Template for comments / observations returned during the consultation				**Date:**	**Document:** Amendment to the Building Regulations, Part B (Fire Safety)	
Name of Organisation / Respondent	**Section (e.g. 1.0, 2.0, etc)**	**Subsection (e.g. 1.1, 1.2, etc)**	**Paragraph / Table No. or Diagram No. (e.g. Interpretation / Section 2.1.2.6 / Appendix B.5.1.1 / Diagram 56)**	**Type of comment G = General E = Editorial T = Technical**	**Comment / Observation**	**Proposed change (if any)**
Henry J Lyons	General Comment	General Comment	General Comment	G	With the ever-worsening climate emergency and increasingly ambitious carbon reduction targets, the construction industry needs to reduce its carbon outputs. Currently, construction (embodied) carbon is responsible for 14% of Ireland's annual emissions. Ireland's population has grown by 1.2 million since the turn of the millennium, with an additional 40% increase projected by 2051. To address our insufficient building stock, national policy (National Development Plan, Housing for All, and the Deep Retrofit Programme) aims to increase construction. If this is delivered with a 'business-as-usual' approach using high-carbon structural materials, national construction emissions will double, escalating the climate crisis.(ref igbc/ucd) Ireland urgently needs to implement low-carbon construction materials on a mass scale. Mass timber offers a means to quickly deliver housing while capturing and storing carbon, and reducing the use of high-carbon materials such as steel and concrete. Any revision to TGD part B must implement mechanisms to facilitate the usage of modern methods of construction through prescriptive methods. https://passivehouseplus.co.uk/blogs/mass-timber-consultation-have-your-say-by-21-april-to-change-the-rules https://www.esa.act.gov.au/sites/default/files/2019-06/massive-timber-buildings.pdf	Review the draft guidance document (and more specifically the sections mentioned below) to ensure the next version of TGD B support Ireland's transition to a fully decarbonised built environment, and its ambition to become a global leader in climate action.
	General Comment	General Comment			Compliance with the building regulations is not always interpreted the same way by different professionals creating the potential for misunderstanding between those who submit designs and those who review and approve or reject building designs. Switzerland provides an example of how this clear communication between building design professionals and fire safety approval bodies can be improved. They have created a suite of standard building details showing build-ups for wooden buildings that comply with the fire safety regulations including titles such as "1.1 Buildings in wood – fire protection requirements" and "2.1 Buildings in wood – quality assurance in fire protection". The details cover wood-based buildings and mass timber construction. They are presented in the typical format of construction details instead of the word-based format of TGD B and thus are easier to read by and interpret consistently by construction design professionals.	Create a similar suite of technical details to complement TGD B to better support the confidence of the construction sector. Allow for alternate methods for achiving compliance
	General Comment	General Comment			"Part B of the Second Schedule to the Building Regulations applies to all buildings. The detailed provisions set out in this document are intended to provide prima facia guidance for common non-complex". However, a clear definition of what a complex building is, and at what stage a non-complex building becomes complex, is needed. A definition of what constitutes a "major renovation" should also be provided.	Define what constitutes a complex building, and provide a clear route for complex buildings. Define what constitutes a "major renovation".
Henry J Lyons	Introduction		Technical Specifications Para. 4	G/E	A new paragraph has been added to 'Technical Specifications'. A list of other standards and publications that deal with matters relating to this Part of the Building Regulations is included at the end of this document. These standards and publications may be used as a source of further information, but do not form part of the guidance. The second sentence is incorrect.	Omit subject sentence
Henry J Lyons	Introduction	N/A	Para. 4, Page 4	G	"...certain parts of the Regulations apply to existing buildings where a material change of use or a major renovation takes place." This could be interpreted that fit-outs or material alterations to Purpose Group 3: Offices or Purpose Group 4: Shops would now require Fire Safety certs which are typically exempted. Major Renovation has not been defined.	Definition required for what a "major renovation" is or a clarification that office and shop fit outs are exempted under this clause.
Henry J Lyons	Existing Buildings	N/A	Existing Buildings	G	Behaviour and upgrade of historic structures for Fire.	Application of TGD part B to protected structures is not always practicable without significant impact on historic fabriic. We would suggest that an Advice Series be published by the Department of Heritage be produced, dealing specifically with the behaviour and upgrade of historic structures for Fire.
