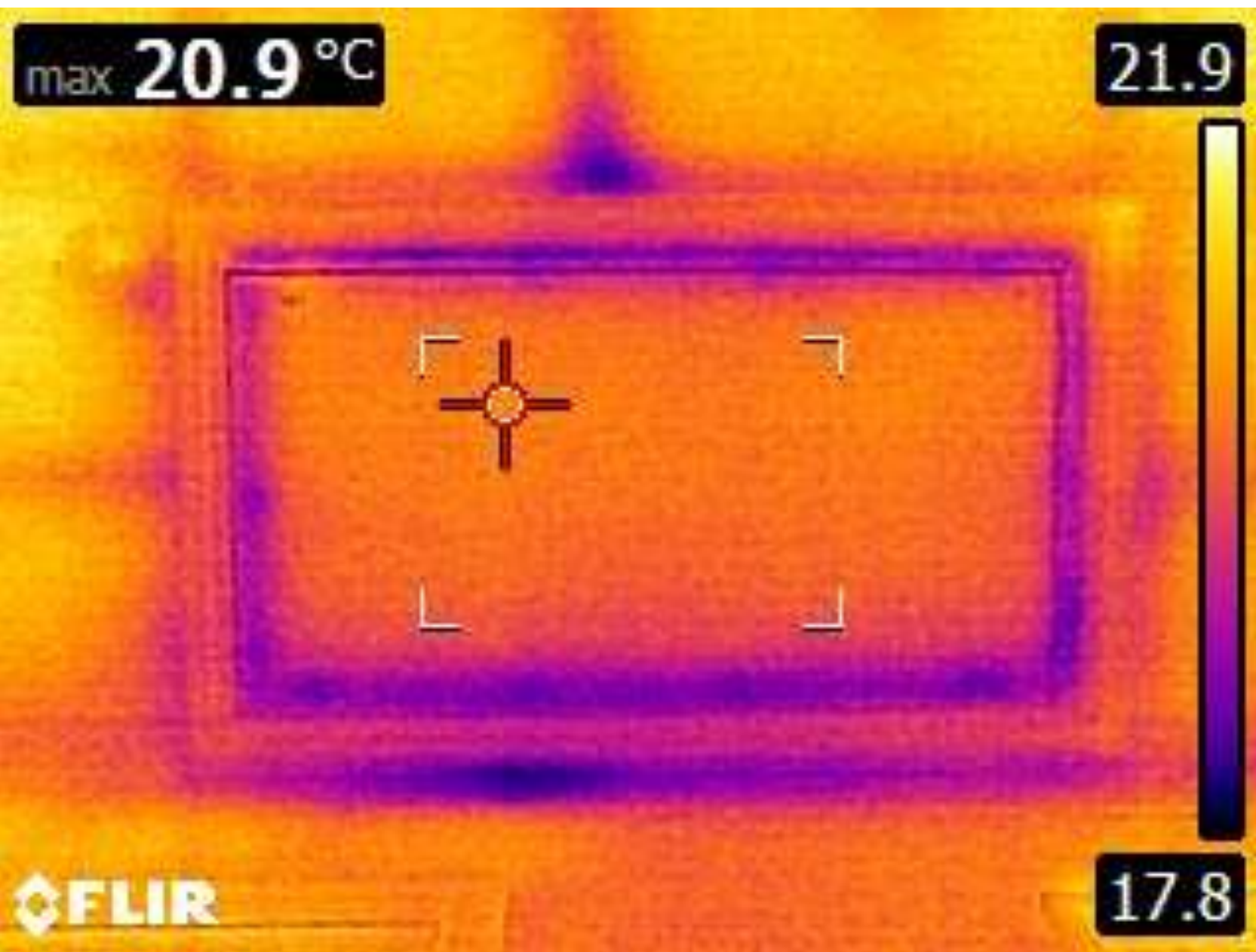
19.5



