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UCD School of Architecture, Planning and Environmental Policy

Written Submission to the Department of Taoiseach

This submission is a contribution to the National Risk Assessment in the context of: *“Environmental risks include climate change; the risk of exposure to rising energy costs, particularly in the context of Brexit; risks inherent in the continued housing supply constraint; and risks that could arise from under-investment in economic and social infrastructure”*. It is in two parts: Part A- Energy performance standards, systems to achieve EU Energy and Climate objectives and compliance in new-build construction, and Part B- Construction standards, public safety and environmental protection.

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PART A- Energy performance standards, systems to achieve EU Energy and Climate objectives and compliance in new-build construction.

This Part is based on a submission to the Department of Housing, Planning, Community & Local Government review of Building Regulations Part L (Conservation of Fuel and Energy for Buildings other than Dwellings) in June 2017¹. This DHPCLG state that *“the overall objective of improving the energy and carbon performance of new buildings other than dwellings and to transpose the EU requirement for nearly zero energy buildings and major renovations, without imposing a disproportionate burden on industry in terms of bureaucracy or costs”*.

1. POLICY CONTEXT

“The 2016 Programme for a Partnership Government specifically commits to Ireland’s transition to a low carbon society by 2050 and energy and CO2 emissions savings likely to accrue as a consequence of the proposals have already been factored into the third National Energy Efficiency Action Plan 2014² and will be factored into plans being prepared as part of the built environment carbon sectoral plan which will feed into the National Mitigation Plan which will be published by the Minister for Communications, Climate Action and Environment, in accordance with the Climate Action and Low Carbon Development Act 2015, in the coming months” (Regulatory Impact Analysis, 2017)³

¹ Public Consultation on the Review of Part L (Conservation of Fuel and Energy for Buildings other than Dwellings) 2017

<http://www.housing.gov.ie/housing/building-standards/tgd-part-l-conservation-fuel-and-energy/public-consultation-review-part-l>

² NEEAP #3 (2014), now NEEAP #4 (2017-20) [http://www.dccae.gov.ie/en-ie/energy/topics/Energy-Efficiency/national-energy-efficiency-action-plan-\(neeap\)/Pages/National-Energy-Efficiency-Action-Plan-\(NEEAP\).aspx](http://www.dccae.gov.ie/en-ie/energy/topics/Energy-Efficiency/national-energy-efficiency-action-plan-(neeap)/Pages/National-Energy-Efficiency-Action-Plan-(NEEAP).aspx)

³ DHPCLG, 2017 http://www.housing.gov.ie/sites/default/files/public-consultation/files/regulatory_impact_analysis_for_draft_part_l_for_public_consultation.pdf

The Building Regulations for Conservation of Fuel and Energy are a key part of “Ireland’s transition to a low carbon society by 2050”. Energy savings from buildings are anticipated to make up more than 38% of the national final energy savings by 2020 under the National Energy Efficiency Action Plan⁴. This is planned to be achieved from new buildings (under Department of Housing) and retro-fit improvements in old buildings (under Department of Communications, Climate Action and Environment).

Sustainable Energy Authority of Ireland (SEAI) report that “Buildings accounted for 35% of total final energy consumption and 59% of electricity consumption in Ireland in 2014, making it the second largest energy end-use behind transport”⁵ so the State reliance on the building sector is very significant, and this in turn must be based on robust and reliable systems and monitoring.

The European Commission (EC) notes that “it remains challenging to acquire reliable data on building characteristics, energy use, and financial implications of renovation in terms of cost savings or asset values. This generalised lack of data has negative consequences on the market perception of the cost-effective energy saving potential of the EU building stock, and on the enforcement, monitoring and evaluation of the Directive”⁶. It is critically important, therefore, that energy standards and systems of control be re-cast in a wider policy context and not the current narrow focus of limited compliance “without imposing a disproportionate burden on [the construction] industry in terms of bureaucracy or costs”, as set out in the DHPCLG Public Consultation.

Appropriate technical guidance, procedures for consistent delivery (at design and construction) and effective monitoring and enforcement are integral to achieving technical standards. This is because publication of technical standards must be viewed in the context of policy objectives; climate change targets target will not be reached unless the systems are in place to ensure consistent and compliance delivery at design stage and on building sites.

New buildings are designed by construction professionals (architects, engineers and specialists) and delivered by builders, subcontractors and specialists in the construction industry. This is a complex process with large teams, complex contractual arrangements, multiple materials and technical requirements. In order to achieve energy-efficiency standards, there must be appropriate knowledge, skill, monitoring and enforcement at appropriate stages, both design and construction. This should be the context of a rigorous regulatory impact analysis and ‘risk assessment’ of the new standards.

The construction industry is recovering from almost 10 years of recession and a critical loss of staff and skills. Higher energy standards have been introduced during this period of very low levels of building activity, meaning that there have been limited opportunities for education and up-skilling.

