

Agents day seminar

29th June 2018

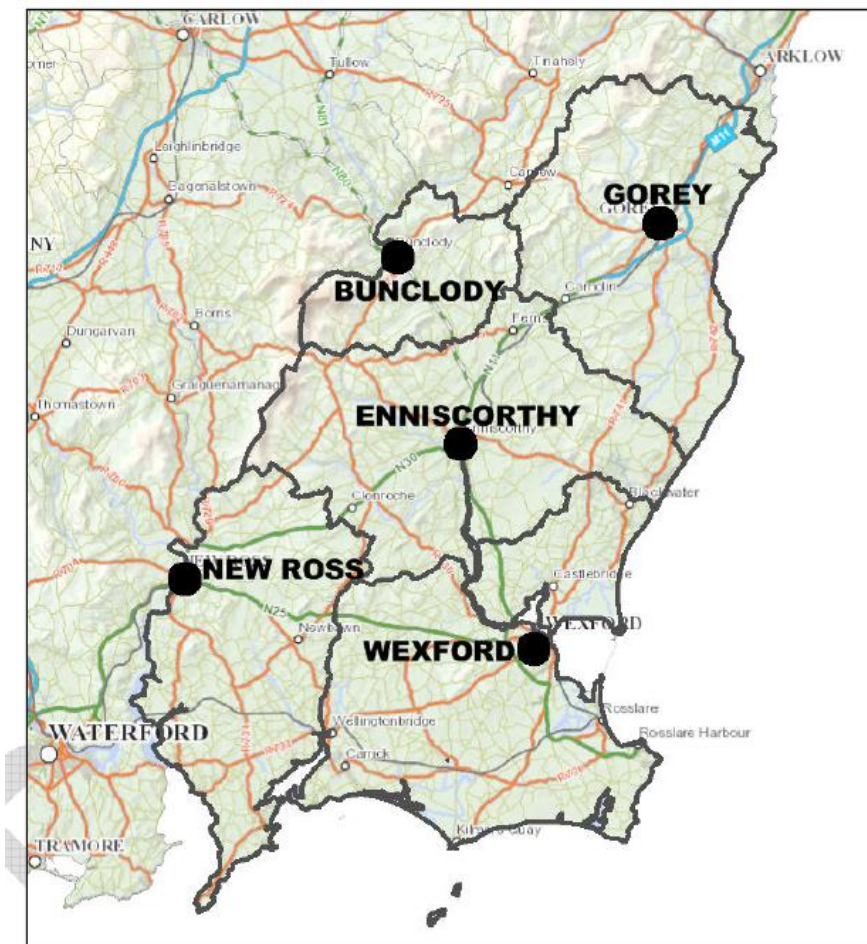
John Maher

Senior Assistant Chief Fire Officer

Presentation content

- **Wexford fire service overview, stats etc**
- **Volume 2**
 - **Overview**
 - **Main points**
 - **Issues arising**
- **Stairs (spiral)**
- **Stoves**

