



An Stiúirthóireacht Náisiúnta um Dóiteáin agus Bainistíocht Éigeandála
National Directorate for Fire & Emergency Management

REVIEW OF TGD B

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DECLG



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REVIEW OF TGD B

Presentation I.B.C.I. Conference. Athlone March 2012

- Requirement
- Project Steps
- Fire Safety Principals
- Considerations
- Purpose of Review
- Document Format
- Consultancy Reports
- B1 Means of Escape
- B2 Internal Fire Spread (Linings)
- B3 Internal Fire Spread (Structure)
- B4 External Fire Spread
- B5 Access and Facilities for the Fire Service
- Other Issues



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Requirement

- TGD B – guidance on fire safety – part B
- Compliance with TGD B indicates *prima facie* compliance with Part B of Regulations
- Other approaches allowed, but TGD B is used for majority of building works
- Current doc published in 1997, limited updates in 2006
- Co-operative project
 - National Directorate for Fire and Emergency Management
 - DoECLG Architecture & Building Standards Section
 - Building Regulations Advisory Body (BRAB)



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Project steps

- Initial Consultation Stakeholders, Fire Officers, Public.
- Establish Steering Group-Commentary, advice
- Develop proposals for consideration
- Research, consulting, drafting
- Regulatory impact analysis- costs
- Draft Proposals- further Consultation –public and CEC (Commission of European Communities)
- Proposal for BRAB – recommendation to Minister
- Document production
- Communication, transition to new guidance
- Monitoring



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Fire safety principles

- Early suppression of fire where feasible(B1)
- Avoidance of outbreaks of fire: (fire prevention:FS Mgnt)
- Early detection of fire and early warning to occupants to allow for an adequate response and safe evacuation.(B1)
- Provision of escape routes that are protected from smoke and fire to allow occupants to leave the building safely.(B1)
- Limitation of the development and spread of fire(B2-Linings)
- Limit fire spread to adjoining buildings(B4)
- Containment of fire and smoke to room of origin(B3 -Structure)
- Effective evacuation procedures (F.S.Mgnt.)
- Access and facilities for the fire service(B5)



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Considerations

- Update/Future Proof revised document-15 year gap
- Interaction between building and people
- Lessons learnt
- New materials-methods
- Impact of changes to TGD's
- Experience with current guidance, Interpretations, ABP Rulings
- How buildings are used (conflicts with design intent)
- Management – alterations, evacuation, responsibilities – (*S.H.W.W. Act*)
“Adequate level of fire safety management”- 0.1.6.
- Defend in place strategy for apartments- Provision for FADS
- FSC for Domestic dwellings (source of most fatalities)



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Purpose of Review

- First Principal and Focus of the Review: **Life Safety**
- Occupants/Residents/Visitors /Fire fighters
- International Developments in construction industry
- Approaches: General -Part B,(85%)
- Advanced: (B.S.9999:2008 “Code of Practice for fire safety in the design,management and use of buildings” (10%)
- Fire Engineering: B.S.7974 2002 Parts 0-7 (5%)
- Update references: BS 5588(5-12)-BS 9999-Risk Profile, 3 level Mgnt.
- BS 5588-1 Residential – B.S. 9991:2011
- Construction Products Directive (CPD),
- Euro codes: Test standards v’s BS 476
- *Part B – A Guidance document not a Code of Practice*



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Purpose of Review

- Building Types- Purpose Groups- Definitions- Expand Restaurant/bar – retail? – bookies, crèches, preschools, home offices
- Other building types: Schools (B.B.100), Hospitals, (H.T.M. Series Docs.)
- Care Homes, Places of Assembly, Stadia, Atria, Shopping Centers
- Historic Buildings: Various Guidance docs – protection of property?
- Define: Dwelling, (HSE) Residential Centers, Sheltered Housing/ Houses in Multiple Occupation (New Purpose Group 2(c)?)
- Use of Guidance Documents – Selective approach-cherry picking
- Suggested areas for revision to date *B1 55%, B5 25%, B2,3,4 20%*
- Updates of National Codes of Practice



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National Codes of Practice

- Existing National Codes of practice: Revise or not?- Status in new regulations
- Code of Practice for Fire Safety of Furnishings and Fittings in Places of Assembly(1989)
- Code of practice for Safety at Indoor Concerts (1998)
- Fire Safety in Nursing Homes – A guide to Fire Safety in Existing Nursing Homes and Similar Type premises – (1996)
- Code of practice for Safety at Indoor Concerts (1998)
- Fire safety in Guest Accommodation : A Guide to Fire Safety in Existing Guesthouses, B&B 's & Similar Establishments, Providing Overnight Guest Accommodation
- Fire precautions in existing Hotels, Guesthouses, and similar premises - 1989
- Fire Safety in Flats – A guide to Fire Safety in Flats, Bed sitters and Aprts - 1994
- Fire safety in Pre-Schools: A Guide to fire Safety in Premises used for Pre-School Services
- Fire Safety in Hostels – A guide to Fire safety in Existing Hostels (1998)
- Code of Practice for the Management of Fire Safety in Places of Assembly – 1989



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Document Format

- Existing Document Structure: B1-B5
- Proposed Format: Single Volume / Two Volume (A.D.B: Domestic–Non Domestic)
- Additional guidance notes-for clarity – worked examples
- More Diagrams, Details
- High quality, color renderings, isometric views,
- Include index
- All Definitions consolidated in foreword
- Integrated Management of Buildings: include fire safety template appendix.