Furthermore, training and apprenticeship programmes have been reduced⁷, education of professionals is lengthy, and very limited guidance and technical information is available in the industry to practitioners.

The Irish construction industry is very fractured; in 2010, 95% of companies working in the sector were classified as micro-enterprises, employing fewer than 10 people⁸. In 2015, (at a time of very low activity)

⁴ 7,189 of 18,595 GWh, Table: 1, NEEAP#4 <http://dcae.gov.ie/documents/NEEAP%204.pdf>

⁵ SEAI, 2016 Energy Efficiency in Ireland Report https://www.seai.ie/Publications/Statistics_Publications/Energy_Efficiency_in_Ireland/Energy-Efficiency-in-Ireland-2016-Report.pdf

⁶ Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive 2010/31/EU on the energy performance of buildings, 2016 https://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v10.pdf

⁷ “There were some 4,400 apprentices across all trades in construction in 2015 compared with 23,700 apprentices in Q4 2007” DKM/ Solas Demand for Skills in Construction to 2020 <http://cif.ie/images/Publications/Skillsreportfor2020.pdf>

⁸ Construction Industry Council, 2012 [http://constructionindustry.ie/CIC_Report\(June2012\)_web.pdf](http://constructionindustry.ie/CIC_Report(June2012)_web.pdf)

there were 74,795 active principals and sub-contractors in the construction industry and 128,127 PAYE employees⁹. Individual projects are organised 'ad hoc' with multiple designers, contractors and suppliers

Furthermore, as stated by the Construction Industry Council in 2012:¹⁰ *"there is no overall vision for what a healthy, dynamic construction industry should look like; responsibilities and accountabilities are separated from each other within Government departments, agencies, and regulators, with little coherence or connectivity across the network of networks; and, no one has responsibility or accountability for looking across the construction industry as a whole, i.e., across the network of networks"*

The recent change in technical standards, the loss of skill and this lack of clarity of governance mean that there are significant structural weaknesses in the delivery of compliant standards. Added to this, the construction industry is largely self-regulated with no requirement for independent certification of design or construction, although there is some monitoring of energy compliance through the Building Energy Ratings (BER) system. It is critical, therefore, that this regulatory systems have effective monitoring, control, enforcement and sanctions. The Commission recommends that: *"Member States define the mechanism that will be used to monitor the fulfilment of the NZEB targets and to consider the possibility to set up differentiated sanctions for new buildings after the NZEB deadlines have passed"*¹¹

2. RISKS TO DELIVERY OF BUILDING REGULATIONS PART L (CONSERVATION OF FUEL AND ENERGY) STANDARDS

In broad outline the risks to the delivery of energy efficient standards for new buildings¹² are in the following areas:

2.1 BEST PRACTICE STANDARDS Building Regulation Standards must accord with best international practice; this will ensure that as the EU NZEB (Near Zero Energy Building) standards develop and are aligned across the EU that Ireland will not be playing 'catch up'. It also means efficiency savings in imported materials, components and equipment and greater opportunities for Irish companies to supply to international markets.

2.2 INTEGRATION Standards must be technically rigorous, integrated and aligned with other relevant standards (including Part F- Ventilation, Part J- Heat Producing Appliances, etc). Buildings are shelter for people and 'air-tight' buildings must be ventilated to ensure indoor air quality and occupant health. Part F- Ventilation regulations must therefore be aligned with the Part L – Energy regulations and included in the DHPCLG development of standards.

2.3 MISSED OPPORTUNITIES The proposed Part L standards pre-suppose that a building is 'designed' and fixed to Planning Permission requirements before energy efficiency is considered. This is a missed opportunity for easy wins in energy savings at no additional cost (e.g. building shape, orientation, siting, fenestration, materials, energy systems, etc.). The Review should be expanded to consider the opportunities for promoting passive design principles and for requiring energy compliance to be assessed prior to making a Planning Application.

⁹ Minister for Finance Michael Noonan, in reply to Dail Question, 19 July 2016.

¹⁰ Construction Industry Council, 2012 [http://constructionindustry.ie/CIC_Report\(June2012\)_web.pdf](http://constructionindustry.ie/CIC_Report(June2012)_web.pdf)

¹¹ Commission Recommendation (EU) 2016/1318 of 29 July 2016 on guidelines for the promotion of nearly zero-energy buildings and best practices to ensure that, by 2020, all new buildings are nearly zero-energy buildings <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016H1318>

¹² Note: The DHPCLG 2017 Public Consultation is a review of Part L for buildings other than dwellings. However, most of the commentary in this submission equally applies to the Part L standard for dwellings.

2.4 'PERFORMANCE GAP' theoretical Part L standards must be monitored through post-occupancy evaluation. According to studies, *'Buildings typically consume 2 to 5 times more energy than predicted at design stage'*¹³; this is referred to as the 'performance gap'. Monitoring of the actual energy consumption in occupied buildings is necessary to develop and improve technical standards. It is also critical to accurate monitoring of whether theoretical standards deliver the anticipated results.

