

STBA

SUSTAINABLE TRADITIONAL
BUILDINGS ALLIANCE

STBA Advisory Group 21/2/17

Heritage response to “Each Home Counts”

John Preston  , STBA Heritage Chair

Heritage and traditional buildings are integral and essential to successful climate change adaptation

Heritage bodies were instrumental in setting up the STBA.....

STBA Gold Patrons



Historic England



STBA Bronze Patron



STBA Supporting Organisations



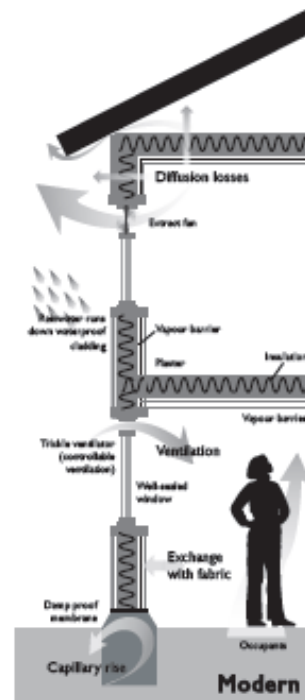
International Council on
Monuments and Sites
Conseil International
des Monuments et des Sites



Traditional buildings perform differently.....

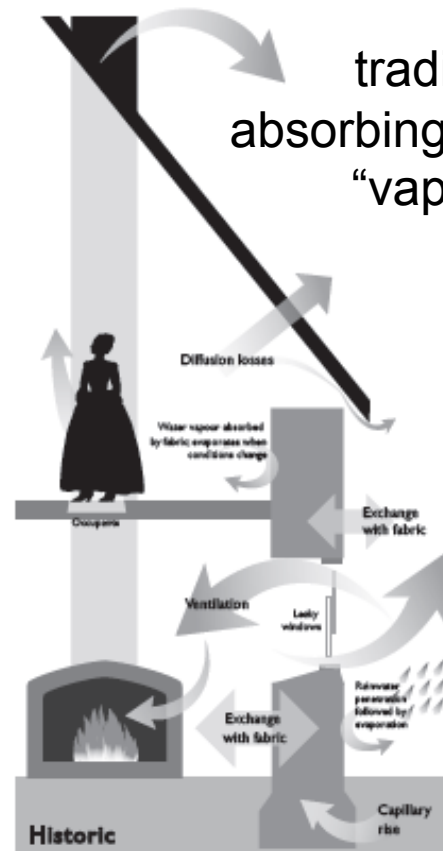
Modern

Modern construction sheds water
Impermeable outer surface
“vapour closed”



Traditional

traditional construction “breathes”
absorbing moisture then evaporating it
“vapour open”



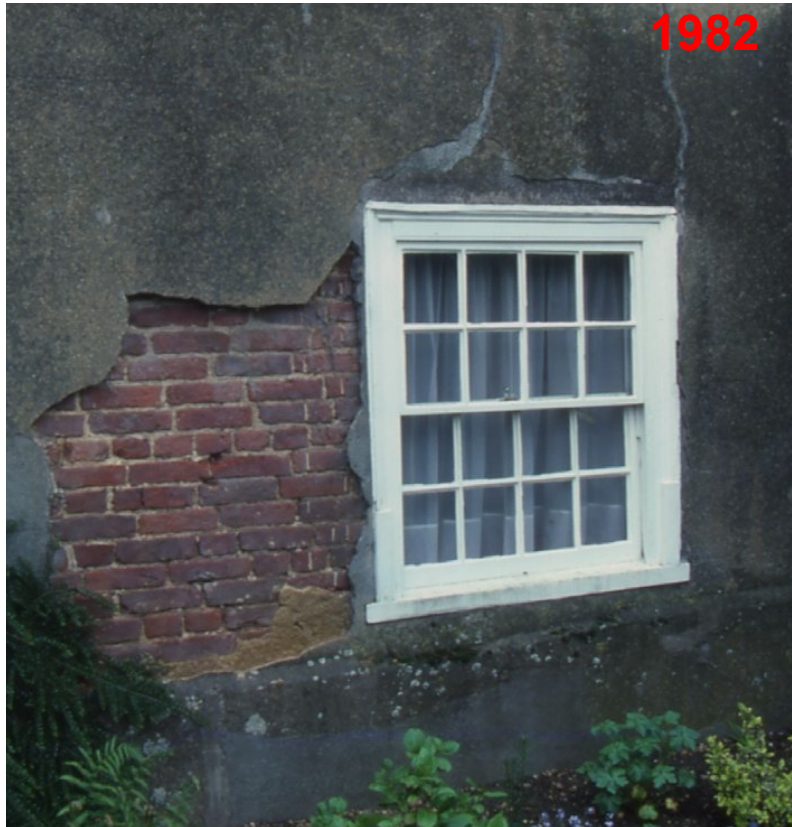
Historic England

Failure to understand the differences has led to countless problems....