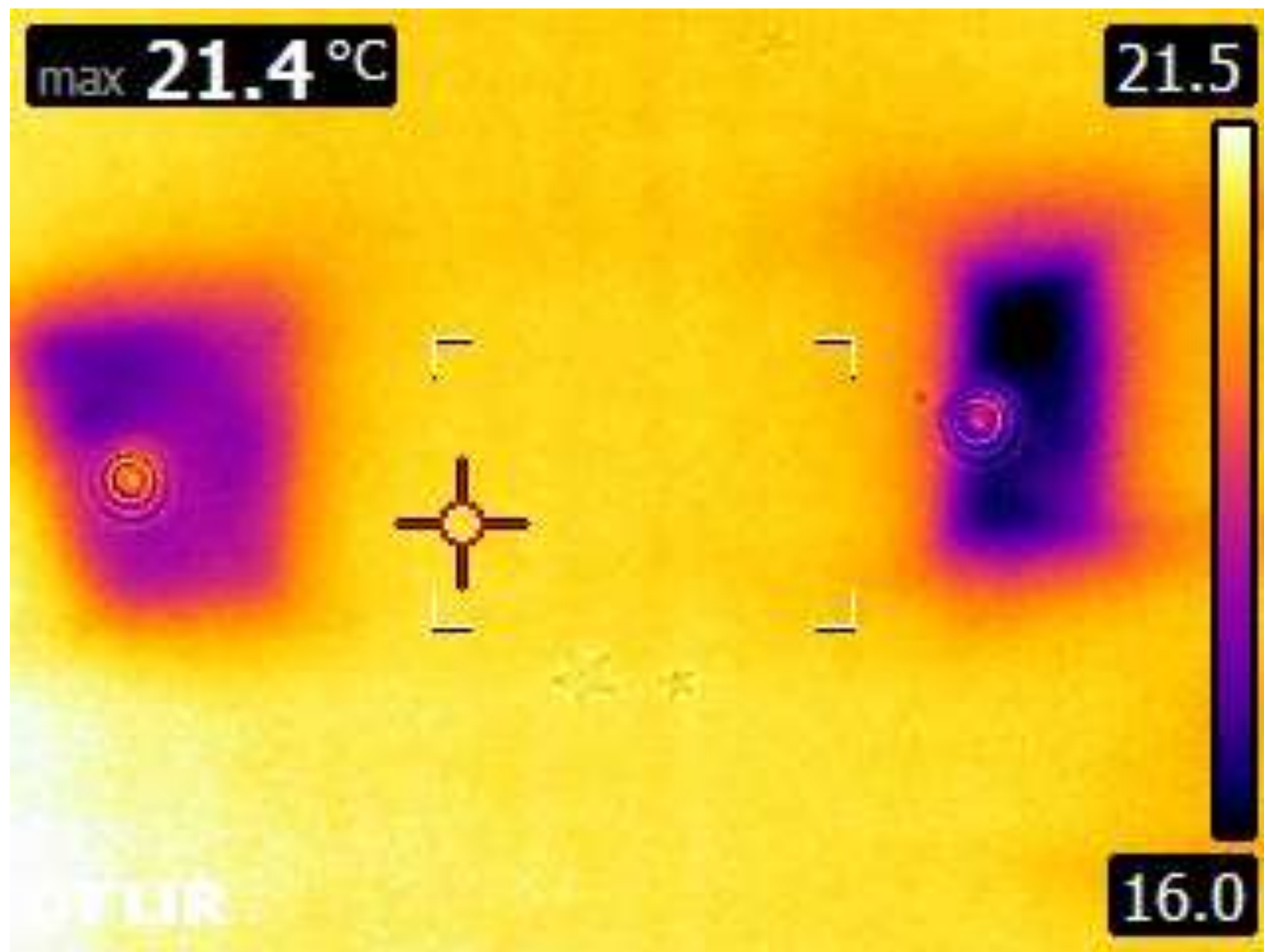
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