Henry J Lyons	Introduction	Provision of Information (B12)	Part B: The Requirement Table Page 7 - Provision of Information (B12)	G/E	There are no provisions for a Regulation of this type curently contained within the enabling Act . The matters which this seeks to address are adequately covered by other legislation i.e. Fire Services Acts and Construction Regulations (Safety File). This is inappropriate / unnecessary duplication.	Omit proposed "Provision of Information (B12)"
Henry J Lyons	Introduction	Table Page 7	Table Page 7	E	Under Part B requirement "Provision of Information", it is noted that "Sufficient Information on the systems(s) installed in the building for the purpose of fire safety...."	Propose to insert "passive and active measures" instead of systems
Henry J Lyons	0.2	N/A	Tall or Complex Buildings	G	The role of fire safety engineering or alternative approaches where guidance cannot practicably be achieved in buildings that may not be tall or complex should be included as an option. It is considered that fire safety engineering should be recognised and allowed for within the guidance document. Complex terminology is subjective and large industrial compartments may require travel distances >45m. The code does not directly allow for use of other guidance where 45m are not practicable. Refer to UK (e.g. BS9999) / Australian Building Codes for example of the use of Fire Engineered solutions.	Allow for fire engineering and alternative approaches as per sections 0.2.1, 0.2.2, 0.2.3, 0.2.4 & 0.2.5 of the current TGD-B

Henry J Lyons	0.2	N/A	Tall or Complex Buildings	G	The alternative approach is an integral route to compliance for buildings that vary in whole or part from TGD B. New technologies are required to meet current and future proposed Government policy and new ways of building in Ireland are required to meet demand. A robust and reliable alternative compliance route through the fire regulations is needed. The current TGDB guidance contains a much larger description of alternative approach route and clear unoquivocal guidance on procedure and standards should be documented in Section 2.	"Insert clear guidance on procedure and standards intent on the alternative approach"
Henry J Lyons	0.2	N/A	Tall or Complex Buildings	G	With reference to "For the design of fire safety of buildings using any document other than this document, a non-exhaustive list of useful references are given in Appendix H. In utilising any alternative document, code of practice or any other method to satisfy the requirements of Part B of the Second Schedule to the Building Regulations, the minimum performance levels of fire safety as set out in this document should be achieved. " Where TGD B is required as a baseline comparison for minimum standards the intent of prescriptive requirements relative to overall risk should be made clear in TGD B to allow a holistic alternative approach to be put forward. A consistent interpretation of the TGDB guidance as a minimum standard is needed to make this route of compliance more viable. Consideration should be given to mechanisms or statements of intent that could be put in place to provide greater certainty on TGDB interpretation at early building project stage.	
Henry J Lyons	0.2	N/A	Tall or Complex Buildings (continued from previous comment)		(continued) Using country examples cited in the “Preliminary Regulatory Impact Analysis – Review of Part B (Fire Safety) of the Building Regulations, January 2023” – For Canada, there are published intent statements for the NBC (supplementary document) which more clearly define the intent / purpose of each individual prescriptive clause relative to the overall code. Through the ICC one is able to request a technical interpretation of the IBC which is a formal and publicly documented response to questions regarding interpretation of the IBC guidance.	
Henry J Lyons	0.2	N/A	Para. 3	G	"complex buildings" are not defined. The wording here should not preclude the use of innovative or alternative materials such as mass timber construction. In utilising any alternative document, code or any other method to satisfy the requirements of Part B of the Second Schedule to the Building Regulations, minimum performance levels of fire safety as set out in this document should be achieved.	Define "complex buildings". Ensure that definition does not preclude the use of modern materials such as mass timber. The language as set out needs to be clear and strenghtened. Alternative wording is required to facilitate alternative routes for compliance.
Henry J Lyons	0.4		Maintenance of Fire Safety Provisions	E	We note in the documents stating the regulatory impact of the proposed amendments, it is explicit that the Regulations address the design of buildings. "It is not appropriate to substitute management solutions of buildings as a compensation for performance of fire safety design." whichdiffers from BS 5588 or BS 9999 which both address management of a building as well as design.	Reintroduce facility for management solutions to be employed.
Henry J Lyons	0.5		Table 1: Classification of Buildings by Purpose Group	E	Both Industrial Purpose Groups and Storage Groups refer to normal and high risk. Elsewhere in document refers to normal and high hazard	Use common terminology throughout document
Henry J Lyons	0.6		Table 1: Classification of Buildings by Purpose Group		With reference to "In order to claim a specific fire resistance for an element of construction, this must be proven by test (1) and certified by a competent body. (1) Fire resistance tests carried out by a person/organisation and certified by an independent third party to carry out such tests offers a way of ensuring that such certification can be relied upon""This statement contradicts Section A1c “Many of the provisions in this document are given in terms of performance in relation to standard methods of tests identified below. In such cases, the material, product, system or structure should .....Or (c) be designed, using relevant design standards, in order to meet that performance classification (See A11), or “ The statement in section 0.6 that fire resistance must be proven by test and certification only, contradicts this standard and will cause confusion. Elements of construction can be designed appropriately for the recommended fire resistance rating through the application of the national standards- Eurocodes referenced in Appendix A11 and F1.1.	Refer to Appendix A1 for demonstration methods, in order to claim a specific fire resistance for an element of construction.
Henry J Lyons	0.10		Definitions	E	Definition of "associated floor area" needs to be more clearly defined	Define "associated floor area" more clearly.
Henry J Lyons	0.10		Definitions	E	Definition of "atrium" needs to be addressed as a void in a floor is specifically not considered to be an atrium and requires a void to be formed through a minimum of two structural floors.	Define an 'Atium'
Henry J Lyons	0.10		Definitions	E	Definition of "Electro-magnetic or electro-mechanical device susceptible to smoke" needs to be changed	Change text to use industry standard terminology. "Electro-magnetic or electro-mechanical hold open device".
Henry J Lyons	0.10		Definitions	E	Definition of "Material achieving A1" and "Material achieving A2" should be renamed	Suggest change text to "Class A1 Material" and "Class A2 Material"
Henry J Lyons	0.10		Definitions	E	Definition of "Platform floor" should be renamed "Raised access floor"	Change text to use industry standard terminology. "raised access floor".