50 years of problems due to industry training for new
when in reality up to 50% of workload has been on existing
leading to repeated problems in traditional buildings.....

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cement render damage, different buildings, 35 years apart



Impermeable coatings result in trapped moisture and building decay

and now, at scale, in Government retrofit schemes

Heritage / traditional - up to 35% of dwellings!

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*According to BRE's own literature,
published by DECC*

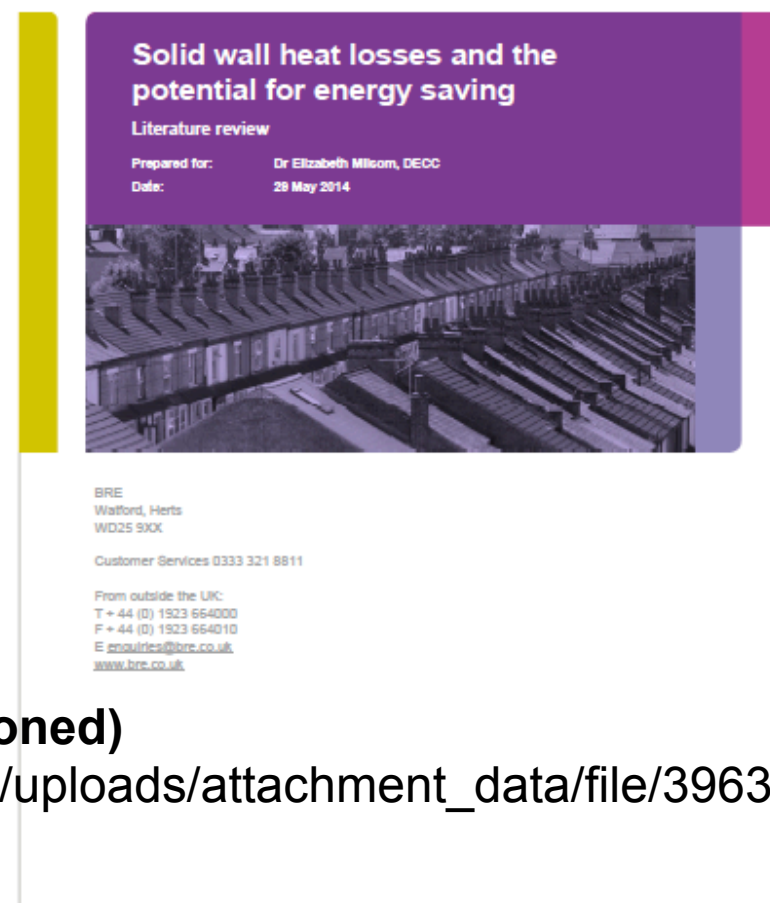
65% **35%**
bre

www.bre.co.uk

***“Heritage buildings represent
approximately 35% of the existing
dwellings in the UK as a whole
and a large proportion of
solid wall buildings.***

