

Introduction - Kate de Selincourt, journalist:

Feature

Fixing fuel poverty – is there a healthier way?

Winter is here and, with it, another season for many, living in inefficient homes that afford to keep warm and healthy. The Government (as predicted in these pages a couple of years ago) was never going to deliver affordable warmth to low income households; and while the target for ECO (energy company obligations) has been set around so a higher proportion is directed towards the most vulnerable, the overall level of activity has been cranked right back. Kate de Selincourt has a warm glow somewhere on the horizon.

A little while ago this sad post appeared

Kate de Selincourt

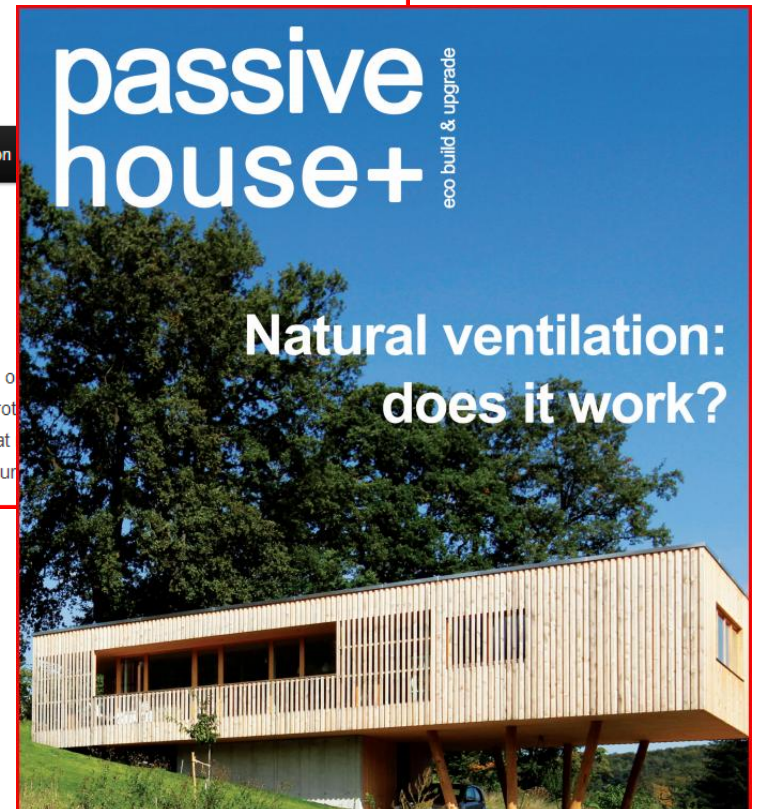
Environment, energy, sustainable building

[about me](#) [all posts](#) [Passivhaus](#) [ventilation](#)

Risks of Retrofit

Posted on [January 4, 2016](#)

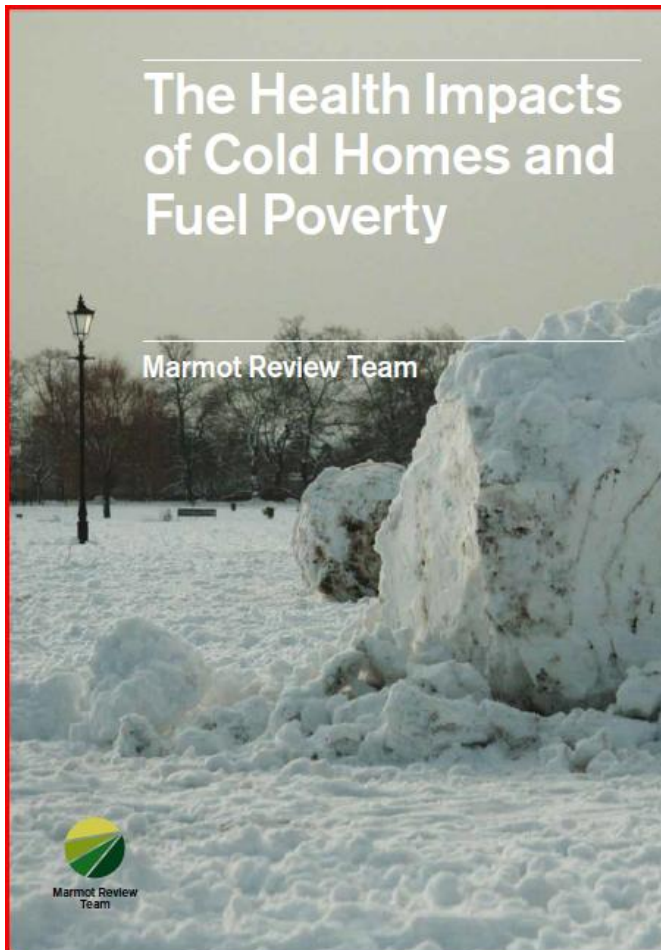
A well-designed and well-executed retrofit will not only provide a comfortable, healthier indoor environment, and protect the environment. There have been a number of warnings about what can go wrong. Suggestions that in some instances retrofit measures



