CoRE - Centre of Refurbishment Excellence

How CoRE Supports Better Quality Retrofit of Existing Buildings
CoRE’s Aims

CoRE aims to support the retrofit sector by working collaboratively with and acting as the Hub for the industry:

• To establish and share best practice in retrofit

• To support the building of a reliable evidence and knowledge base

• To inform better policy making, strategic planning and long-term business decisions through sharing the evidence base

• To signpost to other organisations who provide complimentary services and support
Stakeholders

Government:
- Department of Energy & Climate Change
- Department for Business Innovation & Skills
- Department for Communities and Local Government

Professional / SMEs
- CoRE
- CoRE Alumni
- CoRE Fellow
- CoRE Member

NFP Partners
- FMB
- National Energy Foundation
- BRE

Communities
CoRE HQ - The Green Venue for Training and Events
Building Fabric and Services @ CoRE

1. Solar Thermal Hot Water
2. Solar PV (8.5KW)
3. Ground Source Heat Pump
4. Air Source Heat Pump
5. Green Roof
6. Biomass Boiler
7. Grey Water Recycling
8. MVHR
9. Triple Glazed Passivhaus Windows
10. Internal Retrofit Insulation
11. External Retrofit Insulation
12. Sensor Controlled Windows
13. Sensor Controlled LED Lighting
Products, Services and Activities

- 500 Alumni
- 60 Graduates
- RIBA Endorsed
- Accredited by the IOEE
- Courses now nationwide

- Flagship annual conference
- 200 attendees
- Videos available

- 105 Fellows
- 12 accredited courses
- Provides evidence to government
Deep Retrofit - Challenges

- Skills and Knowledge
- Standards
- Heritage
- Unintended Consequences
- Uncertain Policy
- Uncertain Funding
What Goes Wrong?
The Knock On Effect

Unintended Consequences

Systemic
- Energy savings less than anticipated
- Insulation suitability
- Materials
- Exposure and local climate
- Condition of Structure
- Ventilation

Assessment
- Sources of Moisture
- Daylighting
- Heritage

Application
- Restrictions to good design
- On-site checks at key stages
- Handover Information

Physical aspects of a good process with reduced risk.
When undertaking thermal improvements these should be
Considered at every stage: planning, procurement, design, construction, operation and maintenance.
Evidence from the Field

Photographs courtesy of Nicholas Heath/ STBA
Which leaves us ...

**Current Practice**

- Little if any design, shocking workmanship
- Ventilation provision not considered
- Steady state condensation risk
- Little consideration of context and location
- Dictated by the lowest price not what is suitable
Uncertain Policy / Funding
Deep Retrofit - Opportunities

- Volumetric, offsite WHR
- Large scale £10m+ ‘best practice’ investments
- Responsive and flexible insulation systems
- Retrofit Coordinators
- Voluntary Code of Conduct?
- Whole House Service Schedule
- Knowledge Base
Thank you for listening.

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