**Published on DECC website January 2015
(long before Bonfield Review was commissioned)**

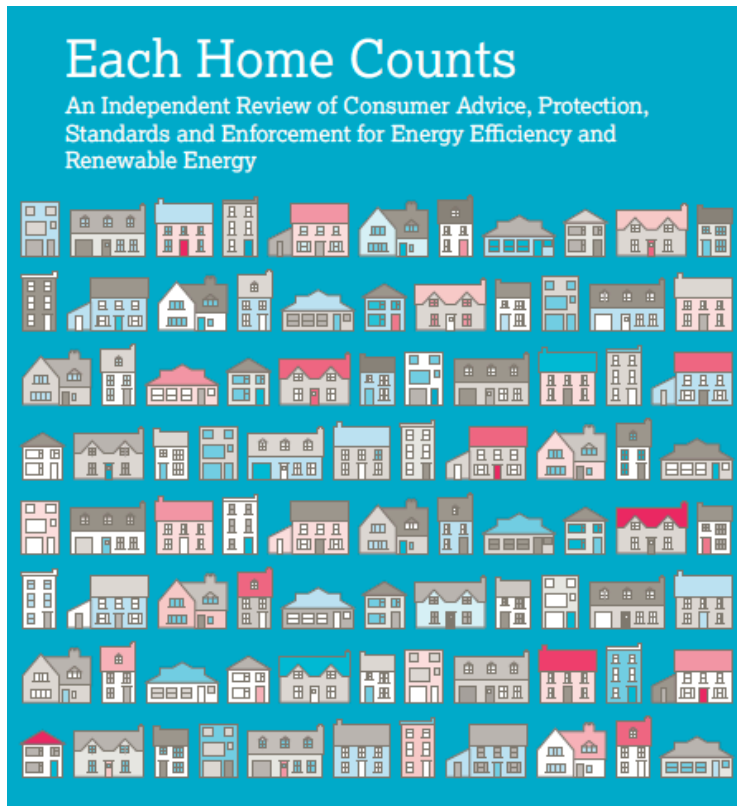
[https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/396363/
solid_wall_insulation_literature_review.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/396363/solid_wall_insulation_literature_review.pdf)



“Whole building” approach welcome, but.....

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Dr Peter Bonfield, OBE, FREng



Department for
Business, Energy
& Industrial Strategy

Department for
Communities and
Local Government

December 2016

65% 35%???

How will a single

Quality Mark

Code of Practice

and Consumer Charter

cover the very different approaches

needed for **Traditional buildings?**

Getting it right for the 35%? Traditional Buildings Working Group



Revive the Older Properties Working Group

Set up by DECC in 2011

following meeting between Prince of Wales and Greg Barker MP

co-chaired by DECC and Prince's Regeneration Trust

led to DECC commissioning

STBA's "Responsible Retrofit" and

BRE "In-depth study of Solid Wall Insulation, building on STBA's work"

(still awaited)

New National Occupation Standards for Green Deal Providers

and Installers, drafted and approved by Assetskills *(now defunct)*

(but DECC did not apply or require them)

Working group allowed to lapse in 2012.....

Advice and Guidance

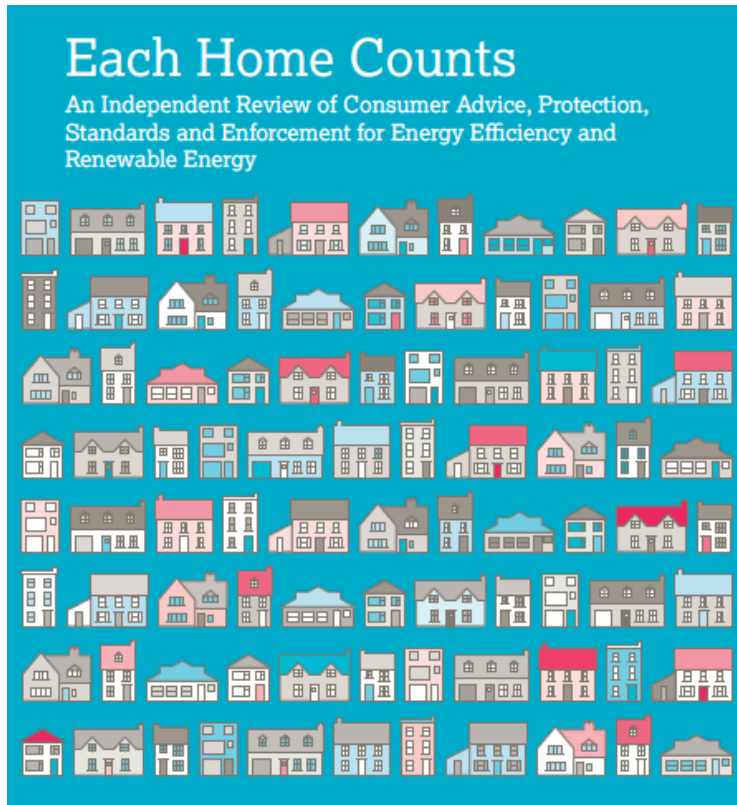
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65% 35%???

