Nearer to Zero: Central London
8th July 2014
DvAB Evidence Review

Literature review

Interviews, Design Review & Construction Walk-through

SAP Audit

Priority action: Performance assessment R+D
Continued evidence gathering
DvAB  Priorities for action

Priority action: Performance assessment R+D
Continued evidence gathering
U-value and thermal bridging calculation procedures

Timber Fraction: 12.5% assumed, 25% measured
Priority action: Strengthen the Compliance Regime
DvAB 2006 -2013
Lessons Learned
"there is an urgent need to emphasise energy performance issues in training of new entrants and to provide additional training and Continuing Professional Development for existing members of the industry. This includes clients, planners, designers, architects, engineers, SAP assessors, energy modellers, developers, contractors, procurers, site managers, materials suppliers, operatives, commissioners, testers, verifiers, valuers and insurance bodies"
DvAB Priorities for action

Industry:

Performance assessment R+D
Skills and knowledge development
Construction details scheme
Continued evidence gathering

Government:

Signal clear direction
Stimulate industry investment
Strengthen compliance regime
Support skills and knowledge development
Legacy & Affordability
DvAB

Inadequate understanding and knowledge within design team
DvAB  Construction joint details

Priority action: Establish industry owned construction details

Image courtesy of C4Ci: www.C4Ci.eu
Priority action: Establish industry owned construction details

- PVC-U cavity closer fully insulated with conductivity 0.038 W/m·K (R = 0.77 m²·K/W)
- 102.5mm Brickwork (λ = 0.77 W/m·K)
- Stainless steel, double triangle wall ties
- 125mm Insulation (λ = 0.038 W/m·K)
- 30mm Frame overlap
- 25mm Softwood window sill board (λ = 0.13 W/m·K)
- Flexible frame sealant (λ = 0.30 W/m·K)
- Plaster dabs (λ = 0.43 W/m·K)
- Standard wallboard (λ = 0.21 W/m·K)
- Hi-Strength aircrete blockwork, 7.3N/mm² (λ_{block} = 0.19 W/m·K, mortar correction λ = 0.236 W/m·K)
Designing homes for the 21st century

Lessons for low energy design
DvAB  Conclusions

1. The evidence supports the concern that our homes (prior to occupation) do not perform as predicted

2. 4 Priorities for Action give an optimum focus of what we as an industry should do about this

3. Raising awareness of ‘Gap’ and Application of appropriate process - needs addressing

4. Clients and customers expectations
   • monthly outgoings
     • Mortgage payments- BoE rate rises
     • rents - Welfare reform & direct payments
     • Food bills
     • Asset values/performance standards
   • Energy Bills
   • reputations of builders will be effected- potentially insurance premiums also