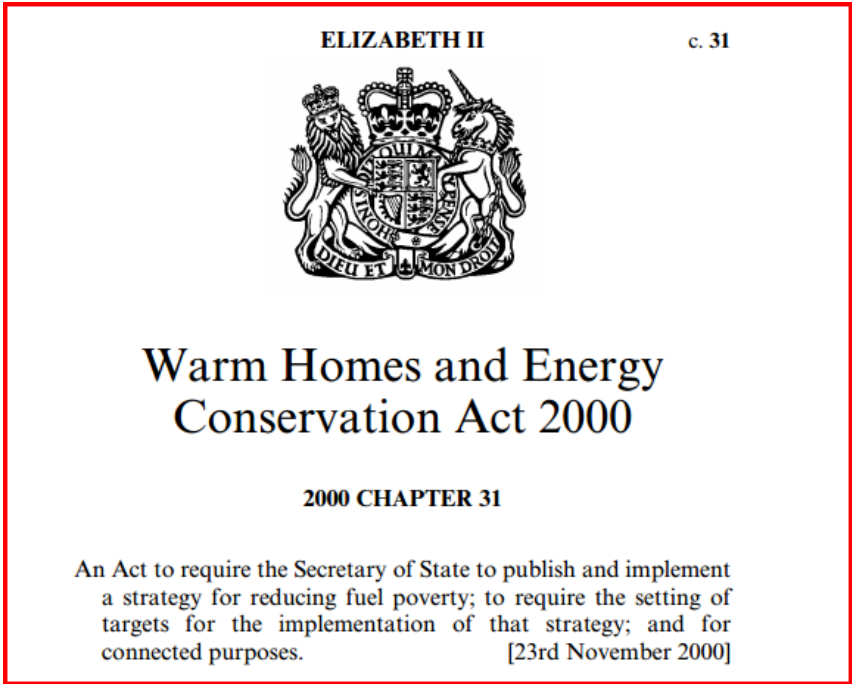
So much UK building, new and old, is
... not very good

Buildings are a big factor in fuel poverty; if
buildings can be improved, hopefully people can
be warmer and healthier

We think first of all about cold



Mining for cold
Practicable means of identifying the fuel poor for policy delivery in England



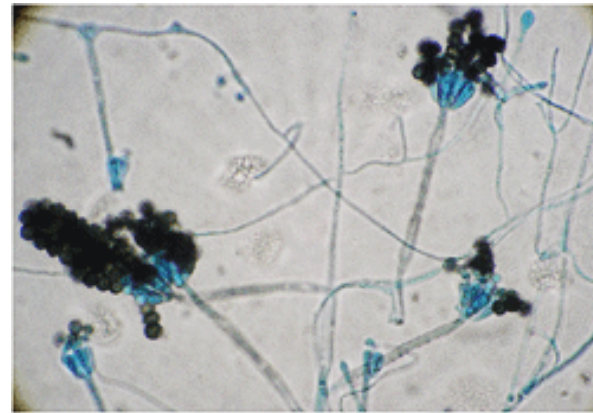
We know damp and mould are part of the story

Respiratory conditions ~30% EWD

Moisture tends to be the most problematic indoor air quality issue – not harmful in itself, but...essential to life



Dust mites



Black mould

We need to understand the buildings better, and the relationships between buildings, indoor conditions and health better, to ensure our fixes are fixes

Forest Hill mum fears for asthma-suffering son's health after 'disgusting damp'



A FOREST Hill mum is desperate to move after she claims "disgusting" damp is further damaging her chronic asthma-suffering son's health.

Victoria Nash fears for her nine-year-old son Lewis Salisbury, who she says has been in and out of hospital with his condition and requires a ground floor flat to be easily picked up by ambulances.

