

# The unalloyed joy that is a retrofit

Presentation to Carbon Co-op  
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# The Project

- Original house 1950s – two up, two down
- 1990 extension which more than doubled the house size
- 1950s original was uninsulated cavity wall with suspended timber floor
- 1990 extension was insulated cavity wall with solid concrete floor



# The Project

- House had been refurbished in 1990, but to a very poor standard
- Absolutely no maintenance had been done since then
- Therefore house in a poor state thermally
  - double glazed windows had “blown”
  - Frames had rotted
  - Windows were badly fitted
  - Kitchen was wearing out
  - Etc

# Drivers

- Warm and comfortable house
- Reduce energy consumption and carbon footprint
- Re-use as much as we could rather than consume more by buying new
- Need and desire to use “eco” and natural products with as few chemicals as possible (eg no formaldehyde)
- Beautiful house
- Future proofing of house for eg when in wheelchairs

# Process we went through

- Took lots of advice (eg Urbed, Green Building Store, Carbon Co-op) in order to try and clarify exactly where we wanted to go
- Attended lots of shows (Grand Designs, sustainable building, etc)
- Attended a number of “open houses” (Carbon Co-op and others)
- Eventually we had a clear idea of what we wanted – but this took a **LOOOOOONNNNGG** time
- Started looking into a retrofit in May 2016...

# Decisions we made

- We employed an architect, but not a specialist in sustainable retrofit (this was not for the want of trying)
- We made a number of positive decisions (ie not primarily finance based) on things we would or would not do.
- These included NOT having
  - external or internal wall insulation
  - MVHR
- We went with a main contractor who was not a specialist in sustainable retrofit (again not for the want of trying)

# Main elements of the project

- We had already had a new fully insulated roof, 3.75kW of solar PV and a wood burning stove installed
- We have now had:
  - New windows and doors throughout (Green Building Store)
  - Back wall of house more or less removed and replaced with bi-fold doors into a new “orangery” with sliding doors and a glass roof
  - Timber floor replaced with an insulated (and hopefully mouse proof!) concrete floor
  - Cavity walls filled (and internal wall with cavity filled)
  - Small porch extension and full insulation of porch
  - As much insulation as we could get in everywhere.
  - New hand built kitchen and A++ rated appliances





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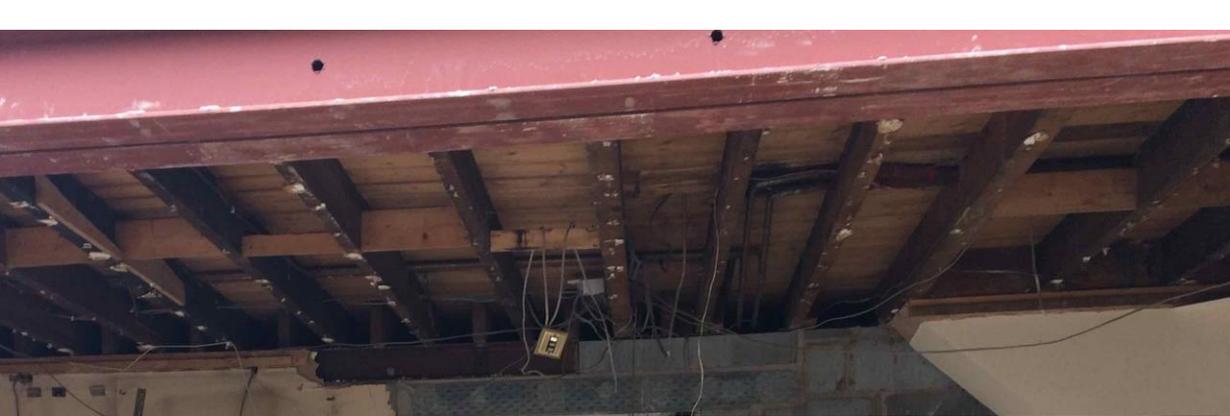
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# Things could be worse...

- This thankfully is not our house but a house in Sale..
- It was a cellar conversion

The builder declared himself bankrupt the following day



# Best things we have done

- Green Building Store windows and doors
- “Orangery” – though that has not been without problems!
- Extra insulation everywhere – house is so much warmer even with no one living there
- Movement of bedroom and ensuite
- New kitchen
- Whole house is just better arranged now

# Top Tips

- Know the building regulations – that will be what they do, so anything else you have to fight hard for
- Move out if you can and can afford it (we would not have been able to stay in the house no matter what) but be very close as you will constantly be called round about things and need to constantly check on things
- No matter how carefully you have specified things you will not get exactly what you want. The retrofit process forces some compromises on you.
- The process is **completely exhausting**
- Do not expect to do anything else **at all** with your life from the moment you start asking for estimates until the process is complete.

Thanks

Any Questions?

Some pictures of the house as it is now