Henry J Lyons	0.10		Definitions	G/E	The term "building" is not defined, although section 1.2.2 excludes some specified types of roofed structures	Define 'Building'
Henry J Lyons	0.10		Definitions	G/E	Definition of open-plan flat is not accurate and may cause unnecessary confusion.	Amend definition and 1.6.2.3 Open-Plan Flats (1.6.2.3.1)

Henry J Lyons	0.10		Definitions	G/E	Definition and recognition of "Modern Methods of Construction (MMC)" and "Mass timber" are required.	Add definitions
Henry J Lyons	0.10		Definitions	G/E	Entirety of the document should be linked back to the matching definition for easy reference. Please refer to Doc B, UK or NCC 2019, Australia. There should also be an index at the end for ease of use.	Provide document links to all definitions and an index at the rear.
Henry J Lyons	1.3	1.3.1	Capacity Calculation method	G/E	The omission of the "design occupancy" is unnecessary, consider for example implications for design of means of escape for many building e.g. Categories 2/3/4/8/9/10	Retain design occupancy option
Henry J Lyons	1.4	1.4.2	Number of Escape Routes and Exits	T	No allowance for extend travel distance where are building is fitted throughout with a sprinkler system.	Make allowance in line with International guidance documents.
Henry J Lyons	1.4	1.4.2.3.	Table 3	E	Industrial and Storage purpose groups referred to as Class 1 and Class 2 - Elsewhere in document referred to as "normal" and "high" hazard	Use common terminology throughout document
Henry J Lyons	1.4	1.4.3.8.	Para. 2	E	"...where self-closing fire doors are fitted with an automatic release mechanism" terminology is not industry standard.	Use common terminology throughout document
Henry J Lyons	1.4	1.4.3.11	Escape from Galleries in Shops, Offices and Industrial Buildings	G/E	1.4.3.11 (c)(i) is excessively onerous - see 14.2(d) BS9999:2017. Cross reference to section 1.8 required for avoidance of doubt / confusion.	Amend to permit single means of escape in limited circumstances.
Henry J Lyons	1.4	1.4.5.8	Sprinkler Systems	G	An automatic sprinkler system should be provided throughout a residential (institutional) building where the building has bed spaces on any level other than the ground level.	The requirement for sprinklers needs to be justified. This will add substantial extra pressure to construction budgets.
Henry J Lyons	1.4	1.4.9	Halls of Residence (Purpose Group 2 (b))	G	Clause 1.4.9 refers specifically to Halls of Residence. There does not appear to be a provision for Hotels / Hostels / Guest Houses?	Clarify requirements for Hotels / Hostels / Guest Houses
Henry J Lyons	1.4	1.4.9.	Diagram 12	G	It is noted that walls between bedrooms do not need to be fire rated, however ductwork passing through walls may need fire & smoke damper to prevent cold smoke spread	Clarity required on need for fire & smoke dampers in non-rated walls
Henry J Lyons	1.5	1.5.5.2.1	Buildings Where Stairways Must Be Discounted	E	Buildings Where Stairways Must Be Discounted: Requirement to discount stairs in 2-stairs blocks and in blocks exceeding 20m to top floor – will result in wider or additional stairs. This is a new provision compared to either BS5588 Part 11 or BS9999 – Clause 1.5.5.2.1 – combined with the preceding paragraph this can result in 50—75% increase in staircase provision. The reason for the change is unclear - there is no known or demonstrated issue with current practice based on DHLG Circular letter BC5/2011	Significant new provision compared to either BS5588 Part 11 or BS9999. A cursory examination of the impact on the design of a 6 storey BS 9999 office building constructed in DCC in 2022 found that stair provision increases from 2 x 1200mm wide stair to 3 no. 1800mm equating to a floor area reduction of 342m2. The regulatory impact assessment remains entirely silent neither accounting for cost or examining benefit. Results in less efficient buildings, challenges sustainability and places Ireland at a distinct disadvantage in attracting foreign investment.
Henry J Lyons	1.5	1.5.6.1	Protection of Escape Stairways General	G/E	1.5.6.1 needs to clarify that in certain limited circumstances a stairway forming part of an escape route need not be a "protected stairway"	Review / revise text
Henry J Lyons	1.5	1.5.6.5.	Use of Space within Protected Stairways Clause (c)	G	Text appears to indicate that a WC inside a protected stair core would need to be enclosed in FR construction. This affects the design of Offices. It is unclear if it affects Fire door and door closer compliance with Part M?	Clarify
Henry J Lyons	1.5	1.5.6.6.	Diagram 14 (External Protection t	G	Clarify note (2) which implies fire protection to a height of 1.1m is acceptable, however diagram has dimension of 1.8m	Align diagram with text
Henry J Lyons	1.5	1.5.7.2	More than one Escape Route Para 2	G	Paragraph needs to be re-written as does not read with clarity	Clarify
Henry J Lyons	1.5	1.5.8.1.	Provision of Protected Lobbies and Corridors Clause (f)	G	Changed to "stairs that serve different purpose groups" as a building could have multiple purpose groups, but also have stairs that serve only a single purpose group	Change "...building containing different purpose groups..." text to "...stairs that serve different purpose groups"
Henry J Lyons	1.6	1.6.2	Internal Planning of Flats	E	Guidance is confusing and the use of term "open plan" i slso confusing. Consider restructuring to deal with: - open-plan ("studio") flats: (a) without sprinklers and (b) with sprinklers - "cellular" flats without a protected entrance hallway: (a) without sprinklers and (b) with sprinklers	Revise
Henry J Lyons	1.6	1.6.6.1	Small Single-Stair buildings	E	Building configuration should be 3 storeys above ground storey is incompatible with the 11m threshold. 11m threshold should be omitted to meet other government guidelines and objectives.	Revise - 11m threshold should be omitted to meet other government guidelines and objectives.