2.5 MAJOR RENOVATIONS There are shortcomings in the proposed regulations for 'Major Renovations' (defined as *where "more than 25% of the surface area of the building envelope undergoes renovation"*¹⁴). Firstly, this definition means that most major renovations will be exempt from Building Control and outside any system of oversight or monitoring by the local authorities. This is a significant omission. Secondly, the proposal states that *where "major renovations are being carried out to a building.... the building should achieve a cost optimal energy performance at building level in so far as this is technically, functionally and economically feasible"* The interpretation of 'economically feasible' is unclear and there is a risk of widespread avoidance as a default response.

2.6 SKILLS DEFICIT Education and training are required for both design professionals and builders. It is estimated that an additional 112,000 skilled workers will be required in the construction industry by 2020¹⁵. It is likely that all of these workers, in addition to the majority of the existing workforce need to be upskilled. Build Up Skills Ireland (BUSI) reported that: *"the pace of change in building construction and renovation standard has not been matched by availability of compatible training provision for the construction workforce"*¹⁶. The National Roadmap for Energy Training in Construction¹⁷ recognises that *"the gap that exists is one of knowledge rather than skills"* and it was estimated in 2012 that 60,000 existing workers needed to be trained to at least foundation level. The Regulatory Impact Analysis (RIA)¹⁸ states that *"there maybe some intangible additional costs associated with upskilling the construction sector in the design and construction of low energy buildings"*. These costs and the challenges for the sector have been established through earlier studies and should be addressed.

Micro-enterprises and SMEs make up almost all of the construction industry; these organisations have limited capacity to train staff without supports; there are also challenges in ensuring access to appropriate general and technical information.

2.7 TRANSITION PERIOD The period for education, training and up-skilling in order to achieve NZEB by 2020 is critically short. During the period 2017-2019 the buildings that will be built in 2020 will be designed, receive statutory approvals and, importantly, will have development finances arranged.

The EU Commission warns that States must allow for: *"the period of validity of building permits, the length of construction and completion of building works"* to avoid falling short of the NZEB target dates in the EPBD¹⁹.

¹³ 'Performance Gap', CIBSE (2012) <http://www.cibse.org/getmedia/55cf31bd-d9eb-4ffa-b2e2-e567327ee45f/cb11.pdf.aspx>

¹⁴ Part L (buildings other than dwellings), 2017 http://www.housing.gov.ie/sites/default/files/public-consultation/files/tgd_l_-_conservation_of_fuel_and_energy_for_buildings_other_than_dwellings_0.pdf

¹⁵ DKM/ Solas Demand for Skills in Construction to 2020 <http://cif.ie/images/Publications/Skillsreportfor2020.pdf>

¹⁶ Build up Skills Ireland, 2012 <http://ireland.buildupskills.eu/>

¹⁷ National Roadmap for Energy Training in Construction, <http://ireland.buildupskills.eu/sites/default/files/BuildUpSkillsRoadmap%28lowresUpdate%29.pdf>

¹⁸ Regulatory Impact Analysis, 2017 http://www.housing.gov.ie/sites/default/files/public-consultation/files/regulatory_impact_analysis_for_draft_part_l_for_public_consultation.pdf

¹⁹ Commission Recommendation (EU) 2016/1318 of 29 July 2016 on guidelines for the promotion of nearly zero-energy buildings and best practices to ensure that, by 2020, all new buildings are nearly

Therefore early and focused action is needed to avoid delay, increased costs and compliance failures. There is currently a lack of awareness in both design professionals and builders about these changes to Part L; therefore, technical information, supports and guidance are needed and the Review should include an assessment of the resources to be provided.

2.8 BUILDING CONTROL AND COMPLIANCE CERTIFICATION Under the Building Control (Amendment) Regulations²⁰, Part L is 'self certified' by the architect, engineer or building surveyor. There is no requirement for local authority or independent verification that the building design is compliant with Part L regulations. This is a critical weakness in the delivery of compliant buildings, particularly in view of the skills deficit in the sector. As an element of Part L design certification fRsi²¹ calculations are required for certain building junctions and there are currently only eleven NSAI approved thermal modellers in Ireland²². This skills shortage and mitigation through technical guidance should be addressed in the Review.

At construction stage, building work is inspected by an Assigned Certifier (a statutory appointment by the building owner or developer). Other consultants, sub-contractors and builders provide non-statutory Ancillary Certificates to 'self-certify' their own work as compliant. These certificates are often required as a condition of payment under standard contractual arrangements. There are inherent conflicts of interest here that are a risk to achieving compliance, to public trust in the system, and to the reliability of the compliance documents (Certificates of Compliance, Ancillary Certificates and Building Energy Ratings).

