Everything But a Heat Pump - Fen Ditton

15 October 2026



Funded by: COBB COMMUNITY FOUNDATION, CAMBRIDGE CITY COUNCIL, South Cambridgeshire District Council, McCarthy Architectural Design, Mole, Ac

Cambridge Carbon Footprint

Agenda

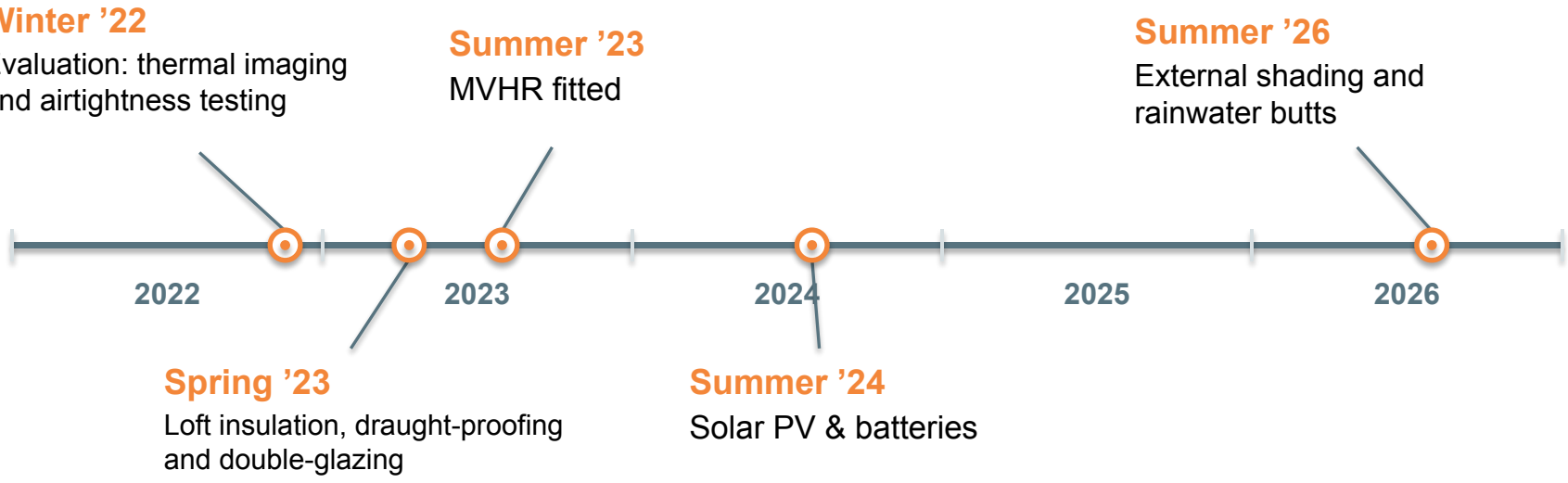
- 7.00pm Our retrofit journey
- 7.20pm A look around with Fiona's views on the changes
- 7.30pm Q&A session

Please put your questions into the chat

Funded by: COBB COMMUNITY FOUNDATION, CAMBRIDGE CITY COUNCIL, South Cambridgeshire District Council, McCarthy Architectural Design, Mole, Ac

Cambridge Carbon Footprint

Retrofit Timeline



Fabric First Approach

- Used CCF's Thermal Imaging camera training & loan scheme
- Joined local group Green Building Spods pub meets
- Recommended air-tightness tester - £200
- Low cost improvements
  - Loft insulation (paid for installer) £
  - Seals and covers on letterbox and keyholes
  - Caulk for gaps under skirting
  - Expanding sealant for holes in ceiling fittings
- Builder to fit missing insulation in cavity walls





Doors and Windows Upgrade

- 1960's Crittall steel windows
- First quote £64,000, re-evaluated cost-benefit
- Low profile design aesthetic
- Replace worst offenders – patio doors
- Upgrade to double-glazing and seal
- Steel Windows Service £
- Eterno doors, wood and Alu-clad product £££



