

BRE INNOVATION PARK @RAVENS CRAIG

Part of the BRE Innovation Parks Network



Retrofit demonstration
David Kelly, BRE

bre

Why a retrofit demonstration?

- UK homes are some of the oldest and least efficient in Europe
- All Buildings account for 45% UK CO₂ emissions
- Housing energy use is responsible for 27% of UK CO₂ emissions
- UK housing stock amounts to 26 million dwellings
 - Annual new-build rate <1% of existing stock
 - Two-thirds of current housing stock will still be standing in 2050
- High levels of heat loss through roof, walls, floors, windows and doors
- Infiltration of cold air via holes and gaps
- Significant environmental impact of CO₂ from inefficient building stock

Challenge and Opportunity

- The retrofit programme could be worth £280 billion to the UK economy between now and 2050.
- Approximately 23 million homes need retrofitting between now and 2050. That's 600,000 retrofits per year.
- An overhaul of the UK housing stock could save approximately 48 million tonnes of CO₂ and reduce householders' fuel bills by as much as £8.7 billion

Retrofit project @ Ravenscraig



Demonstration and testing
of retrofit solutions for 4-in-
a-block dwelling



National
Refurbishment
Centre



Develop a refurbishment demonstration on the BRE Innovation Park @ Ravenscraig. This demonstration will act as a pilot for the wider strategic project and will involve private sector partners, training providers and academia.

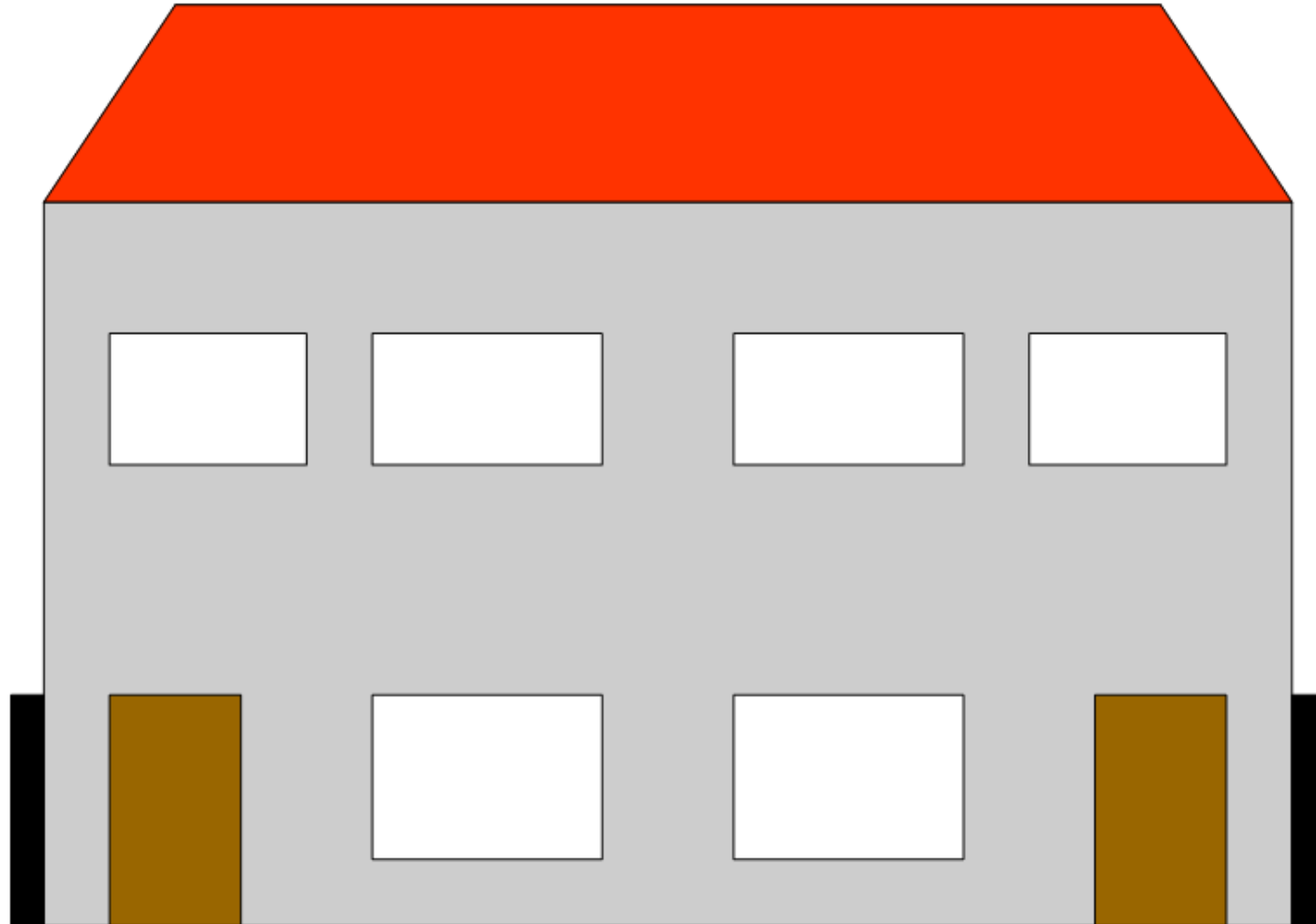
Issues to be considered include:

- use of innovative products/ materials
- energy strategy
- water strategy
- monitoring / dissemination
- up-scaling of approach
- network of partners / suppliers
- links to other demonstrations

Establish a strategic project to look at the development of a methodology for retrofit. This will seek to develop a generic strategy for tackling existing buildings throughout Scotland. Issues to be considered include:

- identifying performance targets
- identifying planning issues
- identifying common issues
- developing strategies or retrofit
- identifying funding mechanisms
- identifying stakeholders
- developing supply chains
- training and skills
- demonstrate refurbishment in practice
- knowledge hub
- dissemination of best practice

Retrofit project @ Ravenscraig



What we need

- Partners with products / technologies / approaches which could be demonstrated
- Architects / designers who can develop a retrofit 'approach'
- Innovative materials that improve thermal and acoustic performance

Thank – you.

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