2.9 MONITORING AND ENFORCEMENT Responsibility for compliance is the responsibility of the building owner, who appoints Certifiers and Builders. Importantly, their duties are to the building owner and not to the State. This should be addressed in the Review, as the most significant risk of non-compliance is to the State and not to the building owner. The Commission states that "*Member States [should] consider to set up differentiated sanctions for new buildings after the NZEB deadlines have passed*" as a means of penalty for non-compliance.

3. COMMENTARY ON THE REGULATORY IMPACT ASSESSMENT FOR CHANGES TO BUILDING REGULATIONS PART L (Conservation of Fuel and Energy), 2017.

*"The purpose of this RIA is to consider in detail the impacts, costs and benefits of the proposed changes to Part L (Conservation of Fuel and Energy) for buildings other than dwellings"*²³.

3.1 IMPACT ON STATE COMMITMENTS Ireland's National Energy Efficiency Action Plan (NEEAP) is a matter of national and international importance and climate change is a key policy issue for government. However the State is not listed as a 'stakeholder' and the RIA for Part L states that: - "*Responsibility for compliance is primarily a matter for the owners, designers and builders of buildings*". There are significant risks to the State of failure to comply with the EPBD and these risks of and non-compliance have not been addressed in the Regulatory Impact Assessment.

These include failure to meet NEEAP targets; failure to comply with EPBD, including financial penalties (EU); risks of environmental damage; fuel poverty; and critically risks to occupant comfort and health.

zero-energy buildings (EU Commission, July 2016) <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016H1318>

²⁰ BC(A)R, 2014 <http://www.irishstatutebook.ie/eli/2014/si/9/made/en/pdf>

²¹ fRsi temperature factor, calculated to prevent thermal bridging and condensation.

²² NSAI, Thermal Modellers <https://www.nsa.ie/our-services/certification/agreement-certification/thermal-modellers-scheme.aspx>

²³ Regulatory Impact Assessment, 2017 http://www.housing.gov.ie/sites/default/files/public-consultation/files/regulatory_impact_analysis_for_draft_part_l_for_public_consultation.pdf

The Consultation states that *“the overall objective of improving the energy and carbon performance of new buildings other than dwellings and to transpose the EU requirement for nearly zero energy buildings and major renovations, without imposing a disproportionate burden on industry in terms of bureaucracy or costs”* There Regulatory Impact Assessment does not assess the wider economic cost to the State of non-compliance or partial implementation of the Directive. (These include areas of risk of remediation of defective buildings, excessive energy usage, impact on occupant health etc.).

3.2 IMPACT ON BUILDING OCCUPANTS The RIA does not include “building occupants” as stakeholders in this process. This is a significant omission as the risks of non-compliance significantly impact on the people who will occupy a building over its lifespan of 50+ years. These includes thermal comfort, indoor air quality etc.)

The Directive²⁴ states that: *“Better performing buildings provide higher comfort levels and wellbeing for their occupants and improve health by reducing mortality and morbidity from a poor indoor climate. Adequately heated and ventilated dwellings alleviate negative health impacts caused by dampness, particularly amongst vulnerable groups such as children and the elderly and those with pre-existing illnesses.”*

3.3 IMPACT ON COMPETITIVENESS The Regulatory Impact Assessment (RIA)²⁵ does not include an assessment of the additional cost to industry of implementation of the regulations, whilst acknowledging that additional design, training and conformity-checking is required. The Review states that: *“It is not anticipated that there will be any significant impact on design and supervision fees or compliance burden associated with the additional conformity-checking the amended Building Regulations will impose on Building Control Authorities and Assigned Certifiers”* It is critical that the RIA include an accurate assessment of the additional resources required in up-skilling designers, builders, suppliers and inspectors. Some of this cost to industry may be mitigated by appropriate supports, training and information.

3.4 IMPACT ON CONSTRUCTION COSTS The RIA states that *“The uplift in costs for an office block is provided below. This shows an increase in capital to achieve NZEB performance in the order of 2% to 5%”* and also that *“The report identified a gap of more than 15% between the current 2008 requirements of Part L in respect of Buildings Other than Dwellings and a cost optimal energy performance”* This research is limited to two case studies of notional projects²⁶ and is inadequate to assess the scale of the impact across all building types, conditions, methods of construction and conditions. More rigorous ongoing research is required to assess the impact of NZEB across the industry.

3.5 IMPACT ON LOCAL AUTHORITIES The RIA does not refer to the impact on Local Authorities, including up-skilling of staff who may undertake some ‘spot check’ inspections of Building Regulation compliance. Staff have not been trained for Part L, at design stage, at construction stage or to assess performance at completion stage (none of which is obligatory under the Building Control Regulations).

The RIA does not adequately address the impact on enforcement authorities and the potential cost to Local Authorities of increased enforcement activity: It states that *“Responsibility for compliance with the requirements of the Building Regulations 1997 to 2017 is primarily a matter for the owners, designers and builders of buildings”*.