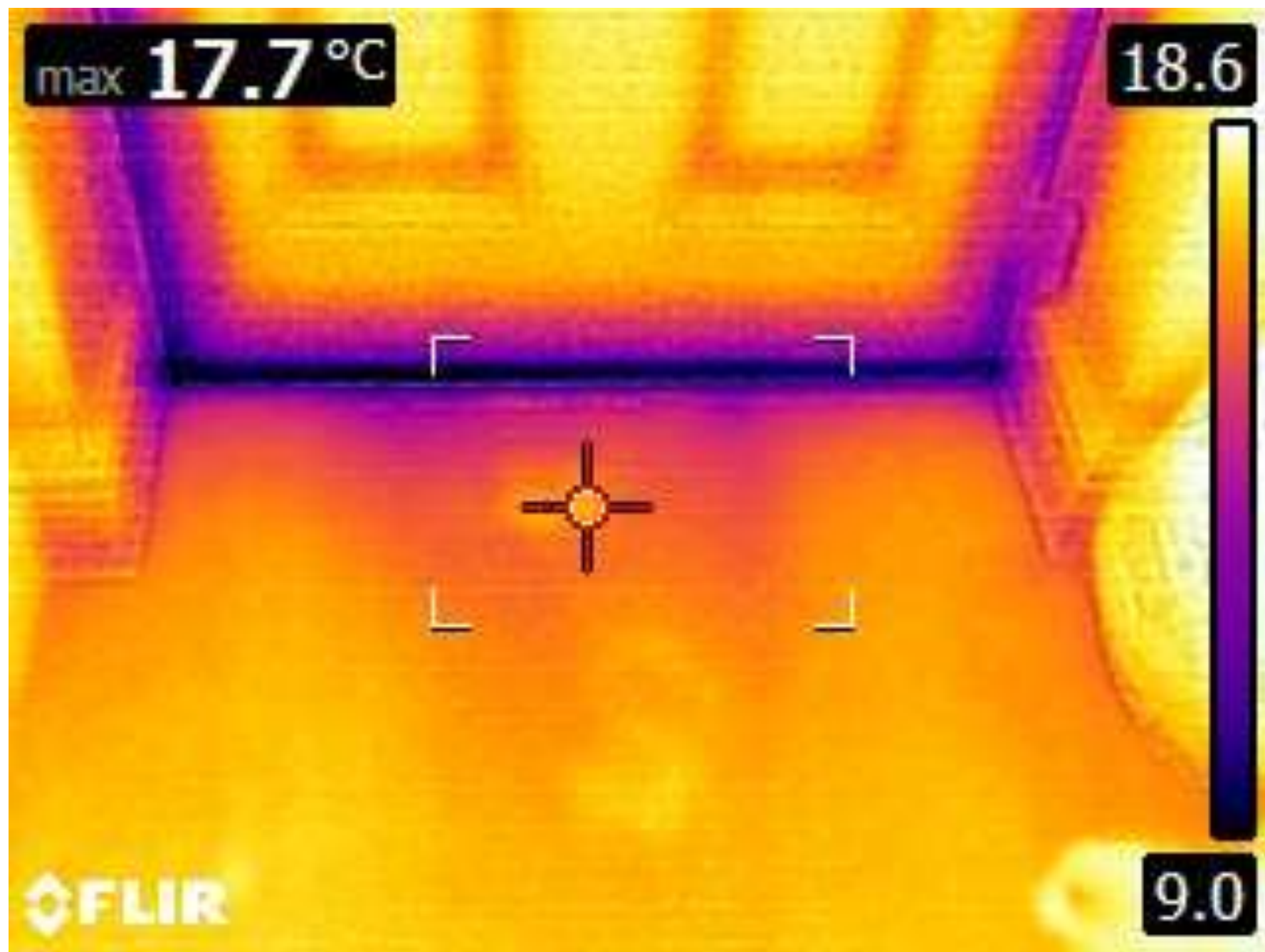
FLIR