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Consultancy Report

Consultancy Service to carry out a study and to make draft proposals on the impact on life safety in Dwelling Houses Flats and Maisonettes (Purpose Groups 1(a), 1(b), 1(c)) of the installation of enhanced levels of fire alarm and detection systems

Findings

Awaiting final report

Other Areas identified for research

- Sprinklers in Dwellings,
- Timber frame Construction
- Provision and use of Evacuation lifts



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B1 Means of Escape

- Impact of Part M - Access and Use
- Disability Access Certificate-Process v FSC
- Use of Lifts for Evacuation: NDA Recommendations: Safe Evacuation for All (March'11) 5.4.1, 5.4.2.
- Final Exit requirement –Part M
- Risk assessment /PEEPS.
- Responsibility for evacuation (HSWW Act)
- Refuges-communication
- Rest areas on escape stairs (WTC NIST Report) Effect on escape times
- Provision of enhanced fire alarm detection/Emergency Lighting for disabled persons/ L.E.D. lighting to floors
- Width of escape routes Part L, K

Promoting Safe Egress
and Evacuation for
People with Disabilities



NDA
National Disability Authority
Cúrsaí Náisiúnta Míchairde



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B1 Means of Escape

- Place of Safety: Define, Timber decks to rear of domestic dwellings, Balconies, enclosed rear courtyards/gardens
- No self closing devices on doors in 3st.dwellings/flats? (ADB UK)
- Security V Escape
- Thumb locks/easy open door fastenings to final exit doors in Domestic Dwellings
- Escape windows: area-height-Part K- Replacement Windows -
- Nursing Homes- Staff ratio/Progressive Horiz. Evacuation
- Compartment Size: occupancy levels
- Use of “Hold open” devices-Swing Free doors
- Storage rooms on escape routes/ Protected Escape Stairs



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B2: Internal Fire Spread (linings)

- Materials used in construction (Part L)
- Fuel Load
- Rate/Intensity of fire development
- Air-tightness
- Air-to-Air heat exchangers
- Ductwork for heat recovery systems
- Pumps for solar panel/Inverters for PV systems
- Increased use of multi fuel stoves
- The impact of Part L on fire development/behaviour in Buildings

“Innovative Construction Products and Techniques” BD 2503

DCLG(UK) 2008





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- Result of Fire in ICF Constructed Dwelling



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B3 Internal Fire Spread (Structure)

- Timber framed Dwellings IS 440 (2009)
- Other building types; 2/3 story dwellings - Multi story apartments
- Allow increase in height (T.F.) to 7/8 stories
- Collapse of engineered timbers- structural floors
- Fire stopping
- Fire spread into cavities (window/door frames)
- Compartment walls (terraced units)
- Cavity barriers (closed joints)





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B3 Internal Fire Spread (Structure)

- Management: Alterations
- Fire Fighting Operations
- Car parks- underground
- Use of sprinklers (remove note 3.5.2 (b)) *“not normally fitted with sprinklers”*
- Assumptions on fire spread – vehicle to vehicle – not valid?
- Ventilation



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B4 External Fire Spread

- Building to building spread – assumes identical building opposite
- Fire Spread vertically window to window
- New Cladding materials
- Curtain walling systems
- Fire stopping details –clarify
- Double skin facades
- Canopies – define status
- External drencher systems/ Fire shutters
– limit Unprotected area





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B5 Access and Facilities for the Fire Service

- The provision water supply for fire fighting, statutory responsibilities/on-site provision of static water storage
- Water Charges, Risk Profile, Determine water volume/rate/time requirement
- Hydrant locations (Diag.30) 46m max. from entrance not perimeter.
- Access to gated Developments-Urban sites
- 20m Reversing Limit –adjust ?
- Forms of construction (timber frame etc) effect on fire fighting methods-offensive fire fighting
- Fire Fighting Shafts- provide at 18m
- Fire Fighting Lifts -18M +
- Max size of compartment in single story building too large-high risk
- Escape across a flat roof: Not allowed in public /residential buildings



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Other Issues

- Storage of flammable gas/liquid cylinders/containers in commercial buildings
- HSWW Acts/Fire services Act/B.S.5499 : requirement for escape signage
- Certification of products and verification of installation /assembly processes. Ensures fire resistance is maintained through installation process
- B.E.S.S. Building Emergency Safety Systems-RECI
- Community Fire Safety: Life span of smoke/heat detectors
- Carbon monoxide detectors -Part J: Review commenced
Required in all Bedrooms (Canada)



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Other Issues

- First aid fire fighting
- Provision of fire hoses reels (not required when Sprinklers provided)
- fire extinguishers
- Provide only in high risk areas – subject to risk assessment
- Danger to occupants-sense of security
- Cause occupants to delay evacuation



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Part B comments/submissions to

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Thank You