²⁴ Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directive 2010/31/EU on the energy performance of buildings, 2016
https://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v10.pdf

²⁵ Regulatory Impact Assessment, 2017 http://www.housing.gov.ie/sites/default/files/public-consultation/files/regulatory_impact_analysis_for_draft_part_l_for_public_consultation.pdf

²⁶ *“The energy and carbon dioxide emissions performance for 2 storey and 4 storey office blocks both naturally ventilated (NV) and air conditioned (AC) were calculated”* http://www.housing.gov.ie/sites/default/files/public-consultation/files/regulatory_impact_analysis_for_draft_part_l_for_public_consultation.pdf

There are no records of any enforcement proceedings to date by Local Authorities for non-compliance with current Part L regulations (since 1991). As a result the threat of enforcement for non-compliance is not seen as a risk by designers and builders. This issue should be addressed in the Review.

Note: As an interim measure the Part L standard for Public Buildings (required by 2018 under the EPBD) is currently being implemented through contractual arrangements and not through regulation. This means that it is not possible to take enforcement proceedings under Building Control legislation for non-compliance in these buildings.

PART B- Construction standards, public safety and environmental protection.

This Part is based on a written submission and witness statement to the Joint Oireachtas Committee on Housing, Planning, and Community & Local Government in April 2017²⁷ on the subject of ‘Building Regulations, Building Control and Consumer Protections’. The context of this part of the submission is “*Environmental risks include climate change*” and “*risks that could arise from under-investment in economic and social infrastructure*”.

Risks include non-compliance with Energy Performance of Buildings Directive (EPBD), non-compliance with Water Framework Directive, non-compliance with the Construction Products Regulations, risks to public safety (including fire safety), and the economic and political impact of sub-standard, defective and non-compliant construction.

4. POLICY CONTEXT

The 1990 Building Control Act²⁸ sets out the scope of Building Control in Ireland. Building regulations²⁹ may be made for all or any of the following purposes:

making provision for securing the health, safety and welfare of—

(i) persons in or about buildings, and (ii) persons who may be affected by buildings or by matters connected with buildings;

(b) making provision for the special needs of disabled persons in relation to buildings;

(c) making provision for the conservation of fuel and energy in relation to buildings;

(d) making provision for securing in relation to buildings the efficient use of resources;

(e) making provision for the encouragement of good building practice; and

(f) making provision for such other matters as appear to the Minister to be necessary or expedient and are specified in the regulations.

There are consequences for the State from an ineffective Building Control system. Technical non-compliance has wider economic and environmental impact in locally (contamination through leakage from septic tanks, pyrite, radon infiltration etc.) and nationally (failure to meet commitments on climate change and energy efficiency).

There are health and economic consequences for homeowner and occupants from non-compliance and poor standards of construction including fuel poverty, reduced occupant health, etc.

²⁷ Public Consultation on the Review of Part L (Conservation of Fuel and Energy for Buildings other than Dwellings) 2017

<http://www.housing.gov.ie/housing/building-standards/tgd-part-l-conservation-fuel-and-energy/public-consultation-review-part-l>

²⁸ Building Control Act, 1990 Irish Statute Book

<http://www.irishstatutebook.ie/eli/1990/act/3/enacted/en/html>

²⁹ Note: Within Building Control there are two strands- the first is the technical standards (“Building Regulations” standards) and the second is the administrative controls, the systems for approval, inspection and certification (“Building Control” system).

4.1 BACKGROUND (Prior to 1990 and 1990-2014) Prior to 1990 there was a system of local authority inspections (under Building By-Laws) in many urban areas. The local authorities inspected construction at appropriate stages. The 1990 Act³⁰ replaced this system and gave the Minister extensive powers to set technical standards and also to introduce a national regime of inspection and certification. This was not implemented, with the exception of two very limited areas – ‘design approval’ for Fire Safety and Disability Access. The other regulatory requirement was to lodge a short ‘Commencement Notice’ form to the local authority to alert them that building works were starting. The local authorities had target inspection rates but were not obliged to inspect construction or to sign-off completion.

In the absence of the State introducing any inspection regime an ‘ad hoc’ private system was put in place between the lending institutions, the Law Society and the professional bodies. This is the non-statutory system of ‘Opinions’ that are often referred to. The system was wholly inadequate but it could be argued that it was transparent because if a professional was only paid for an hour to look over a completed apartment then that is what the Opinion said. The other shortcomings were that Opinions frequently referred to a unit (not the building) and that the developer may have engaged the professional for very limited, if any, involvement during the design and construction stages. Local Authority site inspections were not routinely carried out.

In parallel, was also a system of statutory inspection at completion (Floor Area Compliance Certificates³¹ under the tax code) that was operated by the Department of Housing from 2004. This was a statutory inspection of compliance with set technical building standards. This system no longer operates.