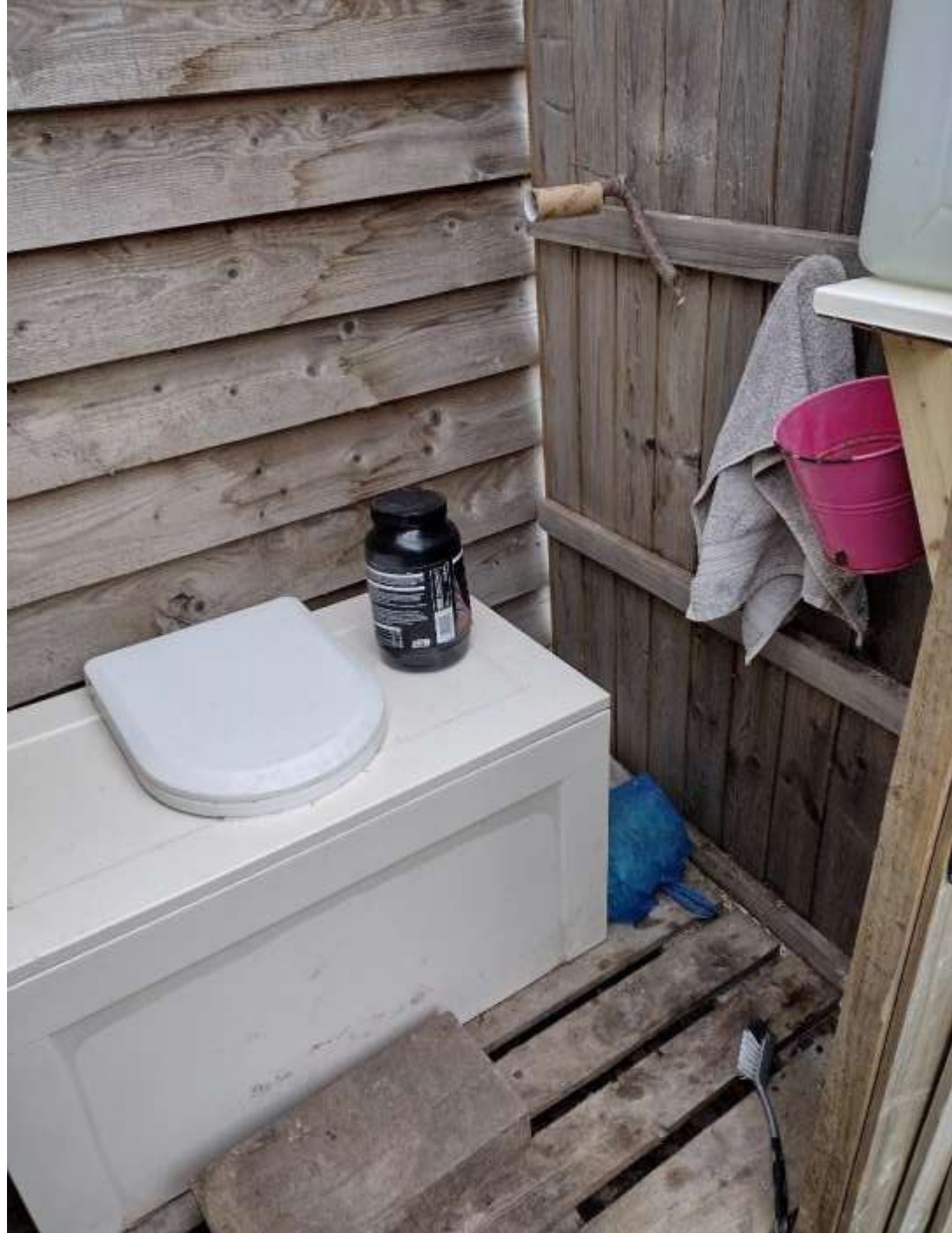


What about bills?

- Our electric usage sept 22-sept 23 = 9,952kwh
- Electric bill for that period - £1,759
 - 100% renewable Octopus energy (but up to 43p / kwh)
 - But only £1055 on house. The rest goes into the cars
- Average UK energy bill (gas and electric) - £2074 (Ofgem)
 - 5 bed house = £2,761
- Average price of petrol for a car £1,225 annually







