

## Edinburgh Napier awarded Queen's Prize

19 November 2009

Noise insulation techniques pioneered by Edinburgh Napier University have led to a major drop in complaints about noise from neighbours.



The research, which has benefited over 1 million home owners, has now received the highest accolade that can be conferred on a higher or further education institution in the UK – the Queen's Anniversary Prize for 2009.

It is the only university in Scotland to receive the prize on this occasion. The prize, which will be officially awarded at Buckingham Palace in February 2010, recognises the effect that this world leading research has had on revolutionising new-home building practices and standards in England and Wales.

The new innovative wall and floor constructions dramatically reduce noise transmission within new homes. It was one of the largest and most intensive research projects ever undertaken between a university and the house building industry.

It was funded by the Home Builders' Federation and 13 of the country's biggest house builders, including, Barratt Homes and George Wimpey. It has seen 400,000 new homes incorporating the pioneering designs.

Noise complaints, which had risen by 140% between 2001 and 2004, are at their lowest level in eight years in England and Wales for new housing due to the innovations emerging from the research. The introduction of the new Standards in 2004 has resulted in a four-fold drop in noise complaints.

The uptake of the new acoustic insulation solutions by the £15 billion UK house building industry was achieved within an extremely short timeframe. The unusually fast uptake was accomplished by incorporating findings into innovative building regulation legislation in England and Wales. Compliance within this part of the Building Regulations rose from a pass rate of 35% to 97% within 18 months of its introduction, smashing the ten year target set by the Government.

An additional financial and environmental benefit of this system is the vast reduction in Building Regulations testing requirements for new builds. This removes £14 million in associated costs for testing, as well as 17,000 car journeys. No new house built to the guidelines has yet failed to meet the Building Regulations when built correctly.

Over 40 new products have been developed incorporating the processes and standards developed by the research team. These include Monarfloor Acoustics, 'Wall Cap', a membrane used in between homes that, in addition to acoustic benefits, can reduce heat loss by 14-22% and 'Soundcoat' made from British Gypsum – pre-bagged ready mix render to help with sound insulation.

Professor Dame Joan Stringer, Edinburgh Napier University Principal and Vice Chancellor, said: "I am enormously proud that the University is being recognised with this prestigious honour. Noise affects the quality of life for so many people and our innovative solutions demonstrate our commitment to undertaking research that directly benefits people and society. The services of our acoustic research team are now in considerable demand and have received requests to share their insights on a global stage."

Sean Smith, Professor of Construction Innovation at Edinburgh Napier University's Building Performance Centre says: "Importantly these new building techniques mean that home-occupants suffer less stress, less sleep interruption and enjoy a better quality of life as they are not blighted by noise. The new flooring and wall constructions also result in less heat loss and better energy efficiency to comply with the future low and zero carbon targets. It shows the very real benefits that can result when both universities and the business sector work so closely together."