...local press report

The flats where the family live appear to have cold bridging issues from the balconies, wet masonry from leaking services, and replacement windows that may have reduced air exchange. All these could be contributing to their problems.



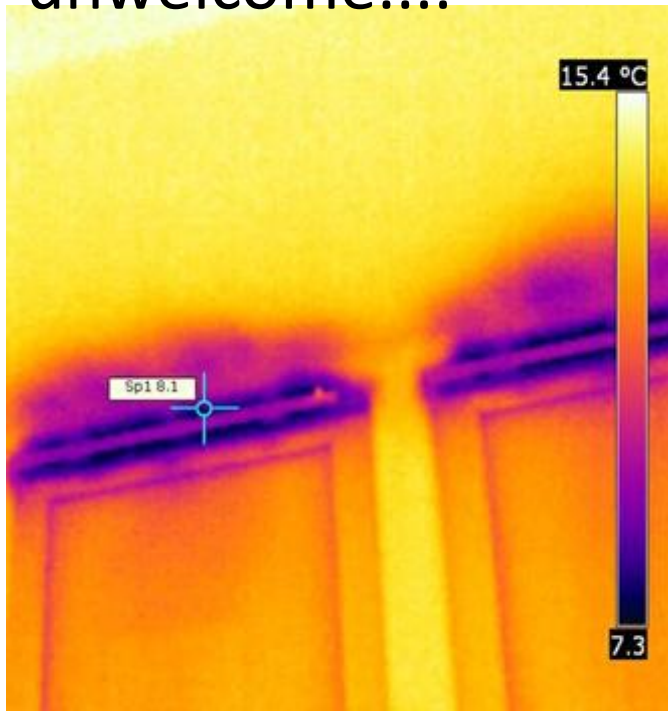
With the health effects of fuel poverty, how much of the story is damp, rather than cold? What about other pollutants?

We know we need to make homes warmer, but are we paying enough attention to air quality?

Lots of factors make it hard for people in fuel poverty to maintain good IAQ

Less ventilation:

Cold is
unwelcome....



So people do
this:



- Unsafe or unpleasant (eg noisy) neighbourhoods – less likely to open windows
- Older, poorly maintained property: poorer ventilation systems (or no system at all)

More pollution:



Unvented bottle gas stoves emit moisture, NO₂ & sometimes CO, straight into the room – as may badly maintained boilers, smoking & cooking on gas.



Overcrowding? Less likely to own, or use, a vented tumble dryer
Moisture also comes in from poorly maintained fabric

Mould remover??



May release dangerous gases (Chlorine)

Do not breathe spray

Use only in well-ventilated area

Can interventions help?

What interventions should be carried out?

What happens if we get it wrong?

At present, NICE have concluded “Evidence on interventions to reduce winter-and cold-related mortality/morbidity remains limited.”

(Good evidence might help release more funding)

Is the evidence weak because benefits are being confounded by “retrofit gone wrong?”

“Risks of Retrofit”

Much of the concern is based on modelling.
And all modelling is based on assumptions

Even when outcomes are not modelled,
sometimes little direct info is available about
indoor conditions – often inferred (guessed!)

...so why not measure?

£150 buys you

One for a bedroom



One for a living room



Records temperature and humidity every half hour for a year - then re-use – various options to do this

CO2 monitoring also available (slightly more expensive), useful indication of air change rate in occupied rooms

Also possible to monitor other toxins/irritants, eg CO, NO2 etc

We could find the ACTUAL impact of fuel poverty on living conditions, and look for correlations with health issues

We could find the ACTUAL impact of interventions (eg insulation, ventilation) on living conditions, and look for correlations with health issues

One intervention I'd like to see tested:

Decentralised continuous extract ventilation

Eg:



- Fits in same way as normal intermittent extract fan – but can provide **whole-house ventilation**
- About £100 - £150 plus installation
- Very quiet
- Low wattage – low bills
- Moves MUCH more air over 24 hours than a standard intermittent extract (5-10x more?)
- Works **even if you draughtproof**

I want to know if they work:

- If they improve air quality
- If they are beneficial to comfort and health

Who might help us find out?

- Fan manufacturer?
- Concerned social landlord?
- Interested CCG?
- Insulation installer worried about 'failed' retrofit, aware that ventilation is being raised as potential factor?
- Any suggestions?