Henry J Lyons	1.6	1.6.7	Vertical Means of Escape in Common Parts of Flats	G/E	Where the topmost floor level of a building is >30 m • A second stairs should be provided to serve all floors or • A sprinkler system should be provided to all flats in the building • Where the topmost floor level >11 m, additional stairs may be required to satisfy the conditions of Sub-Section 5.5 (refer to related comments).This is likely to impact existing permissions where fire certs are not granted or submitted as this typically applies to large projects with. even considering the transitional arrangements. Depending on transitional arrangements, does the impact on developments in the planning system/late stages of design need to be considered?	Link the transitional arrangement to granted permissions required rather than completed work on site .

Henry J Lyons	1.7	1.7.5.3.	Means of Escape from Occupancies Other Than Shop Units, and Ancillary Accommodation to the Shopping Centre Para 3 & 4	G	Significant departure from BS5588-10. Why does vertical means of escape from ancillary accommodation have to use independent stairs.	Revise
Henry J Lyons	1.9	1.9.3.1.2	Electrically Powered Locks	T	Addition to draft is that electronically powered locks should return to the unlocked position "...in any of the following cases: (a) On operation of the fire alarm system.; (b) On loss of power or in the case of system error. (c) On activation of a manual door release unit (Type A) to IS EN 54-11 positioned at the door on the side approached by people making their escape." There is a contradiction here that - either item (a) or (c) but not "any of" as noted. - Also IS EN54-11 is for fire alarm system, not access control. - BGU's on access control systems are not designed to this standard. - Why there is a drive towards Maglocks not being used in buildings?	This additional text will cause confusion and this level of detail is not required. Maglocks are required in buildings for security and operational reasons.
Henry J Lyons	1.9	1.9.3.1.3	Security	T	Panic bolts on final exits that are only used in an emergency are ok, however where a final exit is a door in "general use" (e.g. Main entrance to a reception area or similar) then panic hardware is inappropriate and not practical.	Suggest that panic hardware is only to be used on final exits not in everyday use.
Henry J Lyons	1.9	1.9.4.1.	Construction of Escape Stairways General	G	It is not clear why fire classification of Class A2-s3, d2 or better being requested here. Fire resistance in more important and typically linings on escape routes would only need Class B-s3, d2 ratings. This requirement will eliminate use of Mass timber as even with encapsulation using fire resisting board class A2 cannot be achieved. Government policy is to decarbonise our built environment and this will not be achieved with over eonerous technical guidance.	Suggest change text to fire resisting construction and B-s3, d2.
Henry J Lyons	1.9	1.9.9	Lifts	E	A lift should not be continued down to serve any basement storey if it is in a building served by only one escape stairway, or within the enclosures to an escape stairway which is terminated at ground level. Provisions on escape stairways that connect basements with the upper storeys of a building are set out in Subsection 1.5." The provision is completely impracticable and runs against the grain of universal access, it does not reflect national practice since the introduction of Building Regulations part M and the universal design approach. Alternative options such as double vented lobby are commonplace.	Part M compliance issue - review / revise. Consider alternative approach using vented lobbies.
Henry J Lyons	1.9	1.9.14	Provision of Refuge Areas in Buildings Para 5	T	"A refuge area should be provided to each protected stairway designed for means of escape from each storey, and to each external escape stairs. This applies irrespective of the provision of a lift." The change is unwarranted both due to the typical additional requirement for EVC call system and the additional floor area in every stairs at all levels except at ground floor required . The requirements will add signficant additional cost to the construction of small buildings. A refuge is required for buildings with lifts .	This change should be omitted.
Henry J Lyons	2.1	2.1.2	Floors and Stairways	T	The case of firefighting stairs is the sole reference in the Subsection (>18m height)	Title of Section 2.1.2 should be amended to Firefighting stairs, for clarity
Henry J Lyons	2.1	2.1.2		G	It is not clear why any material used to cover firefighting stairways should be a material achieving Class A2-s3, d2 or better. This would preclude the use of a Timber / Marmoleum / Vinyl type floor coverings. This would mean that stairs are limited to sealant, painted finish or epoxy type floor finishes.	Suggest omitting this requirement as it is too onerous, would adversely impact the quality of the space, have cost implications and delay construction programme.
