

## Part L and Part F Consultation

Dear Sir/Madam

### Introduction

The Irish Green Building Council (IGBC) provides leadership for a sustainable built environment. IGBC is an independent non-profit inclusive organisation with [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.

We would like to take this opportunity to provide feed back from our members to the consultation on Technical Guidance Documents Part F and Part L. We have engaged with our members over a number of weeks to maximise feedback.

- 26<sup>th</sup> March- Green Building Network with Ian Mawditt of Fourwalls - Ian addressed over 70 people on his findings of testing indoor air quality of dwellings in the UK. This gave rise to intense discussion from members particularly around level of non compliance.
- Webinar for IGBC members to provide feed back on the consultation
- 31<sup>st</sup> May – Green Building Network – Further discussion of Part F and L

In addition, we have discussed with a number of other industry associations and organisations such as the Irish Ventilation Association and ICOMOS. We have seen the submissions that are being submitted by these organisation and broadly recommend the detailed technical recommendations included therein.

We also have experience over the past 3 years in developing the [Home Performance Index](#) for which there was extensive consultation with the industry. We have had subsequent discussions on certification with most of the leading home builders, most of the larger local authorities and leading housing architects, through over 50 presentations and meetings which has given us a clear insight on their views.

In particular we would like to thank the following contributions.

- Fintan Symth – Saint Gobain
- John Morehead – WMA
- Gary Traynor -Kingspan
- Joseph Little – DIT
- Archie O’Donnell – i3PT
- Brian Montayne – ESB Networks
- Simon Jones -Aereco
- PJ Ryan -Ethos Engineering
- Caroline Engel - Carrig

We welcome the introduction of the revised standards as a key milestone en route to nZEB homes, and highly commend the full implementation of the EPBD directive in a timely manner. We attach our comments in the required excel format. Our comments focus on some of the issues of greater strategic concern to our members rather than detailed editorials comments. We welcome the fact that both TGD document Part L and F are being amended at the same time as these are very much connected.

Please find attached comments in the required excel format:

- TGD Part L – Conservation of Fuel and Energy
- TGD Part F– Ventilation.

### Summary of comments Part L – Conservation of Fuel and Energy

We set out a broad summary of key issues raised by members.

#### Summary

- Consider changing name of document to reflect current intent of restricting carbon emissions rather than conservation of fuel.
- It is time to consider not allowing use of fossil fuels particularly oil within new homes as this is in line with Government policy objectives set out to decarbonise Ireland's grid.
- Renewable energy ration (RER) should consider also how the % energy used within the home rather than simply the % energy created, and this could be considered within DEAP.
- We welcome the introduction of water flow restrictors as one of most cost optimal measures for nZEB but this needs to be highlighted in the TGD rather than buried within compliance software as this something often specified at early stages by less technical architectural staff. We recommend that the European water label be referenced. <http://www.europeanwaterlabel.eu/>
- The introduction of the requirement to consider overheating, is welcome but may need simpler alternative to dynamic simulation as would be required under TM 59. It is also essential to include Irish weather files. Overheating period is also likely to be longer than proposed and can extend from March to October.
- Suggest some changes to the fabric standards namely for floors with underfloor heating and cheek walls in attic.
- Airtightness of  $5\text{m}^3/\text{hr}/\text{m}^2@50\text{ PA}$  does not reflect what home builders are currently achieving and  $3\text{m}^3/\text{hr}/\text{m}^2@50\text{ PA}$  should be achievable as a backstop.
- There is a need to move away from defaults for thermal bridging to actual measurement and this should form part of a work package by Department of Housing to enable this.

#### Major renovation

- To avoid a high level of noncompliance with the requirement to bring dwelling to the cost optimal level, there is a need for intense communication to the public as renovation is often contractor led. This requirement is also likely to kick in for large extensions which is not mentioned.
- It is not clear that the works suggested in table 6 would actually result in achieving cost optimality or  $125\text{kWh}/\text{m}^2$ , unless accompanied by additional holistic measures such as airtightness, controls in heating, flow restrictors, window replacement. The requirement needs to be careful not to lock in relatively shallow measures.
- Major renovation should ideally be overseen by accredited professionals in holistic renovation. IGBC's have worked over the past year with the main institutes, RIAI, EI, SCSi and ACEI to design an accreditation system for renovation professionals and these institutes are willing to continue this work, if supported by Government. [See report](#)
- Consider also introducing [Renovation passports](#) specific to each home, to create a roadmap to holistic A2/A3 renovation rather than just relying on prescriptive measures. This will help avoid lock in allowing renovation to proceed in orderly high quality connected steps.
- We welcome the limited reference to buildings of traditional construction, however it is important to develop further separate guidance, that considers the specific needs and hgrothermal characteristics of these buildings.

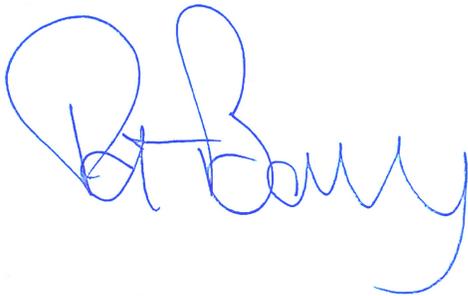
## Summary of comments Part F – Ventilation

- The key concern of our members is around the guidance given for natural ventilation which is permitted where airtightness is between  $3\text{m}^3/\text{hr}/\text{m}^2$  @50PA and  $5\text{m}^3/\text{hr}/\text{m}^2$  @50PA
- Whilst natural ventilation can work if properly designed, there is insufficient evidence that the actual guidance provided on natural ventilation and intermittent fans, for dwellings and apartments works at between 3-5m<sup>3</sup>/(h.m<sup>2</sup>)
- In addition, it risks a two tier system of quality in the housing sector leading to gameplaying by developers with air tightness levels, to avoid costs of either installing mechanical ventilation systems or of properly design for workable natural ventilation systems.
- The additional vents required will mitigate against energy efficiency and comfort in winter and may lead to occupants blocking vents.
- Demand Control ventilation is one the most common systems in Ireland and should be defined and guidance provided to avoid confusion.
- We welcome the introduction of the requirement for proper design, installation and commissioning of ventilation systems by competent installers and designers.
- A key concern is whether such a quality assurance system will be in place in time. It is suggested that such a quality assurance system could use existing skills and competencies of qualified engineers.
- We welcome the detailed commissioning document.

We reference a number of studies in support of the points on the guidance provided on natural ventilation.

- Presentation by Ian Mawditt to Green Building Network 26<sup>th</sup> March including results from monitoring indoor air quality in UK homes  
[https://www.dropbox.com/s/nljsi41h26howsh/Ventilation%20Presentation\\_FourWalls\\_Green%20Building%20Network\\_March%202018.pdf?dl=0](https://www.dropbox.com/s/nljsi41h26howsh/Ventilation%20Presentation_FourWalls_Green%20Building%20Network_March%202018.pdf?dl=0)
- Occupant Interactions and Effectiveness of Natural Ventilation Strategies in Contemporary New Housing in Scotland, UK <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4515731/>

Yours faithfully



Pat Barry  
CEO Irish Green Building Council