

ABSTRACT

Purpose; In the construction industry of the 21st Century, the trend towards "green design" and a sustainable future has never been more apparent. Nowhere else is this more evident than in the movement towards creating and promoting a more energy efficient home. With this in mind, the need for a secure and reliable energy test for domestic dwellings needs to be incorporated into the planning system in Ireland. This study originated from the researcher's experience in the construction sector, is an attempt to highlight some of the failings of the Irish system and suggest solutions to overcome these problems.

Methodology; Undertaking a review of all the available literature gathered relevant and reliable references for the primary research. As the planning process is fraught with inadequacies and a lack of uniformity, introducing a standard and compulsory energy efficiency test could pave the way in developing the system into a leading member of building control in Europe, together with having a very influential benefit on the quality of construction of domestic units throughout the country. The identification of an accurate and beneficial energy efficiency testing method is explored within this text. The research makes use of previous studies' achievements in similar fields, along with the findings of comparable literature, to test the theory and practice of accurate energy testing. The Building Energy Rating (BER) is the standard energy test for domestic dwellings in Ireland. This is scrutinised by literature and interviews with leading professionals within the industry. This study presents comparisons between various aspects of the Building Energy Rating (BER) with other methods of energy testing a domestic dwelling such as BREEAM, LEED and PHPP Testing.

Findings; The research discovered that the introduction of an energy performance test into the planning system in Ireland would benefit domestic construction. Structured interviews proved paramount in testing the hypothesis and together with reference to relevant literature to arrive at the conclusion. The suggested recommendations include incorporating a uniform planning application process across the country, and revising the BER to include some level of destructive testing to increase its accuracy.

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