4.2 BUILDING REGULATIONS & BUILDING CONTROL It is generally considered that the Irish technical standards are good, they change and develop, both with improvements and with changes in culture. Building standards are, therefore, not an exact science because materials change, design is innovation and society changes. For example, if we consider universal access- this is a building regulation that comes from cultural change about equality of access for all including those with disabilities; if we consider energy efficiency, this comes from concerns about climate, sustainability and occupant comfort. Standards evolve and they also have to be interpreted and adapted because there can be internal conflicts between regulations and unintended consequences. So, in some areas there is a large element of judgement and common sense in how regulations are applied and in which take precedence. In other regulations it is binary (pass/fail) and demonstrating the standard of compliance is more straightforward.

In this context, there needs to be a system for developing and reviewing standards, producing technical information and a feedback loop from practice for information sharing. There is currently no framework for this and relevant responsibilities are split across multiple departments and agencies. From 1990 to 2012 the Minister and his Department had the guidance and support of the statutory Building Regulations Advisory Board (BRAB), however this was disbanded five years ago, in the early stages of the BCAR controversy.

4.3 “LEGACY ISSUES” In order to understand the background to the current regulations(2014 Building Control Amendment Regulation) it is important to understand why house building is different and why this sector is very vulnerable to poor quality and defects. This is not unique to Ireland and it is a consequence of the way that housing is procured.

In the “contract build” sector (commercial, institutional buildings) there is a contract in place between the owner and the builder. There are contractual safe-guards (quality controls) in place in these commercial arrangements. The builder only gets paid every month if the work is built in accordance with the contract. So although there may be problems on site or latent defects after completion there are mechanisms to deal with this. Under contract there are protections and, generally owners and

³⁰ Building Control Act, 1990 <http://www.irishstatutebook.ie/eli/1990/act/3/enacted/en/html>

³¹ Housing (Floor Area Compliance Certificate Inspection) Regulations 2004, Irish Statute Book <http://www.irishstatutebook.ie/eli/2004/si/128/made/en/print>

investors will mitigate the risks with a network of professional oversight, warranties, insurances and retention monies.

In this sector some State oversight is nevertheless required at certain stages particularly for critical areas of occupant safety and sustainability.

The “house building” sector is very different to the “contract build” sector. In the main, defect problems are most common in housing building and to some extent in non-traditional procurement methods (Design-Build, PPP).

Housing is ‘high risk’ construction that requires immediate and sustained focus, particularly spec-build³² and self-build³³. This is because the contractual quality control safeguards described above generally³⁴ do not exist. The owner and builder, for all practical purposes, is the same entity.

4.4 SHORTCOMINGS OF THE PRE-2014 SYSTEM Buyers of defective homes have three problems- their homes are defective (poor regulation), there are no funds available (inadequate insurance), and there are few rights and no mechanisms for resolution (absence of consumer protections).

The failings in the system resulted from an lack of oversight of design and construction, un-regulated housing developers (many are limited liability companies that have since ceased trading), and a lack of adequate consumer rights and protections.

The absence of historic documentation (which has been the principle focus of BCAR), shortcomings in the warranty systems, and registration are secondary issues.

5. RISKS TO DELIVERY OF SAFE, COMPLIANT BUILDINGS & ENVIRONMENTAL RISKS³⁵

In broad outline the risks are in the following areas:

5.1 “SELF CERTIFICATION” From March 2014, BCAR³⁶ put the previous ‘ad hoc’ Opinions of Compliance on a statutory basis. Owners were required to put in place an inspection and recoding system for construction and to lodge certificates with the local authorities through the Building Control Management System (BCMS). This new system of privatized statutory self-certification is unique to Ireland and does not operate in any other country. It reinforces the previous failed system and does not accord with international best practice³⁷. ‘Certification’ by definition requires third party involvement at design and construction stages either by local authorities, by private regulated entities under State control or a hybrid. In many countries a ‘warranty’ (insurance) system for defects is also in place to protect consumers.

5.2 CONFLICTS OF INTEREST The current BCAR regulations rely entirely on the ‘owner’ to put in place (and decide how much to pay for) an inspection regime. If the owner is also the builder there is an inherent conflict of interest. The ‘inspector’ (certifier) does not have any statutory powers, and has no control over the process other than to threaten to withhold a certificate at completion. The certifier can be an employee of the developer and the developer can replace the certifier at any time. The level of inspection is open to negotiation and interpretation.

³² Speculative house and apartment building by developers for sale

³³ Self-build usually refers to individual houses directly procured by owners, possibly undertaking some labour/ management and arranging works by direct labour, trades, sub-contractors etc.

³⁴ A small percentage of private sector housing is procured under these types of commercial contracts.

³⁵ Note: This Public Consultation is a review of Part L, 2017 for buildings other than dwellings.

However, most of the commentary in this submission equally applies to the Part L standard for dwellings.