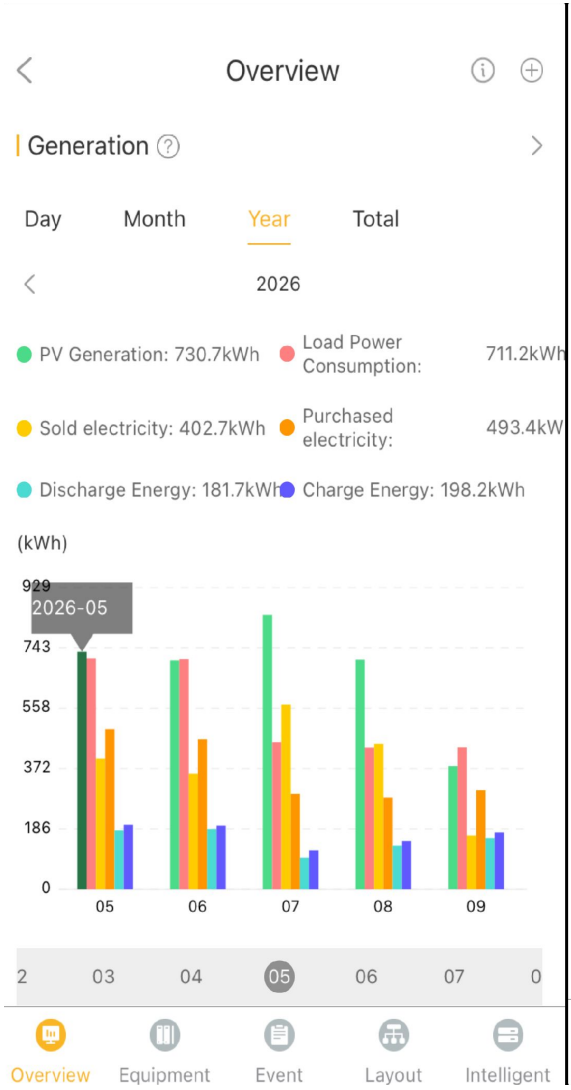


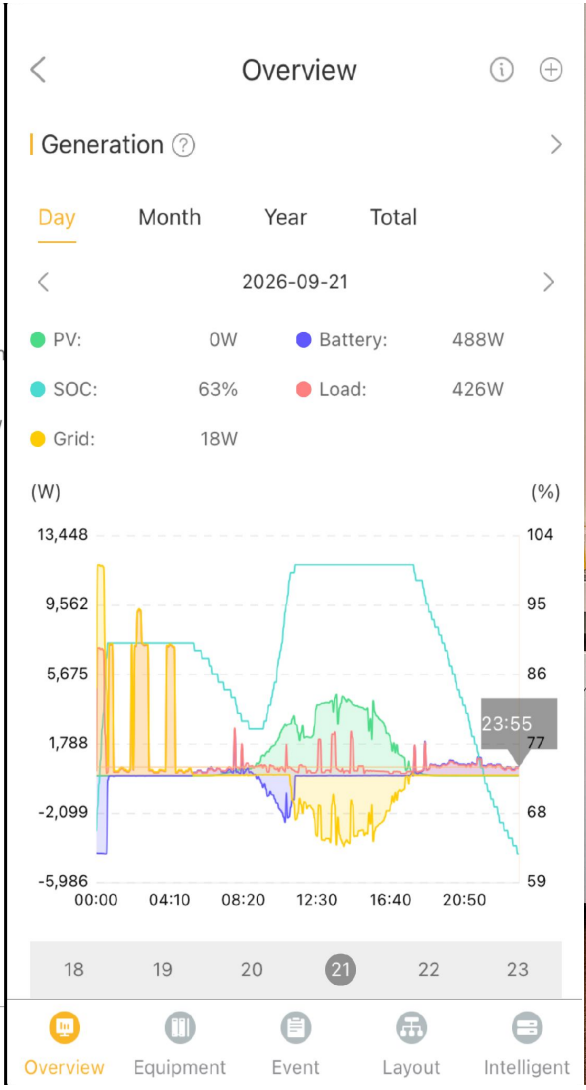
Air Quality

- No one wants to live in a stuffy house with condensation and damp
- Local MVHR fitter: JB Temperature Management ££
- Careful, thorough, consulted, tech advice from Vent-Axia
- Only in utility room was boxing-in required
- Silent
- Summer bypass mode
- Declined A/C unit add-on






Overview
Generation
Day
Month
Year
Total
2026
PV Generation: 730.7kWh
Load Power Consumption: 711.2kWh
Sold electricity: 402.7kWh
Purchased electricity: 493.4kW
Discharge Energy: 181.7kWh
Charge Energy: 198.2kWh
(kWh)
929
743
558
372
186
0
2026-05
05
06
07
08
09
2
03
04
05
06
07
0
Overview
Equipment
Event
Layout
Intelligent