Henry J Lyons	2.2	2.2.1	Table 14 Reaction-to-fire Classifications	T	Classification to IS EN 13501 - 1	Provide for classification to include a range of cross-laminated timber CLT linings, and other low embodied carbon linings
Henry J Lyons	3.1	3.1.1	General	T	Generally the requirement in the previous Part B revision for compartment walls and floors to be non-combustible appears to have been removed and the requirement is now Reaction to Fire rating A2-s1,D0. Section 3.5.7 allows that the fire resisting performance may be achieved by lining systems and this would appear to admit the possibility of timber or other modern methods of construction structures. Section 3.5.10 introduces a new requirement for fire resisting construction above and below compartment floors.	Amend
Henry J Lyons	3.3	3.3.4	Additional Provisions for Load-Bearing Elements		If a floor is also a compartment floor, additional provisions of integrity and insulation etc. will apply	This will add greater coordination, complexity and costs to construction projects. Consider reviewing / revising.
Henry J Lyons	3.3	3.3.5.2	Gallery Storage or Plant Areas which do not need Fire Resistance. (c) Where people can go onto the storage or plant tiers in the course of their normal use, fire resistance of the raised storage area is not required if all the following conditions are satisfied: (v) the raised storage area does not exceed 20 m in either width or length.	G/E	3.3.5.2 (c) (v) is unduly onerous, given the context. Having regard to travel distances limits permissible for alternative means of escape, maximum dimensions of 45 x 45m seems more reasonable	Revise max dimensions (L and W) to 45m each.

Henry J Lyons	3.5	3.5.4	Performance Requirements for Compartment Walls and Compartment Floors	G	With reference to "In a building of any purpose group, where the height of the top storey is 11 m or more (See Appendix C, Diagram 82), any compartment floor which is required to have a fire resistance of 60 minutes or more should be constructed of materials having a reaction-to-fire classification of Class A2 - s1, d0 ((See Appendix A), apart from any floor finish." The current TGDB describes only how inorganic structural materials can meet the requirements of the building regulations with topmost floor over 11m. Acceptable building scenarios that meet the guidance intent based on the use of timber structure should be included in line with recommendations from "Joint Committee on Housing, Local Government and Heritage – Embodied Carbon in the Built Environment, October 2022. Many countries have adopted prescribed routes of compliance for timber structure which describe acceptable building scenarios which balance risk and mitigation principles based on different purpose groups. Using some of the country examples cited in the “Preliminary Regulatory Impact Analysis – Review of Part B (Fire Safety) of the Building Regulations, January 2023” – For timber structure, NCC 2016/2019 (Australia) has incorporated “deemed to satisfy” solutions up to 8 storeys. The IBC 2021 (USA) has expanded their building category types to include acceptable scenarios up to 18 storeys. The NBC 2020 (Canada) incorporates “acceptable solutions” that allows a standard route of compliance for buildings up to 12 storeys.	It is suggested that prescriptive solutions for Timber Structure be added to the TGDB
Henry J Lyons	3.5	3.5.4			This specific clause states that "In a building of any purpose group, where the height of the top storey is 11 m or more (See Appendix C, Diagram 82), any compartment floor which is required to have a fire resistance of 60 minutes or more should be constructed of materials having a reaction-to-fire classification of Class A2 - s1, d0 (See Appendix A), apart from any floor finish." As per recent developments at EU and national levels (E.g., EU Taxonomy, proposed revision of the EPBD, Climate Action Plan 2023), embodied carbon emissions will need to be addressed within the next 5 years. This clause in its current wording is closing the door to any innovative form of construction above 11m (buildings not constructed in steel and concrete), including much needed pathfinder projects. 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). This restriction is out of line with International practice and runs counter to the governments Climate targets. Furthermore, pathfinder projects are urgently needed to build capacity in that field in Ireland. Supporting the development of mass timber buildings and mass timber expansions of existing buildings is key in: 1. Providing the opportunity for achieving lower embodied carbon results in new construction. 2. Preventing embodied carbon emissions associated with demolition and re-construction of existing buildings.	While health and safety is critical, the draft guidance document cannot simply close the door to innovative forms of construction, and mass timber buildings above 11m. This clause must be reviewed, and the IGBC urge the department to review existing testing and codes (e.g., recent large scale test undertaken by Cerib/Imperial College London/Arup on sprinklered protected mass timber buildings and NFPA 5000,), as well as international best practices (e.g., Swedish and other European countries' fire safety regulatory approaches*), and to work with the industry, fire consultants and fire brigades to develop a solution to support the development of innovative forms of construction in Ireland as this is critical to reach our climate targets and support the delivery of much needed homes. * Many jurisdictions, such as Denmark, Norway, Sweden and Norway do not introduce a specific height limit and instead gradually increase the REI requirement depending on the building's height. For example, REI60 up to 4 storeys, REI90 up to 8 storeys and REI120 for buildings above 8 storeys.