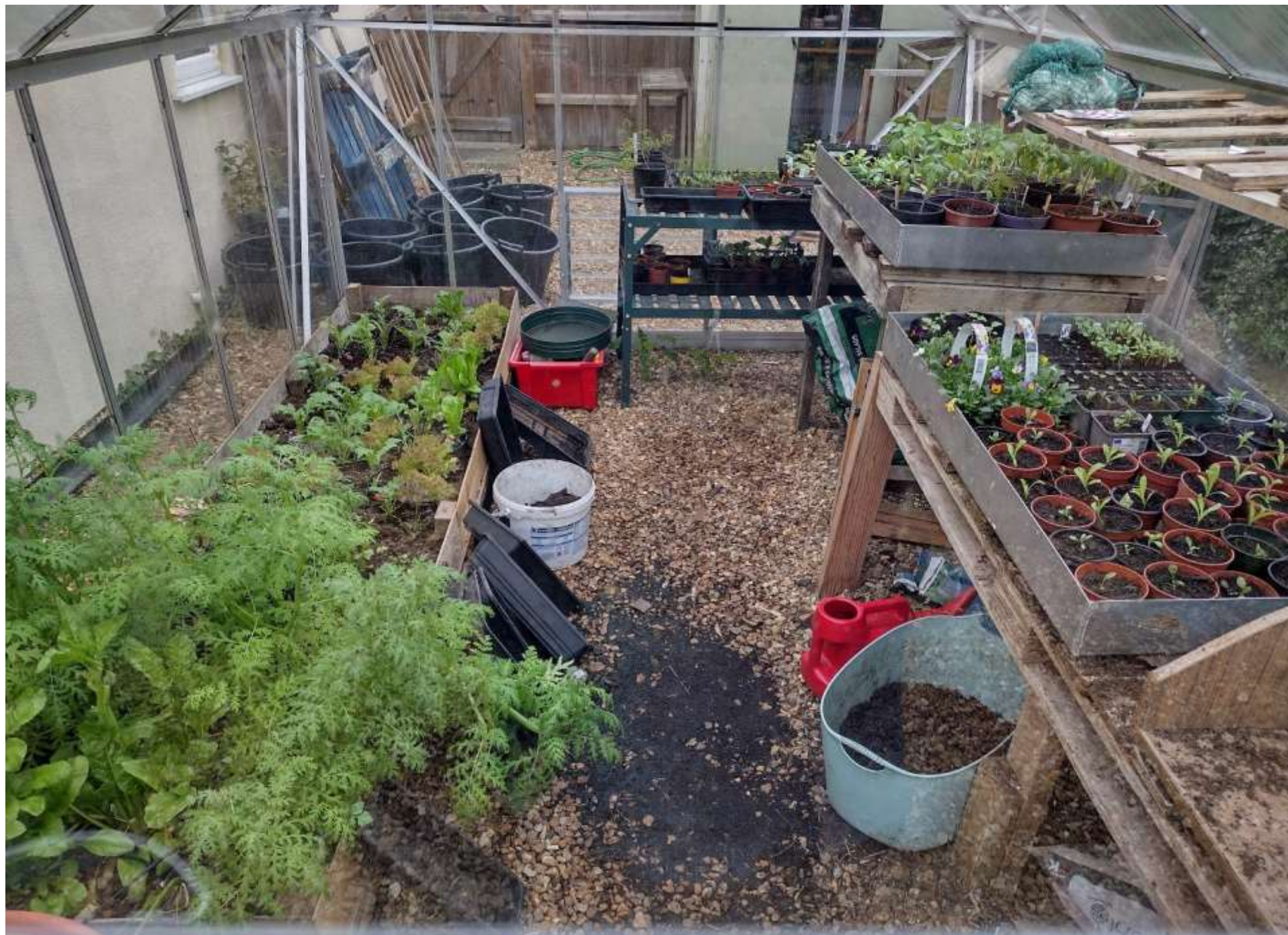
















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- Make a donation to help us run more Open Eco Homes tours: cambridgecarbonfootprint.org/donate
- Share your experiences on social media: **#OEH2023**

Thank you for your support!



Your next steps

- Find out how you can get started with your retrofit
- Book another tour or talk
- Research our past case studies
- Book a training session and borrow a thermal imaging camera
- Use Transition Cambridge's personalised home energy advice tool