Energy Saving Trust does not mention
traditional buildings

How to direct people living in traditional
buildings to the appropriate guidance?



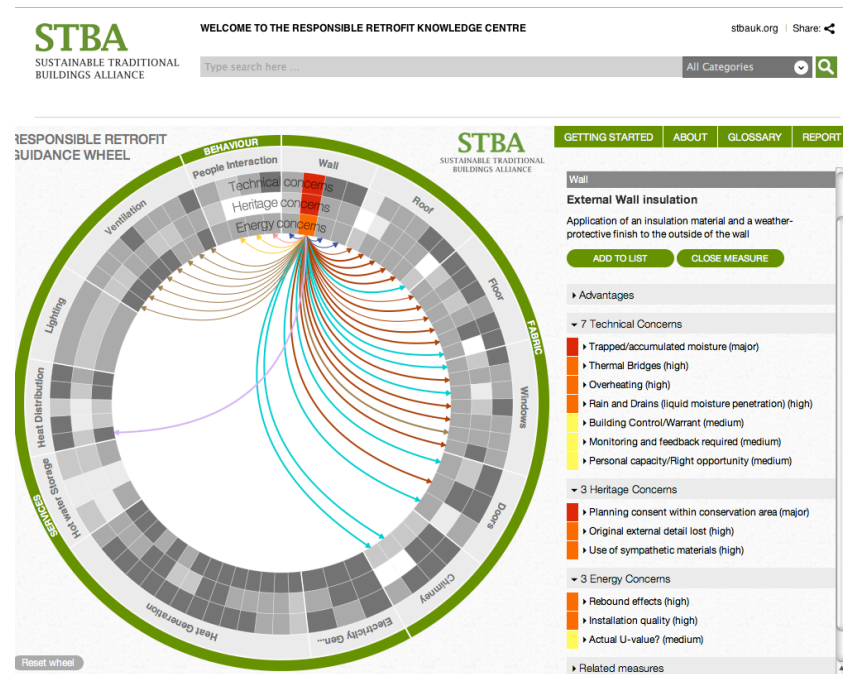
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Quality and Standards

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2011 - PAS 2030

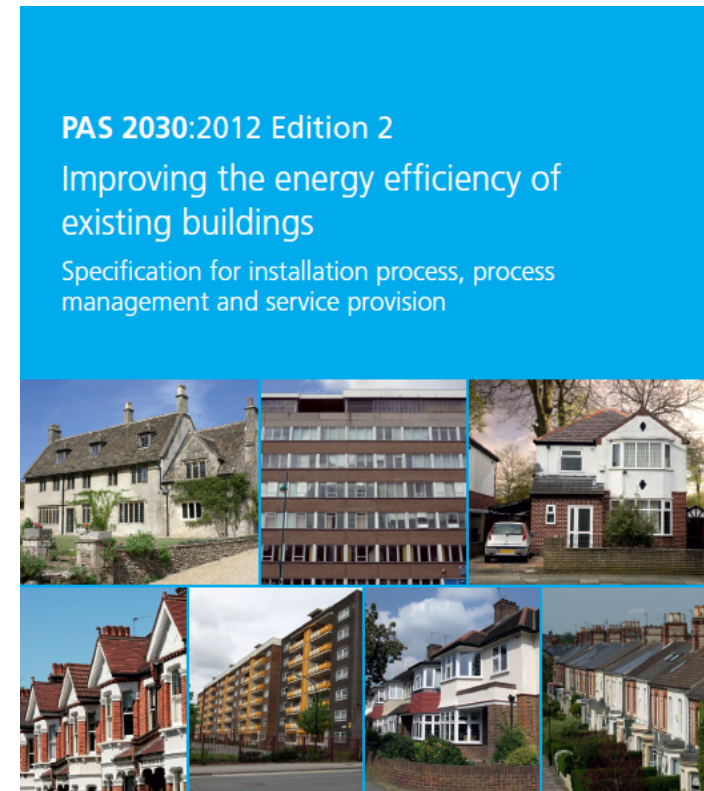
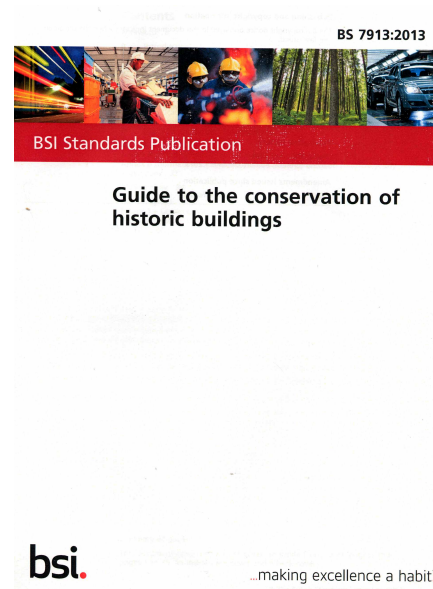
65% 35%???