Henry J Lyons	3.5	3.5.4	Compartment Floors in Buildings >	T	For any building where the top storey is 11m or more any compartment floor is required to have a fire resistance of 60 minutes or more should be constructed of materials having a reaction to fire classification of A2-s1, d0. This precludes the use of not just mass timber construction but also most other forms of modern methods of construction. It is not clear from where the Class A2-s1, d0 requirement is coming. This should be changed to Class B-s1, d0 which would allow for construction of Mass timber.	Suggest reconsidering Class A2-s1, d0 Reaction to fire testing as requirement as this appears to rule out innovative products and does not align with Government guidance on sustainability targets. Innovation products should not be considered complex or non-prescriptive. Consider also Peer-review panel where expertise can be provided to Local Authorities for innovative materials. This clause will be used as a crutch to reject or condition FSC applications using mass timber or other innovative solutions. Suggestion the inclusion of the installation of sprinklers as compensation to reduce Reaction to Fire Classification. (Approved Document B in the UK does not specify a reaction to fire classification for compartment floors)
Henry J Lyons	3.5	3.5.4	Performance Requirements for Compartment Walls and Compartment Floors	T	With reference to "In a building of any purpose group, where the height of the top storey is 11 m or more (See Appendix C, Diagram 82), any compartment floor which is required to have a fire resistance of 60 minutes or more should be constructed of materials having a reaction-to-fire classification of Class A2 - s1, d0 (See Appendix A), apart from any floor finish" The intent of the requirement (that each individual element of a compartment floor should be constructed of Class A2-S1,d0 rating by EN 13501-1) and its overall role in meeting the structural fire safety performance objectives of Schedule 2, regulation B3 is unclear and open to misinterpretation where organic materials are being proposed. TGDB clause 0.6 defines Reaction to Fire as “ the measurement of how a material or system will contribute to the development and spread of a fire” A system can demonstrate through design or testing it will not contribute to the development and spread of a fire, (while maintaining fire resistance of the structural system) without each system element being defined as non-combustible.	In a building of any purpose group, where the height of the top storey is 11 m or more (See Appendix C, Diagram 82), any compartment floor which is required to have a fire resistance of 60 minutes or more should demonstrate through rating (by EN 13501-1), design or testing the floor system does not contribute to the development and spread of a fire for a “stated” period.
Henry J Lyons	3.5	3.5.5	Compartment Walls		With reference to "Compartment walls in the following buildings should be constructed of materials with a reaction-to-fire classification achieving A2 - s3, d2, or better (See Appendix A)" - same comment as 3.5.4	same comment as 3.5.4

Henry J Lyons	3.5	3.5.10	Junction of a Compartment Floor with an External Wall	T	Requirement for either; a fire resisting spandrel of 900 mm, or a fire resisting projection of 500 mm, or a sprinkler system, where a compartment floor meets an external wall. This is a significant change which would have a significant impact on the design of buildings. This requirement is irrespective of building height. The text also states that "Accommodation which projects outwards from the face of the building above the compartment floor does not meet the requirements of (b) above" - If this projection is fire resisting is there any reason why?	Suggestion omission of this requirement. BRE Global carried out full scale fire tests in April 2016 which demonstrated that the introduction of fire rated spandrels did not prevent fire spread between floors up the outside of the building. This requirement is very onerous and adversely impacts the design and costs of the different Purpose groups. Such a proposed requirement would move the regulations back towards research carried out over 30 years ago.
Henry J Lyons	3.5	3.5.10	Junction of a Compartment Floor with an External Wall	E	No clear benefit has been demonstrated as to the actual meaningful contribution from the proposed change particularly in the context of welcomed Class A2 external wall construction changes. Extensive international research does not support the recommendation. Many concluding that the risk of internal fire spread is far greater. In 1965 the then Director of the Fire Research Station (G.J. Langdon-Thomas) wrote 'Fire Note 8' with Margaret Law to provide context for the new building regulations by stating ''to provide adequate protection it would be necessary virtually to omit all windows from the storey immediately above the one with openings in it". The cost is clear, the benefit is not. If 900mm is insufficient in mitigating the intended fire spread effect, then how is the cost justified. This will lead to significant day light, quality of living and planning implications.	Suggestion omission of this requirement
Henry J Lyons	3.5	3.5.10	Diagram 44	T	Diagram 44 is impracticable. It is not clear what is the background to this.	Suggest that Diagram 44 is reconsidered in its entirety and omitted. It does not reflect current research and guidance into building facades and is impracticable to build. As noted above, BRE Global research has shown that fire rated spandrel panels do not prevent floor to floor fire spread.
Henry J Lyons	3.5	3.5.10	Where a 0.9m fire-resisting zone (See (a) above) meets a fire-resisting horizontal projection of >0.5m (b above), the fire-resisting zone shall overlap the projection for a distance of 0.45m (See Diagram 44)		"How effective is the proposed 0.9m height in terms of inhibiting the 'leap frogging'? How does this proposal scientifically align with standards in other jurisdictions? The consequence of this proposal has significant implications including design aesthetic, technical non - compliance (daylight , Part M requirements i.e. level access to private open space), increase to building height, project viability (reduction in unit numbers where daylight assessments fail) & cost.	Suggest omission of this requirement.
Henry J Lyons	3.5	3.5.11	Junction of a Compartment Wall With an External Wall	T	Requirement for a fire resisting flanking wall, where a compartment wall meets an external wall. This is a significant change which would have a significant impact on the design and cost of buildings. This requirement is irrespective of building height. There appears to be no requirement for angle > 135^{0}.	Suggest omission of this requirement.
Henry J Lyons	3.5	3.5.13	Diagram 46	T	The class A2-s3. d0 reference to substrate should refer to the materials on the underside of the roof only and not necessarily the build-up to prevent fire spread between one side of a separating wall and the other.	Suggest revise diagram. Suggest that there is an allowance for tested alternative solutions.
