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Submission to Public Consultation on research topics on collaborative research by ESRI and Department of Housing, Planning Community & Local Government



UCD School of Architecture, Planning and Environmental Policy

Written Submission to the Department of Housing, Planning, Community & Local Government and the ESRI.

This submission is in response to a call for suggested topics for collaborative research to meet current challenges related to housing. The invitation for submissions gives examples (*demographics, rental market price changes, credit markets and housing supply*) however, the range of topics listed below indicates the broader opportunities for strategic research and, more importantly, the range of research areas that are key to housing policy, design and delivery where research is not currently being carried out.

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HOUSING POLICY / ENVIRONMENTAL POLICY

Assessing the potential of mandatory rainwater harvesting in new housing (OH).

Assessing the potential of passive design principles and Passive House standards to reduce energy demand in new housing, including the potential of requiring energy design 'cost optimal' compliance prior to Planning Application stage for all new housing (OH).

Assessing the potential / risks to national grid of renewable energy requirements in new housing (OH).

Assessing the potential of MHRV (mechanical heat recovery ventilation) and WWHR (waste water heat recovery) in new housing. (OH)

Assessing the reduced energy performance (and cost impact) of natural ventilation (Building Regulation Part F compliant) in air-tight (Part L compliant) housing (OH).

Study of the 'performance gap' (difference between theoretical design and actual use) in energy efficiency building regulation standards (OH).

The alignment of government policy on Climate Change with the design and delivery of housing in the construction industry.

REGULATORY SYSTEM

Assessing potential, removing barriers and facilitating the re-use of office buildings for residential purposes (PA)

Maximising potential and removing barriers to achieving re-use of upper storeys in historic streets (PA)

Potential for removing regulatory and administrative barriers to efficiency in the house building industry (including addressing areas of duplication, redundancy, administrative delay and cost) (OH)

Assessment of regulatory fees, costs of delivery and benefits to economy of current regulatory arrangements in construction industry (Planning, Building Control, Health & Safety, Residential Tenancies) (OH).

Assessment of the effectiveness of the Building Regulations and Building Control system in achieving compliance with EPBD (Energy Performance in Buildings Directive) (including cost optimal capital investment, barriers to implementation, financial penalties for non-compliance). (OH)

Assessment of the training and educational requirements of up-skilling the construction industry to EPBD requirements. (OH)

PROCUREMENT POLICY

Study of access/ barriers to SMEs participation in public procurement (both design professionals and construction companies), skills levels and training requirements in public procurement bodies, award criteria (appropriateness, effectiveness, consistency) (TOB)

Evaluation of 'value for money' (as opposed to cost certainty) in current construction industry public procurement procedures (both design professionals and construction companies) (TOB)

The relative costs of procuring housing under different procurement models (eg. speculative developer built, local authority built under contract, PPP (public private partnership), and others). (TOB, OH)

Assessment of cost/ benefit/ value for money of 'life cycle costing' of alternatives at design stage (TOB, OH).

Assessment of cost/ benefit/ value for money of requiring energy efficiency assessment at design stage, prior to Planning Permission (OH).

The cost/benefit of 'fast-track' (including rapid build) construction procurement (TOB)

The cost/benefit of off-site construction (MMC, modern methods of construction) of houses, apartments and housing components (OH)

The cost/benefit of State standardization and State procurement of housing components (OH)

The barriers to investment in cost-optimal design (assessing a range of factors) of housing and communities (OH).

The barriers to delivery of consistent Building Regulation compliance in housing construction (OH)

The opportunities for procurement reform and modernisation in the house building industry (OH).

HOUSING DELIVERY

Statistics/ Data

Study of the numbers of housing being built, the methods of procurement, the relative costs and effectiveness of current policy (TOB)

The potential to develop and align the Building Energy Rating (BER) Register, the BCMS (Building Control Management System) Register and the Residential Property Price Register, to provide accurate real-time information on housing construction (OH)

Flood Risk

The impact of perceived and actual flood risk on house sale and rental market in Ireland (FP)

Housing Cooperatives/ Alternative Procurement

Removing barriers and improving the legal basis for Housing Co-operatives and Housing Associations (PA)

Assessment of barriers to / opportunities for self-build and custom-build housing in urban areas. (OH)

Consumer Redress

The effectiveness of current consumer protections, insurances and mechanisms for redress in the new housing sector (OH).

The effectiveness of quality controls in construction in the housing sector (OH).

A comparative study of building control systems between Ireland (a model of 'self-regulation') and international 'best practice' (OH).

The cost/ benefit of current (and planned) registration/ licensing of construction professionals and building companies in the construction industry, and a comparison to 'best practice' examples internationally and in other sectors. (OH)

The risks to the construction sector of insurance industry failure and/or withdrawal ('flight') from the Irish market, including construction insurances, professional indemnity insurances and warranty schemes (OH).

The costs and effectiveness of current arrangements for financial bonds/ 'Taking in Charge' of estates and opportunities for reform and alignment of certification/ regulation/ licensing/ bonding of housing developers (OH).

Capacity

To examine the capacity and skills of the construction industry (design professionals and construction operatives) to deliver the Rebuilding Ireland programme. (OH)

Assessment of the professional resources (architects/ engineers/ surveyors) required to provide inspection as required Building Control under Building Control (Amendment) Regulations 2014 (OH).

Construction Products

To study the effectiveness of current market surveillance and control of construction materials in order to fulfill the requirements of the Construction Products Regulation (OH).

To assess the risks of defective and fraudulent construction products (including pyrite) and the effectiveness of current legislation and controls (OH).

DESIGN RESEARCH

Improvements to Public Realm through Community Engagement

Design led research: Improving the residential public realm on a micro scale: through socially engaged art and landscape interventions, designed, executed and maintained by the neighbourhood in cooperation with local authorities (examples: [www.facebook.com StAnnesRoadGarden](http://www.facebook.com/StAnnesRoadGarden) and <http://www.arttunnelsmithfield.com/>) (SGM),

Design- led research for housing standards and residential communities

Consideration of dwelling mix and typology for lifelong neighbourhoods. (OM)

Improving the quality of low-rise medium density housing - challenges and opportunities. (OM)

Balancing design quality, energy use and cost in housing (OM)

Impact of reduced space standards (incl. 2015 apartment guidelines) on construction cost and housing delivery.

To support demonstrator/ pilot projects and study benefits of early design research, energy modeling and monitoring, occupant satisfaction, etc (OH).

Urban renewal/ releasing potential of upper floors

Appropriate construction standards achieving re-use of upper storeys in historic streets. (PA)

Fire Safety

Study of risks/capital costs/ maintenance costs of passive and active fire-safety measures in housing (OH).

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