³⁶ The BCAR administrative building control arrangements and regulatory requirements are discussed elsewhere and have not been included in this paper

³⁷ World Bank Dealing With Construction Permits Best Practice (2016)

<http://www.doingbusiness.org/data/exploretopics/dealing-with-construction-permits/good-practices> and International Standards Organisation (ISO) <https://www.iso.org/certification.html>

5.3 POWERS OF INSPECTION AND ENFORCEMENT In the commercial sector, the regulations do not give statutory powers to the inspector (certifier) to enter the site, to inspect documents or to take samples. Consequently, owners have had to introduce additional contractual arrangements, an unnecessarily complexity that adds cost and leads to delay and disputes. There is also a three week administrative delay at completion. This impacts on competitiveness.

5.4 UNCERTAIN RESPONSIBILITY/ DISPROPORTINATE LIABILITY There are no new rights for consumers (building owners) under the 2014 Regulations. Consequently, the uncertainty about mechanisms of redress persist. Owners must litigate against multiple parties to prove liability and in the event that they are successful there may not be insurance available to meet a claim.

The Civil Liabilities Act³⁸ (whereby someone who is 1% responsible could be liable for 100% of the claim) adds to the legal complexity of problems and to the insurance burden of all of the parties.

For the purpose of the developing a workable regulatory framework (and so that appropriate insurances are available) it is very important that clarity be brought to this. In many of the homes with 'legacy issues' building regulation compliance is only part of the problem.

The non-compliance may have been due to design (the responsibility of the architect or engineer) or due to construction (the responsibility of the builder, sub-contractor or supplier).

In addition to building regulation compliance, there can be 'legacy issues' from poor quality workmanship and materials at the time of construction, latent defects (these are in the control of the developer) and poor maintenance (this is in the control of the owner/management company). Defects can result from errors in coordination, material failure, environmental conditions, a technical error in manufacture or an error in the standard itself.

5.5 INSURANCES AND REDRESS Insurance arrangements in the construction industry are fragmented and there are risks to the sector, particular as much of the insurance is held off-shore and regulated in other jurisdictions.

BCAR places primary responsibility on the professional certifiers with an assumption that Professional Liability Insurance (PIL) is appropriate and adequate for building defects. This is a critical error- PIL is a business insurance for professionals not a construction insurance for owners. It has limitations outside the control of the professional. It operates on a 'claims made' basis which means that it may not be in place at the time of a future claim. It is not a readily available or reliable means of redress for consumers.

'Home Warranty' policies are available for most speculative housing developments. Similarly they have limits and exclusions (notably pyrite) and in many of the past failures these policies were inadequate or the funds were not sufficient for the defect.

5.6 REGISTRATITON /LICENCING OF PROFESSIONALS & BUILDERS The engagement of 'competent persons' is an important aspect of the BCAR regulations. At present there are two statutory registers (architects and surveyors), a non-statutory register for engineers and promised legislation for two more registers for builders and architectural technologists. Under current proposals in excess of 100,000 people and businesses may be included.

Some other trades are also regulated (gas installers, electricians, locksmiths etc.). Other trade organisations manage standards of their membership (Guild of Master Craftsmen, plasterers etc.). In terms of consumer protections, it is important to be clear about what these associations mean. In some organisations, there may be a mechanism for complaint and sanctions, but this is not a route to financial redress. There is an inconsistency of approach and a lack of transparency for consumers. In the context of the EU Services Directive³⁹ there cannot be legal and administrative barriers to trade.

³⁸ Civil Liability Act, 1961 <http://www.irishstatutebook.ie/eli/1961/act/41/enacted/en/html>

³⁹ EU Services Directive http://ec.europa.eu/growth/single-market/services/services-directive_en

The costs and inefficiencies of supporting multiple registers administered by private organisations needs to be considered in the context of both consumers and the administrative burden to industry. There are critical trades and professions that need to be regulated (as examples, fire-stoppers, fire alarm installers, radon barrier installers, structural engineers etc.). In other cases the benefits are questionable (plasterers, decorators, etc.).

5.7 COMPETITIVENESS It is important that self-build and other flexible methods of procurement can operate in the Building Control regulatory regime, subject to the necessary safeguards for public safety and environmental protection. There is currently a risk to competitiveness, as a result of additional cost and inefficiency due to commercial contractual arrangements for BCAR compliance.

To reduce cost and administrative delay in construction, competition should be encouraged and all procurement models facilitated (be it spec build, contract build, management contracting, PPP, self build etc.)

The World Bank ranking for Ireland in 'Dealing with Construction Permits' is lower than competitors⁴⁰.

5.8 ENFORCEMENT It is widely considered that the enforcement mechanisms under the Building Control Act are unworkable. For this reason the Fire Services Act, 1981⁴¹ is often used for enforcement in urgent cases. There is no published data on enforcement activity.

5.8 EXEMPTIONS FROM REGULATIONS An 'Opt Out' from Building Control Regulations for one-off houses and domestic extensions was introduced in 2015⁴² due to concerns about cost and the exclusion of self-build as a procurement option. This opt out (from controls, not standards) has been widely adopted. As a result approx. 40% of new build housing is undertaken outside of any statutory controls.

There are also other areas of 'high risk' construction that fall outside the current regulatory controls.