Henry J Lyons	3.5	3.5.16	Protected Shafts	G	If the protected shaft is in a building with a topmost level of 20 m, and is designed to provide access for firefighters, the provisions of Section 5 relating to firefighting shafts also apply.	Clarification required.
Henry J Lyons	3.5	3.5.16.3	Diagram 48	E	Key in diagram 48 does not match the layouts	Amend
Henry J Lyons	3.6	3.6.2	Diagram 49	E	Bedrooms are shown as fire resisting constructions. This may not be the case with some purpose groups (e.g. halls of residence).	Clarification required
Henry J Lyons	3.6	3.6.3	Maximum Dimensions of Concealed Spaces	T	diagram 17 is a tried and tested option. it should be retained as an option for new traditional concrete block cavity wall type buildings. this reduces the cavity barrier requirement. For many traditional built buildings there is no particular reason to make this change. The former Diagram 17 now Diagram 76 is retained for existing buildings .	diagram 17 as per TGD reprint 2020 (Diagram 17 (TGD B 2020 3.3.3 (4)) should be retained for new buildings as an alternative to additional cavity barriers in the cavity.
Henry J Lyons	3.6	3.6.3	Clause (2)	G	It is not clear why an exemption is no longer provided for voids in an external cavity wall where both inner and outer leaves are masonry.	Suggest provide exemption or clarify why exemption is no longer provided for voids. There is a cost impact associated with this proposal.
Henry J Lyons	3.6	3.6.3	Table 17	G	Items 2 & 3 in Table 17 appear to contradict requirements for spandrel panels in clause 3.5.10	Clarify requirements to eliminate contradiction
Henry J Lyons	3.7	3.7.2	Para 1	G	It is not clear if non compartment walls are subject to this clause?	Suggest change text to clarify
Henry J Lyons	3.7	3.7.3	Ventilation Systems	T	Further clarification would be welcomed in respect of acceptable forms of fire resisting enclosure to ductwork, as some main systems suppliers do not have adequate testing on systems to verify testing from both sides	Clarify

Henry J Lyons	3.7	3.7.3.2	Ventilation Systems	G	Draft document states that terminals of exhaust points shall be sited not less than 1.8m away from: (a) final exits; (b) cladding or roofing materials achieving Class B-s3, d2 or worse; and (c) any openings into the building. This means that all exhaust terminals need to finish in materials of limited combustibility. This requirement is excessively restrictive and the basis of it is not clear.	This is extremely restrictive and will affect any building where air terminals finish in cladding systems as an example. It will adversely impact cost and create design difficulties.
Henry J Lyons	3.7	3.7.3.2.1	Recirculating air Systems	G	It is noted that in recirculating air systems, smoke detectors should be fitted in extract ductwork. This does not correlate with IS 3218. It also is an excessive requirement for small heat recovery units in the domestic environment	Refer to IS 3218
Henry J Lyons	3.7	3.7.3.6	Para. 2	G	Text states that "In a single stairway building, the ductwork enclosure should be imperforate where it passes through the stairway or any protected lobby or protected corridor. If fire and smoke dampers are installed then access hatches have to be provided for maintenance so this clause cannot be met. Depending on void size around duct there may also be a requirement for smoke detection.	Suggest that requirement for maintenance access hatches is awknowledged.
Henry J Lyons	3.7	3.7.5	Fire-Stopping		Fire stopping should achieve the same fire resistance as the element it is associated with	Suggest alternate wording of 'achieve the same or greater fire resistance'.
Henry J Lyons	3.8	3.8.2	Car Parks		This section was formerly 3.5.2 (TGD Part B 2006).This revision removes the text that stated “ .....car parks are not normally expected to be fitted with sprinklers”.	Suggest reinstatement of previous wording “ .....car parks are not normally expected to be fitted with sprinklers”.
Henry J Lyons	3.8	3.8.3	Buildings Containing an Atrium	G	Description of atrium still states "penetration of compartment floor". This description is misleading	Define atrium as per earlier comment.
Henry J Lyons	3.8	3.8.3.1	Smoke-Retarding Construction	G	Draft document states that any doors in an atrium should conform to Appendix B, Table 36. It is not clear if this is requiring fire resisting door sets in Non-fire resisting construction.	Clarify if fire resisting door sets are required in non-fire rated walls. If required there will be additional costs associated with the upgrading of door sets.
Henry J Lyons	4.3	4.3.1.	Last para.	G	Where infill external wall panels or systems are installed on a building, the connections attaching the panels to the structural frame of the building should be designed to ensure that the panels do not detach from the building in a fire scenario. This will be a significant issue where external walls do not need to be fire rated. The fixings of such would not likely be tested for fire resistance e.g. concrete precast type panels.	Clarify.
Henry J Lyons	4.3	4.3.3.2		G	Draft document states "Elements fixed to the external wall of a building (such as an open balcony, a device for reducing heat gain, a solar panel or materials which support and contain growing media in a green wall) should also meet the provisions as specified in Table 20." - Refers to reaction to fire tests for products used in external wall build up. This would affect any façade with any combustible materials and all walls would need to be tested to BS8414	Wording needs to be changed. This proposal significantly limits design and has significant adverse cost impact.
