

## **Irish Green Building Council's submission to the Department of Housing, Local Government and Heritage (DHLGH) on the Review of Part B (Fire Safety) of the Building Regulations**

### **INTRODUCTION**

The Irish Green Building Council (IGBC) provides leadership for a sustainable built environment. IGBC is a registered charity with over [340 corporate members](#) drawn from all parts of the value chain, from occupiers, design professionals, contractors, suppliers, academics and public authorities and affiliated with a global network of 70 national councils within the World Green Building Council. This allows us to create workable solutions and tools to deliver transformative change towards a sustainable built environment.

Since 2018, the IGBC has been involved in several projects to decarbonise Ireland's built environment across its whole life cycle. These include a large stakeholder engagement process to develop a roadmap to decarbonise our built environment across its whole life cycle. The [Building a Zero Carbon Ireland roadmap](#) highlights the absolute **necessity to better use our existing stock** (including vacant and under-used properties) **and to transition to lower embedded carbon construction materials and processes to reach our carbon targets**. It also highlights that the **current version of TGD Part B is a barrier to both the re-use of our existing stock<sup>1</sup>, and a greater use of biobased materials, including timber**.

As the last significant overhaul of TGD B took place almost 20 years ago, and given the urgency to act on climate, the **IGBC urge the Department to seize this opportunity to produce a TGD B which is fit for purpose and fully support the decarbonisation of Ireland's built environment**, without compromising health and safety.

This **submission was developed in close cooperation with our members**, taking a holistic approach to both fire safety and sustainability. Extensive discussions on this topic took place between October 2022 and March 2023, as part of IGBC's work to implement the Building a Zero Carbon Ireland roadmap. A **meeting on the public consultation was also organised on 4<sup>th</sup> April 2023** to develop a multi-disciplinary response to it. Through this extensive consultation process, the IGBC consulted with over 30 key stakeholders, including architects, engineers, fire consultants, developers, product manufacturers, academics and representatives of construction professional bodies.

### **SUMMARY**

The IGBC welcome the publication of an updated version of TGD Part B but believe that significant changes to the draft document are needed. Given the last significant overhaul of TGD B took place almost 20 years ago, and the urgency to act on climate, the **IGBC urges the Department to seize this opportunity to produce a TGD B which is fit for purpose, and fully support Ireland's climate targets and the delivery of homes, without compromising health and safety**.

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<sup>1</sup> This issue has also been raised in the following reports:

- SCSi. (2023). Real cost of renovation report - Vacant and derelict properties for residential use.  
- Hardware Association Ireland (2023). Empty Homes - Unlocking the opportunity.

### **Background information**

In Ireland, construction, and the built environment account for 37% of our national emissions, the same as agriculture. This is made up of about 23% operational emissions, with the remaining 14% being accounted for by embodied carbon. Embodied emissions result from quarrying, transporting, and manufacturing building materials, in addition to constructing buildings and infrastructure. A [2022's study commissioned by the IGBC to a group of researchers from UCD](#) shows that **Ireland cannot reach its 2030's climate target without addressing embodied carbon emissions**. To address these emissions, **better using our existing stock** and **transitioning to lower embedded carbon construction types and materials** (including timber) must be an absolute priority.

**Below is a short summary of our key recommendations to improve the DHLGH's proposal.** Our detailed feedback is presented in the attached spreadsheet.

1. The proposed revision of TGD Part B must support the Government's ambitious climate and housing targets. **The draft guidance document must be reviewed with a focus on supporting the Government's climate targets and policies and Ireland's ambition to become a global leader in climate action**, whilst not compromising the aspects of fire safety. Failing to do so, will result in Ireland missing its climate targets.
2. The consolidation of a new **section 7 putting together all aspects of fire for existing buildings, with a view to providing welcomed design clarity on the re-use of existing building stock, is welcomed**. Detailed guidance documents are key in providing greater certainty to people interested in renovating these buildings. A **much more detailed guidance document based on exemplars should be urgently developed**. This document would need to be fully aligned with the "Bring back vacant homes" report currently under revision and ideally, advice publications for existing buildings on thermal upgrading, access, fire, etc. should be integrated to ensure they do not contradict each other. **The Department should also explore alternative pragmatic design approaches with a view to facilitating building re-use, including a review of best practice from other European jurisdictions. If design tools and clarity are not available, people will continue to be reluctant to seek to re-use existing building stock.**

### *Rational and Specific Clauses to be reviewed:*

The 2022 census and recent studies from the Collaborative Town Centre Health Check (CTCHC) Programme show that vacancy rates are extremely high in Ireland. For instance, the CTCHC land use surveys (Step 2 of a 15- Step assessment process) highlights that the ground floor commercial vacancy rate in Irish towns is 18- 45% - the normal target at a European level is 5%. The upper floors in Irish towns are at around 80% vacancy rate. Both these levels are unheard of in a European context. Bringing back these properties into use is key in delivering much needed homes and in reaching Ireland's 2030 climate targets<sup>2</sup>.

Several publications have highlighted that the **current version of TGD Part B is overly restrictive on existing buildings and often an impediment to the re-use of our building stock**. While the current revision of TGD Part B includes some progress, several clauses must be reconsidered (e.g., **7.1.4.1.1 and 7.1.4.1.2**) and further detailed guidance documents provided.

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<sup>2</sup> The embodied carbon emissions of a deep residential retrofit is approximately 25% of the emissions of a new built. [Source](#).

3. The proposed revision of TGD Part B must **support Ireland's transition to low embedded carbon construction process and materials, including mass timber construction**. For instance, clause **3.5.4** must be reviewed to better support the development of these buildings, including above 11m.

*Rational and Specific Clauses to be reviewed:*

Published Environmental Product Declarations (EPDs) show that biobased materials generally have lower embodied carbon to produce than alternatives such as steel and concrete. Supporting a greater use of these materials is key in reducing embodied carbon emissions in the construction sector. As mass timber is lighter than concrete and steel, it's ideal for roof extension to existing buildings. Better supporting its use for buildings above 11m could prevent demolitions by making it more viable to retain and vertically extend existing buildings, hence further reducing embodied carbon emissions and waste. As mass timber construction is on average 30% faster to build supporting its development would also support the delivery of much needed homes.

Mass timber buildings above 11m and building expansions over that height are being built in several jurisdictions (e.g., the Haut residential building in Amsterdam and the T3 Diagonal Mar building in Barcelona). There is a huge volume of research on mass timber that has already been undertaken including how it reacts in fire including char rates. These tests can be relied upon in Ireland as they have been undertaken by reputable research facilities and are available to review. Clause 3.5.4 in its current wording is out of line with international practice and runs counter to the government's Climate targets. Furthermore, as developing this technology at scale in Ireland will take 5 to 10 years, it is imperative to act now to enable pathfinder projects, support innovation and build capacity in the industry.

4. Transitioning to more innovative forms of construction such as mass timber will require upskilling of the whole construction industry, and more specifically of those who deal with fire safety design. **A budget will need to be ringfenced for training** to support this transition.
5. The Irish Green Building Council, and its members, would be delighted to work closely with the Department to support the review of this draft guidance document, and ensure it fully supports Ireland's ambitious climate and housing objectives.

Yours sincerely,



Pat Barry,

CEO, Irish Green Building Council