Several iterations.....

No mention of traditional buildings

Heritage sector submissions ignored

No cross-reference to...



Department
of Energy &
Climate Change

bsi.

Document prepared for BSI customer bob towse at 25/01/2013 14:03:24

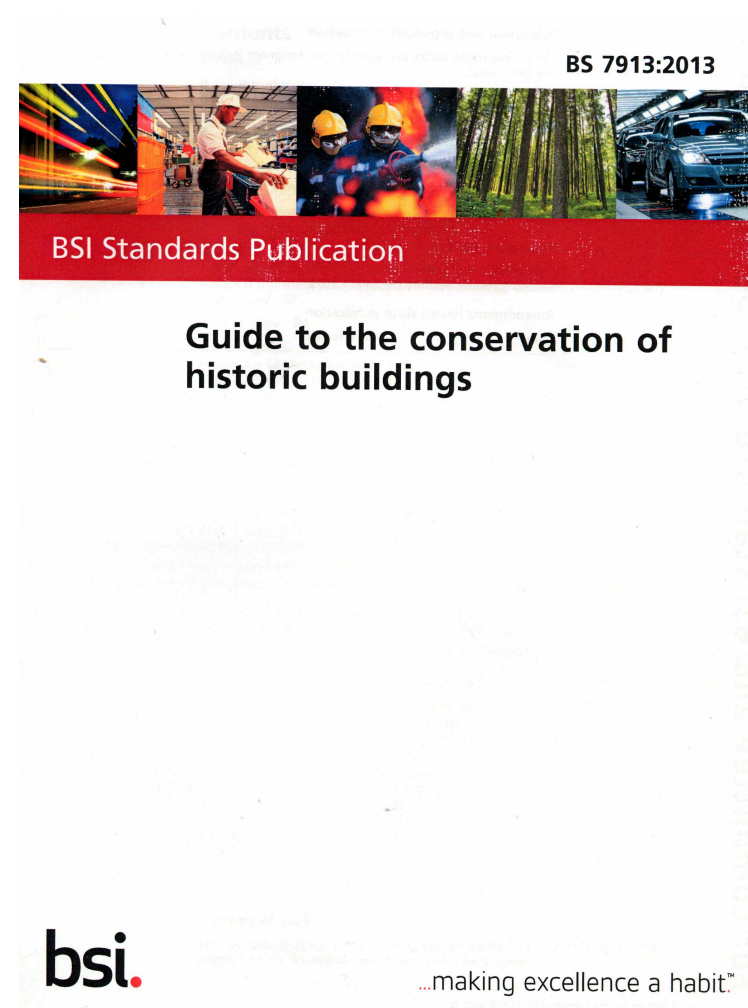
key British Standard overlooked by BSI *..and by the Standards Implementation Group?....*

BS7913:1988: superseded by
BS7913:2013: “Guide to the Conservation of Historic Buildings”

“10. Sustainability and energy efficiency

The most effective way of ensuring energy efficiency and sustainability is to keep historic buildings in good repair so that they last as long as possible, do not need replacement and do not suffer from avoidable decay that would require energy and carbon to rectify ...

Elements such as walls can be over a third less energy efficient if damp”



Building Regulations safeguards from 2002
introduced following lobbying by Heritage sector

Good principles established in Part L1B and L2B
“Improve energy efficiency as far as reasonably practical”

Parts L1B and L2B paras 3.8-3.13

“Special considerations in making reasonable provision”

“3.8c buildings of *traditional construction with permeable fabric that both absorbs and readily allows the evaporation of moisture*”

“3.9 ..the aim should be to *improve energy efficiency as far as is reasonably practicable*. The work should not prejudice the character of the host building or *increase the risk of long-term deterioration of the building fabric...*”

.....but totally overlooked by DECC!!

