Cities, Communities and Homes: Is the Urban Future Livable?

1. Paper / Proposal Title:

Evaluation of two New Zealand typical house retrofits for ageing in place

2. Format:

Written paper (3,000 words) and Verbal presentation

3. Author(s) Name:

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4. University or Company Affiliation:

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5. Abstract (300 words):

The growing demand for ageing in place requires effective design solutions for redeveloping the existing housing stock given the slow rate of adding new houses. Different housing types affect opportunities for redesign. Research also suggests a considerable proportion of the ageing population live in large houses with two or more spare bedrooms. As a result, this study aims to evaluate a number of New Zealand housing types in terms of their appropriateness for conversion to dwellings to accommodate the needs of those in the ageing population who wish to age in place, in smaller dwellings that will be easy to heat and maintain.

Two New Zealand housing types were investigated (early 20th century villas with a central corridor and 1930-50s single storey state houses). Selected examples of each were redesigned, the possible options ranging from subdivision (conversion to two smaller units) to varying degrees of shared living (shared spaces such as a guest bedroom) to only having private bedsits and all living spaces shared. To ensure designs are accessible and appropriate for the mobile elderly, Universal Design principles were taken into account.

The aim in the alternative designs was to retain the same standards of comfort and wellbeing found in new housing for the elderly.

Results show while retrofitting state houses provide suitable houses with a degree of shared space for the elderly, the larger typical villas offer a range of design solutions including separate and shared living. Based on the results of this study, the characteristics of each dwelling type in terms of applying appropriate design standards are defined. Furthermore, recommendations are made for identifying the most appropriate living scenarios for each type, with the aim of obtaining feedback on these from the client group.

6. Author(s) Biography (200 words each):

Fatemeh Yavari is currently a PhD student in Architecture and working at Victoria University of Wellington, New Zealand as tutor coordinator and tutor. She graduated from Yazd University, Iran in architecture in 2007. She has been a University lecturer in architecture in her home country for 6 years and working in an academic environment has been her main job over the last 10 years. Simultaneously, as a registered architect, she has also been involved with designing and supervising residential buildings for more than six years in Iran. She pursued her career as tutor, research assistant and teaching assistant at the School of Architecture, Victoria University of Wellington, New Zealand when she arrived in New Zealand in 2013. Her research interests include housing for an ageing population, behaviour in architecture, sustainable building design and Iranian ancient Architecture.

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Brenda and Robert Vale are architects and academics who wrote their first book on sustainable design in 1975. Following their design of award winning commercial buildings in the UK they built the UK's first autonomous house in 1993 and the first zero-emissions settlement in 1998. They have received international awards, including those from the United Nations and European Solar Energy Society for their work. They developed the Australian government's National Australian Built Environment Rating System (NABERS) which has now been put into operation. Their 2009 book sets out the impact on the environment of a western life-style. They have published a book on fair earth share ecological footprints with contributions from many of their former and existing postgraduate students and are currently writing another.