Overview
Generation
Day
Month
Year
Total
2026-09-21
PV: 0W
Battery: 488W
SOC: 63%
Load: 426W
Grid: 18W
(W)
(%)
13,448
9,562
5,675
1,788
-2,099
-5,986
104
95
86
77
68
59
23:55
00:00
04:10
08:20
12:30
16:40
20:50
18
19
20
21
22
23
Overview
Equipment
Event
Layout
Intelligent


SUN SYNK
SUN SYNK

Solar Panels and Batteries

- Solar Together in 2020 – rejected by contractor
- Found 3 contractors to re-roof and fit Building Integrated Panels
- Chose Optimum Electric on price and proposal
- Kept to 5-day schedule
- Choose 2x 5kWh battery, declined off-grid option
- Inverter sometimes noisy
- Electricity bills ⇩ 80%, net consumption ⇩ 60%
- Excellent return on investment









Heatwaves and Water

- External shading
  - For Velux skylights
  - For South-facing upstairs rooms
- Rainwater collection increased – using on garden
- Like to filter and re-use bath, basin and shower water on garden



Other Stuff

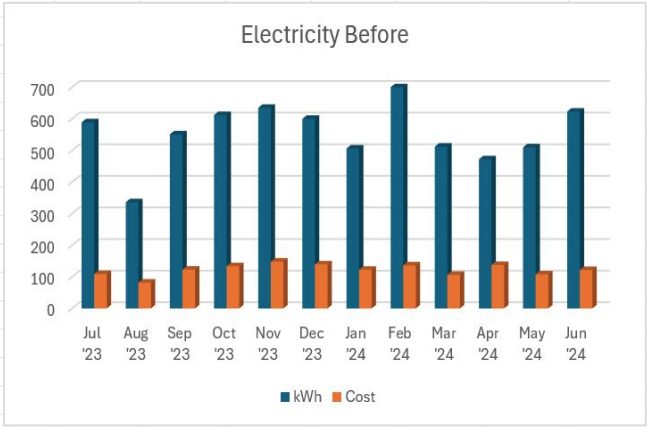


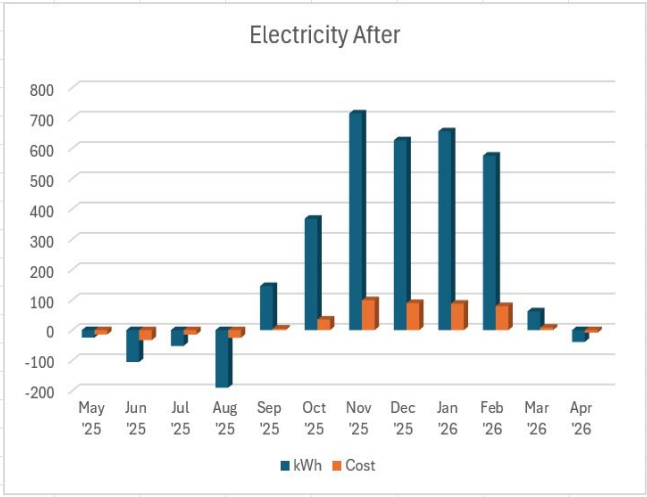
- Home automation with HomeAssistant
  - only for techies!
- Planning for a heat pump
- Plus more batteries, outside



The Figures

Description	Cost
Insulation	£800
Glazing	£21,000
MVHR	£12,000
Solar PV & batteries	£12,000
Water butt	£450
Awnings	£200





Electricity

Annual	kWh	Cost
Before	6,646	£1,467.84
After	2,737	£306.73
%	41%	21%

Gas

Year	kWh	Cost
2022	26,453	-
2025	20,599	-
%	78%	-

Tour and Fiona's viewpoint

Hints and Tips

- Plan it out, don’t have to do everything at once
- Get knowledgeable (enough to know what questions to ask!)
- Seek advice
- Shop around

What would we do differently

- Put batteries & inverter outside
- Fit A/C unit on MVHR

Q&A

Over to you

Can you help CCF?

Make a donation to help us run more Open Eco Homes tours: cambridgecarbonfootprint.org/donate

Share your experiences on social media: #OEH2026

Give us feedback - complete survey after leaving the Zoom meeting

Thank you for your support!

Funded by: COBB COMMUNITY FOUNDATION, CAMBRIDGE CITY COUNCIL, South Cambridgeshire District Council, McCarthy Architectural Design, Mole, Ac