North of Scotland KTP Centre
Case Study

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Knowledge Transfer Partnerships

Grampian Housing Association

The objective of the partnership was to conduct a full hygrothermal and behavioural analysis of a complete Aberdeen Granite Tenement, in occupation, and determine a strategy for carbon reduction and improved energy efficiency by determining appropriate insulation solutions.

Challenge

The rationale behind the project was to gather and assess relevant data which could lead to the improvement of the hygrothermal performance of granite tenemental construction. Whilst the basic technology was similar, the characteristics of granite is significantly different to other materials. This fact had not been properly researched in order to determine the effects on the overall performance of the structural walls. It was deemed essential that the hygrothermal performance of the structure be mapped in order to properly assess the potential for upgrading the thermal performance of the wall without causing detrimental effects to the buildings longevity.

Results

This KTP has provided data which did not previously exist and generated new knowledge. Expected impacts are that buildings could be insulated by the 'injection' of insulation between the inner face of the granite masonry and lath and plaster finish. This method needed to be properly assessed prior to any significant pilot study (also would require the monitoring of the buildings on completion of such works) so that the effects of the method could be assessed.

Benefits

This project will have a huge impact on the quality of tenants' lives. By making these granite buildings, which are so integral to Aberdeen's identity, more energy efficient, it will not only reduce the fuel bills of tenants, but mean that housing associations do not need to spend as much of their limited funds on maintaining the buildings.

Grampian Housing Association (GHA) works in partnership with other agencies to provide and manage quality accommodation for people in housing need while actively promoting community regeneration and related environmental improvements

"We were delighted to be working with staff at the Scott Sutherland School on this project which allowed us to target our limited resources effectively and understand the criteria and analysis required prior to making a critical judgement of what solutions were needed for a particular building"

Laura Fiddes
Property Services Manager at GHA

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