



# AGM 2010 Technical report



CONCRETE BLOCK  
ASSOCIATION

# Presentation overview

- Part 1 - *What we have been doing*
- Part 2 – *What needs to be done now*

## *What we have been doing*

- Drafting standards
- Reviewing standards
- Responding to consultations
- Amending RDs
- Designing thermal bridging solutions
- Designing solutions for acid attack
- Preparing CBA data sheet
- Revising ‘Heavy blocks’ guidance with HSE
- Providing Technical Helpline support

Drafting standards including:

- Environmental Product Declarations (EPDs)
- Sustainability indicators
- PD 6697 (Residue of BS 5628)

Environmental Product Declaration

*(Environmental profile in BRE speak)*

CEN/TC350 (Sustainability) will not include TMR (Total Material Requirement) as an indicator but ADP (Abiotic Depletion Potential)

## Sustainability

ISO 21929-1 will include a list of core indicators covering economic and social aspects as well as environmental.

*(eg embracing fire safety and acoustic comfort)*

Revising standards including:

- EN 771 series (Masonry unit standards)
- EN 772 series (Test methods)
- EN 1745 (Masonry thermal performance)

## Responding to consultations:

- SAP 2009
  - Thermal mass
  - Party wall by-pass
- Part L
- Sections 1 & 6 (Scotland)
- Code for Sustainable Homes
- Zero carbon

Amending masonry cavity wall RDs to cover filling with mineral wool in readiness for new thermal regulations

Joint initiative with:

- Eurisol
- APA

12 cavity blockwork RDs affected

- 9 aggregate
- 3 aircrete

4 types of mineral wool

- Blown rock
- Blown glass
- Built-in rock
- Built-in glass

# Thermal bridging

Ever increasing problem - with a possible  
‘Robust Details’ approach proposed

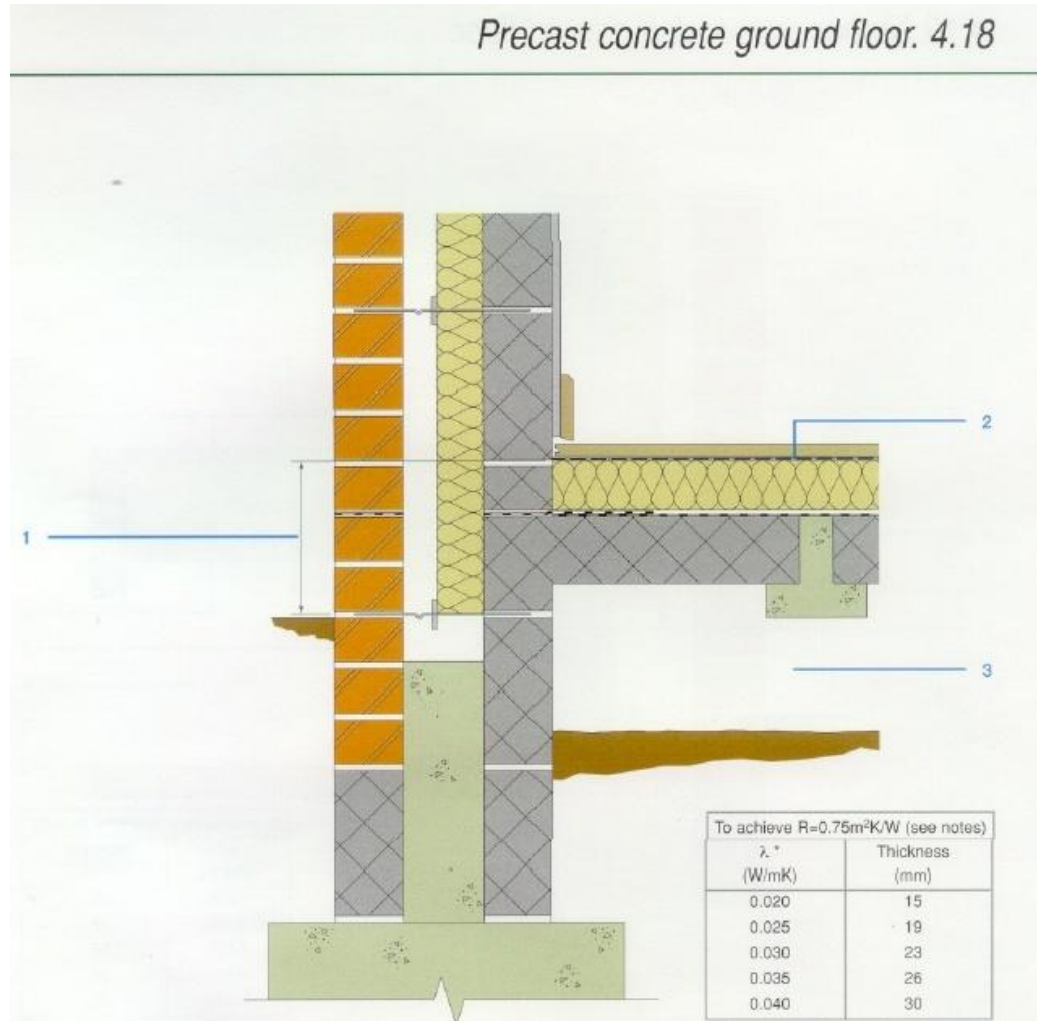
Current solutions we now have available:

- extend insulation (limited attraction)
- course of Foamglas ‘Perinsul’

# Design solutions for floors

## Beam and block flooring

### Beams with dense aggregate block infill



# Thermal bridging

Calculations to extend insulation (and thus heat path) done by BRE

Guided Foamglas to provide 2.9 N/mm<sup>2</sup> strength Perinsul @ lambda of 0.058

Design solutions for acid attack:

Final part of trilogy

- Sulphate soils
- Brownfield sites
- Dissolved CO<sub>2</sub>

## Preparation of new CBA data sheet on solid externally insulated walls

- Cheaper for builders
- More blocks sold
- Reduces thermal bridging problems
- Improves airtightness

## Negotiations with HSE over their ‘Heavy blocks’ agenda

- revision of CIS 37
- site video

Provision of Technical Helpline giving  
advice by:

- email
- phone

# Not a helpline success



## *What needs to be done*

- Further work on standards
- Finalize RD amendments
- Develop and extend solutions for thermal bridging
- Prepare guidance on meeting new Part L

## Further work on standards

- Sustainability
- Thermal – (air permeability/in-situ testing)
- Acoustic – (changes to rating methods)
- Masonry – (limiting proposed changes to EN 771 series)
- Regulated Dangerous Substances (RDS)

# Robust Details

## Finalize amendments to cavity masonry RDs

- E-WM-1 *Dense/plaster*
- E-WM-2 *LWA/plaster*
- E-WM-3 *Dense/parge/drylined*
- E-WM-4 *Dense/parge/drylined*
- E-WM-5 *Star performer/parge/drylined\**
- E-WM-11 *LWA/100mm cavity/parge/drylined*
- E-WM-12 *Aglite Ultima/parge/drylined\**
- E-WM-16 *Dense/100mm cavity/parge/drylined*
- E-WM-18 *Dense/100mm cavity/plaster*

\* *Proprietary RDs*

## Amendment requirements

- 16 tests on E-WM-2
- 16 tests on E-WM-4
- 16 tests on E-WM-6
- 50/50 rock and glass blown fill tested both before and after filling

# Thermal bridging

Develop and extend thermal bridge solutions

- Get designs checked by approved assessor
- Lodge/publish design details

# Thermal regulations

Provide guidance on meeting new and future  
Part L revisions and future target U-values:

$U = 0.18 \text{ W/m}^2\text{K}$  (flats/mid-terrace)

$U = 0.15 \text{ W/m}^2\text{K}$  (semis/end terrace/detached)

# Full-fill insulation thicknesses required

	Dense blocks	Medium density blocks	Low density blocks and aircrete
Flats and mid-terrace ( $U = 0.18$ )	175mm	175mm	150mm
Semis, end terrace and detached ( $u = 0.15$ )	240mm	215mm	215mm

# Thermal regulations

Provide guidance on thermal mass values to use in calculations

# New design code

Prepare guidance on block normalized strength (Required for design to EC6 /EN 1996)

- Wet to dry conversion
- Shape factor correction

## Develop enhanced performance RDs

- Give credits with CSH
- Work with CBA ‘strengths’
- Anticipate next step of regulatory requirement
- Potential Perinsul advantages

Continued provision of CBA Technical  
Helpline

## Update safe handling data sheet

- Give details not in CIS 37  
*eg wall constructions options*
- Obtain HSE endorsement

# Summary

- We are in an environment of constant change on many fronts
- We need to continue to influence the direction of these changes
- We need to obstruct changes contrary to our commercial interests
- We need to have the answers to remain as players

# Your turn

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