Skills and Training

65% 35%???



What if any traditional buildings representation on the Working Group?

Implement the NOS!!

How long to get enough of the industry trained to work on traditional buildings?

ASTSOTV1

Recognise the age, nature and characteristics of older and traditional buildings



ASTSOTV2

Evaluate the appropriate options for the introduction of energy efficiency measures to older and traditional buildings



ASTSOTV3

Make recommendations and give advice on the introduction of energy efficiency measures in older and traditional buildings



Qualifications SQA, Agored CYMRU, not England!

SQA Courses delivered by CITB and HES

Compliance, Enforcement, or effective audit?

BRE SOLID WALL LITERATURE REVIEW

“..there are enough warning signs to suggest that insulating external walls either externally or internally can lead to undesirable consequences..

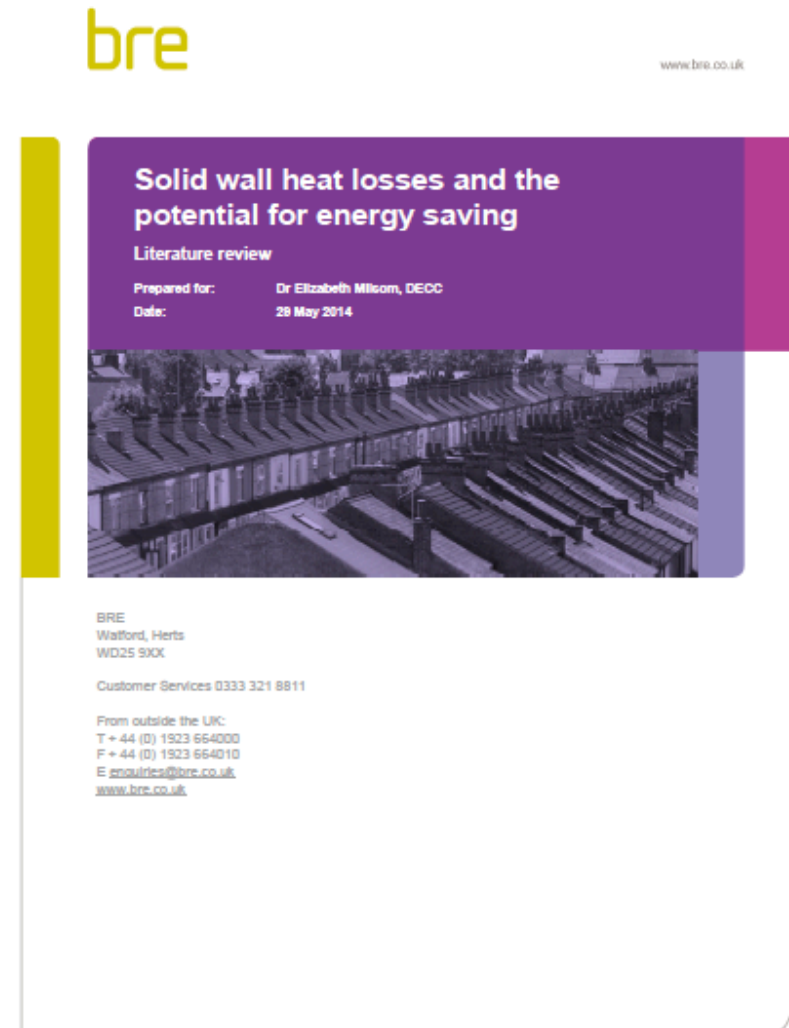
A THOROUGH AND EXTENSIVE REVIEW OF BUILDINGS THAT HAVE BEEN INSULATED WITH EWI SHOULD BE UNDERTAKEN...

OFGEM inspections do not distinguish between insulation types!!

***Rectification of failed measures?
Financial and carbon costs***

REDRESS????? “Preston”??

RESPONSIBILITY – WHO PAYS???



Insulation and Fabric

Key research overlooked

National Trust *not invited to participate in Bonfield Review*

5000 private rented dwellings

Most pre 1919, 75% unlisted, nearly 50% are F or G

Parity Projects research

“E is achievable, D significantly harder”

(cf 1,368,000 total PRS)

RETROFIT CHEAPER WITHOUT SOLID WALL INSULATION

£6.5M to get 2088 up to E
(but £4.45M without Solid Wall Insulation)

£26.8M to get 4400 up to D
(£19.23M without Solid Wall Insulation)

£55M to get all 5000 up to C



interim BRE evidence – major problems **UNINTENDED CONSEQUENCES**

BRE WALES SOLID WALL RESEARCH FOR DECC

www.slideshare.net/BREGroup/colin-king-ecobuild-6-march-2014

Dampness worse after retrofit of inter-war buildings!

