F-rated home to near Passivhaus Standard: CB6
POLL

Which best describes your involvement?

• Looking to start own renovation project
• Builder / supplier / consultant
• Already completed own renovation project
• Just here for interest
Who are we?

Jake: previously worked in construction so some knowledge but mainly of groundworks.

Rachel: works in construction as a social value manager and some knowledge of passivhaus standards.

Not experts!
Both working full time so fitting into evenings and weekends. Lots of help from family and friends.
The house – January 2020
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Our renovation journey

October 2020 – September 2021
Timeline

October
• Moved in 2 October 2020
• Architects plans 23 October 2020

November
• Structural engineer plans 4 November 2020
• Dug out footings for patio in preparation for rubble

December
• Roof off 3 December, woke up to snow on 4th!
• Steelwork up 5 December
• Roof structure finished 16 December at 11am and signed off by building control at 11.15 and membrane attached before rain at 3!

January
• Roof tiling completed 4 January
• Insulation
• Flooring
• Wood burning Stove
• Chimney removal
• Green Homes Grant approved
Timeline

February
• Air Source Heat Pump Installed
• Dig out front house floors to 900mm, MOT type 1 hardcore added and concrete
• End rafters for overhang and mortaring the verges
• Airtight membrane

March
• Plastering upstairs
• Airtight loft hatch installed
• 20 March: Juliet balcony steel installed
• 21 March: Leadwork for window sill in new opening
• 22 March: Windows installed

April
• Kitchen installed
• MVHR machine installed and ducting

May
• Screed removed from front of house, insulation laid, underfloor heating and new screed
Timeline

June
• Internal walls downstairs
• Bath valve, bath and toilets installed

July
• Ductwork fixed, airtight measures downstairs
• Sound insulation downstairs
• Decoupled ceilings with Isomass system

August
• Solar panels installed
• Plastering downstairs
• Painting

September
• MVHR Commissioned
• Flooring
Budget

Initially budgeted £50K for structural changes and the big ticket items such as heating and thought we would figure the rest out as we went along.

Big items:

- triple glazed, passivhaus standard timber windows and doors: £24K
- ASHP, cyclinder, buffer tank, underfloor heating manifold: £10k minus £5K green homes grant
- Solar panels and battery: £8k*
- Liquid screed: £2365
- MVHR system including design: £5850
- Wood stove and flue: £3K
- Airtightness products: £788
- Timber! (haven’t separated out costs)

Current spend: £73K
Q&A
Did we achieve what we aimed to do? ....
What’s left

• Exterior cladding to cheeks
• Fascia and guttering
• Windowsills
• Cavity wall insulation upgrading
• Potential rain water harvesting tank
• Patio!
Key contacts, products and advice

Our renovation blog: https://hillrow.blogspot.com/
Architectural Technologist: Simon Ward (01480 301018)
Structural Engineer: Gawn Associates
Steelwork: Keith Collier Engineering
Plumber (ASHP): Clarity Heating
Electrician: JSL Electrical Services
Stove and flue: Stovefitters warehouse
Windows, doors, MVHR, Airtightness membrane, tapes & gunge: Green Building Store
Screed: Liquid Screed Pumping
Cedral cladding: AJW distribution
Concrete: Cardinalis
Timber, Insulation: Gibbs and Dandy, Jewson, Ridgeons
Questions?

Our renovation blog: https://hillrow.blogspot.com/
Next steps

- Please give quick feedback: form.jotform.com/211853362329052
- Make a donation: cambridgecarbonfootprint.org/donate/
- Share on social media: #OpenEcoHomes

Thank you for your support!
Further Resources

- Find out how you can [get started with your retrofit](#)
- [Book another tour or talk](#)
- [Case Studies](#): Research our past homes
- [Borrow a thermal imaging camera](#) and get training
- Use Transition Cambridge’s [personalised home energy advice tool](#)