6. COMMENTARY ON CONSTRUCTION INDUSTRY AND STANDARDS OF CONSTRUCTION

6.1 RESOURCES AND SKILLS This is particularly critical as resources are constrained, not only in local authorities, but also among design professionals, builders and trades. A catastrophic collapse and 10 years of inactivity has impacted on skills and experience throughout the construction sector (lack of opportunities for up-skilling, fall off in apprentices, emigration, retirement, changing standards etc.).

Poor skills result in waste, inefficiency, poor standards, and increases in defects and disputes.

There are approx. 150,000 fewer people employed in construction than there were 10 years ago and the industry is more fractured than it was then; 95% of individuals and trades are in micro-enterprises. There is an expectation that 80,000 more people will be employed in the construction industry in the coming years, the majority will be employed on a casual or contract basis. This is high risk for low standards and a repetition of past problems.

The local authorities similarly have fewer staff and they lack training and adequate support systems. (There are more dog wardens in the local authorities than building control officers).

There is duplication of effort and inefficiency throughout the systems. In order to make good use of scarce resources there needs to be information sharing and effective use of the people with the necessary skills and specialisations. Information, guidance and supports are needed for local authorities, for designers, for builders and for owners.

⁴⁰ World Bank, Doing Business 2017

<http://www.doingbusiness.org/data/exploreconomies/ireland/dealing-with-construction-permits>

⁴¹ Fire Services Act, 1981 <http://www.irishstatutebook.ie/eli/1981/act/30/enacted/en/html>

⁴² SI 365 of 2015, Irish Statute Book <http://www.irishstatutebook.ie/eli/2015/si/365/made/en/pdf>

6.2 COSTS AND INCONSISTENCY BCAR was applied to all of the industry (residential, commercial and institutional) in response to problems in the residential sector. The cost/benefit has not been assessed as there was no Regulatory Impact Assessment undertaken in relation to the costs of BCAR.

In the housing sector, there is much discussion about the cost of BCAR. Taking the administrative costs⁴³ for one house, the CIF (Construction Industry Federation) have said that *“it is not €15,000, the cost of compliance is €2,000 to €2,500 per Assigned Certifier”*. The Department of Housing have estimated this as €3,800. The RIAI (Royal Institute of the Architects of Ireland)⁴⁴ say closer to €8,000. In the market there are Assigned Certifiers providing the service for as low as €500 (a similar cost to the old ‘Opinions’). These are the quoted costs for the Assigned Certifier role, which is only one part of BCAR.

In other sectors (commercial and institutional) SCSi/ DKM research says that 5% has been added to costs across in the construction industry⁴⁵ as a result of the 2014 BCAR regulations.

The BCAR system was designed to be forensic, to document and record every process and component and this is expensive. However, the market cannot bear this level of cost and the administrative drain on expertise. As a result there are very wide variations in interpretation of the regulatory requirements. There is no consistent standard for BCAR, at one end commercial owners are paying high costs for a quality control system and at the other the market has reverted to business as usual. (In Australia an unregulated privatized system resulted in a race to the bottom on fees and diligent professionals were priced out of the market).

6.3 “CLARITY AND CERTAINTY” Although BCAR has been promised as a ‘chain of responsibility’ for consumers, there is little clarity and certainty for any of the stakeholders in the process. For consumers BCAR has been presented as a robust solution for a range of issue far beyond the scope of the regulations. The Building Control system is not an appropriate mechanism for an “asset” guarantee of 100% compliance and quality. Consumers have an expectation that the system of redress has been fixed but they have no new legal rights under BCAR.

This ‘stretching’ of Building Control has also given rise to increased insurance and overhead costs throughout the sector. This impacts on competitiveness and development costs.

Professionals have very serious concerns about the future availability and affordability of PII insurance, the risk of insurance flight from Ireland, and the potential loss of livelihood due the negligence of others over which they have no control.

Because of this expectation this has also has given rise to very justifiable fears in local authorities about potential future liability for their own work. Local authority staff and independent inspectors can prevent problems and administer enforcement; they cannot issue a warranty on the work of a builder or be held liable for the mistakes of others.

Since 2014, there is increased awareness and an improved culture of compliance. However, this is in the context of moderate levels of construction activity in the commercial sector and low levels in mass housing, the area of highest risk. Will the BCAR system be fit for purpose if there is a doubling of output, a substantial change in construction methods (Near Zero Energy Buildings⁴⁶ by 2020) and an influx of 80,000 workers?

/END

⁴³ BCAR did not change the technical standards, the additional costs discussed here are for additional administrative requirements only.

⁴⁴ Royal Institute of the Architects of Ireland

⁴⁵ Irish Construction Prospects to 2016, DKM/ SCSi

https://www.scsi.ie/documents/get_lob?id=538&field=file

⁴⁶ NZEB, Near Zero Energy Building Standard is required for all buildings by 2020 and for public buildings by 2018.