Henry J Lyons	4.3	4.3.3.2	Table 20	G/E	Guidance in relation to a range of acceptable forms of construction is required.	Provide further guidance, particularly in respect of sustainable building methods which should be promoted.
Henry J Lyons	4.3	4.3.3.2	Provision of Cavity Barriers	T	Refer to the Climate Action plan 2023, Further clarification of requirements is required for mass timber, timber framed structures and rainscreen claddings, including timber cladding would help support this form of construction and help displace cement in construction.	Revision required
Henry J Lyons	4.4	4.4.3.1	Wall Elements Contributing to Unprotected Areas	G	It is not clear why walls not achieving Class B-s2, d0 or better than half the area is treated as unprotected. This may affect any building with external cladding (e.g. double skin insulated panel)	Clarify background to requirement or omit.
Henry J Lyons	5.5	5.5.4	Buildings with a Topmost Floor <11m but <20m		> 900 m2, there should be a minimum of 2 such protected stairways.	Alternative approach required to mitigate reduced building efficiency. Allow the option of providing sprinklers in lieu 2 no. protected stairways.
Henry J Lyons	5.5	5.5.6.3	Construction of Firefighting Shafts	G	Draft document appears to state that walls, ceilings, stairs & landings need to be constructed from materials achieving Class A2-s1,d0 . This will preclude the use of plasterboard which only achieves B-s2, d0 ratings. It is not clear if wall liners are excluded. It is not clear if the intention is to eliminate plaster suspended ceilings. The reason to limit the glazed element in a fire door limited to 0.1m2 is not clear and it is not clear if EI glazing be used in a door.	Clarify requirement.
Henry J Lyons	5.5	5.5.6.4 (d)	Firefighting Lobbies	T	The layout of a firefighting lobby should have principle dimensions of not less than 2m, but not more than 8m in lobbies with up to 4 lifts, or 2m per lift, for lobbies with more than 4 lifts.	Diagram 72 should illustrate the required principle dimensons of not less than 2m, so it can be reviewed together with TGD Part M internal lobby requirements.
Henry J Lyons	6.2	6.2.1	Ventilation of Stairway Enclosure	T	Ventilation of escape stairways have always been a B5 item and allowed for manual openable vents at each upper landing or storey to allow smoke be vented by firefighters subsequent to a fire. Automatic venting was allowed for where a stairs may be landlocked. The manual ventilation has been removed as an option. The evidential basis for this has not been technically demonstrated nor known. This provisions seems excessive.	Allow for openable windows at each level in lieu of automatic ventilation as per current TGD-B.

Henry J Lyons	6.2	6.2.1.	Ventilation of Stairway Enclosure	G	Where a fire alarm system is provided in the building (See Para 1.9.13), an automatic opening vent should be provided at the top of each common-access protected stairway enclosure. Such a vent may be roof or wall mounted. No allowance made for openable sections at each level as previously allowed. This requirement has a cost and design issue for existing / historic buildings.	The option of manually openable windows should be retained.
Henry J Lyons	7.6	7.6.1.	Ventilation of Protected Stairways	G	New Draft document specifies that AOV's must be used in protected stair cores. No allowance made for openable sections at each level as previously allowed	Reason for removing manually openable sections on each landing to be provided.
Henry J Lyons	A1		Introduction	G	Classing of materials should not prohibit use of salvaged/re-used materials nor preclude use of new/innovative materials in near future which help to meet the Climate Action Bill requirements and movement to a circular economy of materials	Include process/method for classification for new/ innovative low carbon materials as well as for classification of reused/salvaged materials (to enable a circular economy). Cross referencing to circular economy and providing section for use of salvaged/re-used materials would be helpful.
Henry J Lyons	C1		Methods of Measurement	G	Given need to respond to the provisions of the Climate Action Bill and need to decarbonise construction industry and move to a circular building economy, standards and requirements in storey height, compartmentalisation should not be excessively restrictive to the use of structural timber in buildings.	Ensure both Part B regulation and specifically TGD are audited for how it restricts or allows for the decarbonisation of the building industry, with alternative methods where required for use of structural timber and other timber products, low carbon or biogenic construction materials. Include specific methods and sections that deal specifically with timber, low carbon and biogenic materials as well as use of salvaged materials.
Henry J Lyons	F1		GENERAL COMMENT	G/E/T	Failure to recognise BS9999 (which superseded BS5588 Part 11 and was endorsed in DHLG Circular letter BC5/2011) as the currently used design code results in significantly reduced travel distances and increased staircase/storey exit widths compared to current design practice – Tables 3, 5 and 8 – results in 15-20% increase in widths. The Department's Circular Letter 05/2011 of May 2011 endorsed the use of BS 9999. An extensive 2020 survey compiled by Maurice Johnson & Partners, Michael Slattery & Associates and Jenson Hughes of all office buildings constructed by the firms in the preceding 9 years found that the design practice in Ireland post the Department's circular is to design offices to BS 9999. The 7% figure in Table 4 of Appendix 4 of the PRIA (which relates only to the period 2018-2021 and which applies to all buildings for which FSC applications were lodged) is a gross underestimation of the extent of use of BS9999 in the design and approval of office buildings.	Recognise BS9999 (which superseded BS5588 Part 11 and was endorsed in DHLG Circular letter BC5/2011) as a design code.