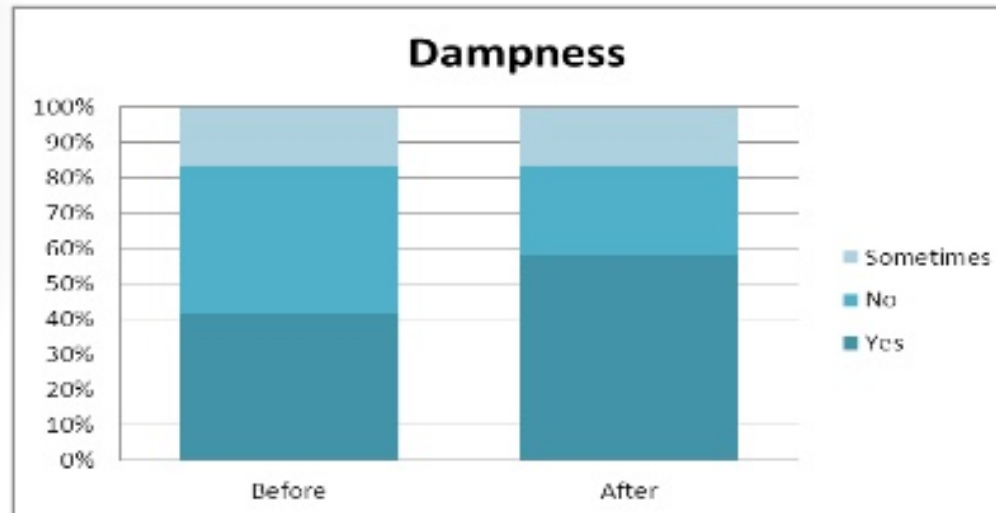
 #brelive



bre

One scheme results

– Total of 37 properties analysed, only EWI



“The risks are too high to continue as normal”

Colin King BRE presentation to ECOBUILD 2014

bre

 #brelive

Final thoughts

- Careful consideration of context
- Whole house surveying, not just the element to be improved
- Improved thought process on the links and connectivity between actions
- Point of responsibility, Moisture or Thermal performance professional
- The risks are too high to continue as normal



High risks....*few safeguards...*

PART L safeguards for breathable buildings *ignored*

GREEN DEAL CODE OF PRACTICE 2014 *limited safeguards*

ECO *no safeguards whatever!!*

**96% of all retrofit measures installed
134,000 Solid Wall Insulation**



PRIVATE RENTED SECTOR 2015 Regulations *limited safeguards*

only where **landlord** has sought written opinion from **s10 (4)**

- a) **a relevant person** (*conservation accredited*), or
- b) **an independent installer of the relevant energy efficiency improvement...** that it is not an appropriate energy efficiency improvement, *due to its potential negative impact on the fabric or structure*

How likely is it that an installer would not recommend the improvement they sell?

Changes urgently needed....

- End **avoidable** waste of money + carbon on inappropriate retrofits
- Thorough **expert** audit of installed schemes
- Learn lessons before large scale roll-out
- Provide effective safeguards **including for ECO**
- **Long term strategy** needed to meet 2050 targets
- **Traditional buildings** an urgent priority
- Training in traditional **repairs** as well as retrofit

HOW CAN WE ALL WORK TOGETHER?

FIRST STEPS:

- **TRADITIONAL BUILDINGS WORKING GROUP**
- **PUBLISH THE LONG-AWAITED BRE “IN-DEPTH” SOLID WALL STUDY**

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EXTERNAL WALL INSULATION IN TRADITIONAL BUILDINGS:
Case studies of three large-scale projects in the North of England:



ENGLISH HERITAGE
RESEARCH REPORT

“DIFFERENT BUT COMPLEMENTARY”

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“A single, **one size fits all**” approach won’t work

“A variety of different but complementary measures is required”

Government response to House of Lords Select Committee on the Built Environment, November 2016

Thank you

John Preston

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