Wexford County Fire Service



- Operated and funded by Wexford County Council

- 5 Brigade areas and stations

- HQ in Wexford

- Three main sections

- Operations

- Prevention

- Emergency planning

- Respond to about **1000 calls per year**

- House fires

- Chimney fires

- Car crashes

- Rescue

- Hazardous chemicals

- Approx **90 house fires per year**



PREPARE

- Escape plan
- Night-time routine
- How to call the fire service



PREVENT

- Electrics
- Kitchen
- Bedroom
- Sitting room
- Stoves
- Candles
- Smoking



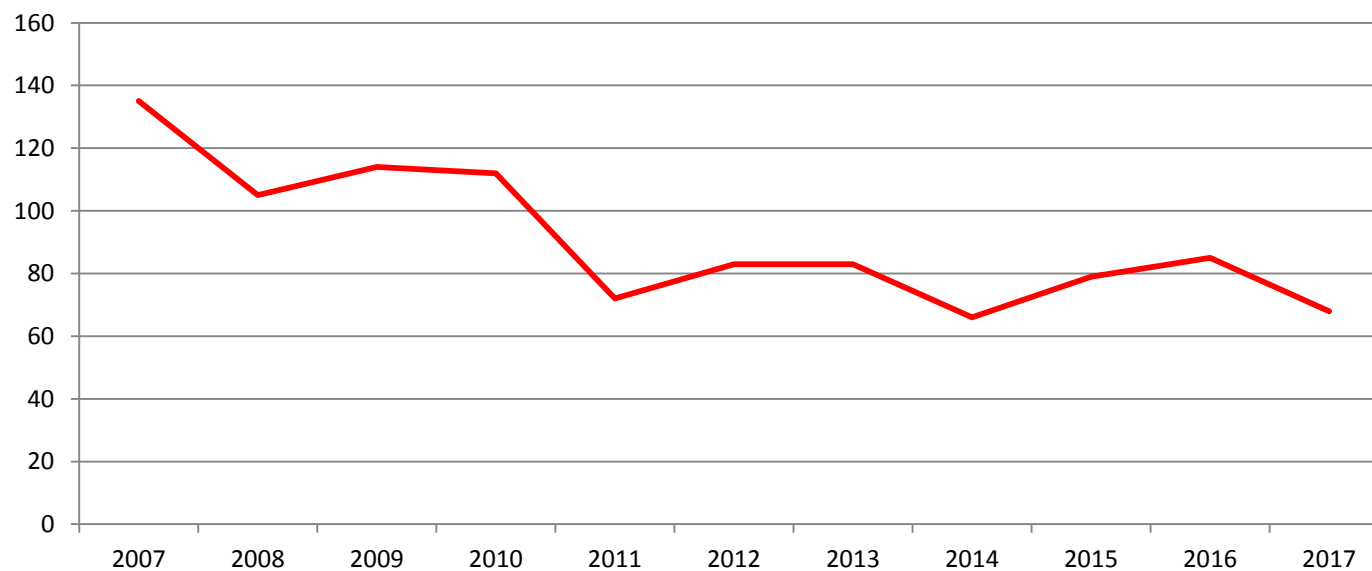
PROTECT

- Working smoke alarm
- How to test
- Where to put/how many

Community Fire Safety

House Fires

County Wexford Domestic fires 2007 - 2017



Fatal Fires

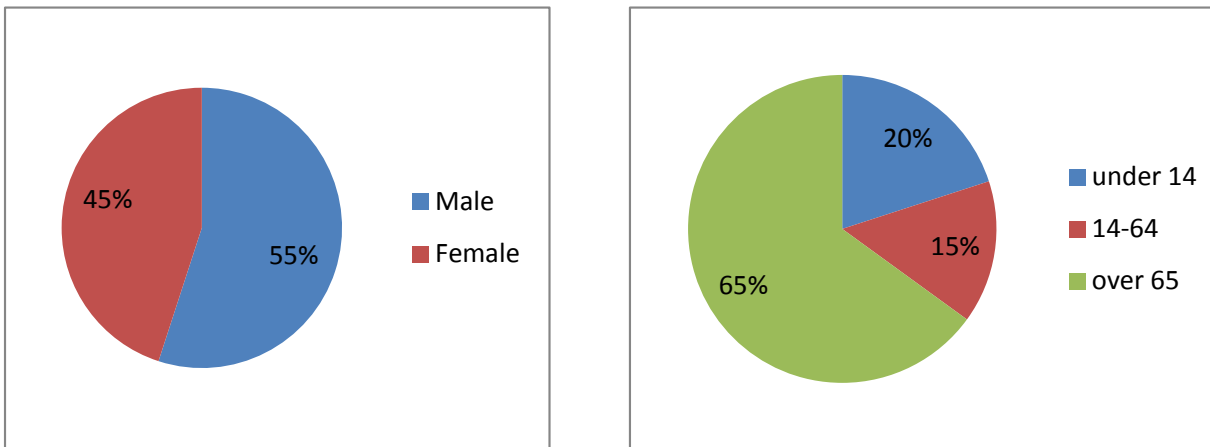


Figure C: Wexford fatal fires 1999 to 2016 demographic (20 fatalities over 18 years)

Station areas

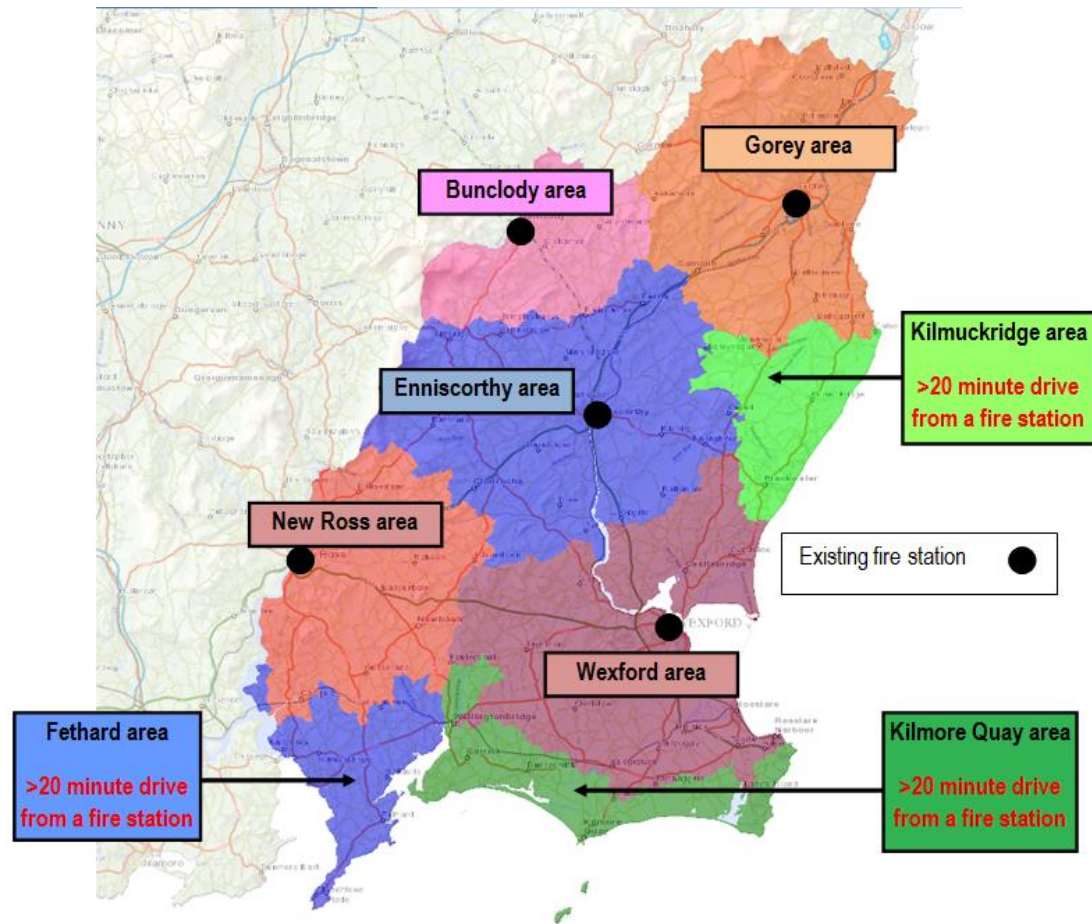
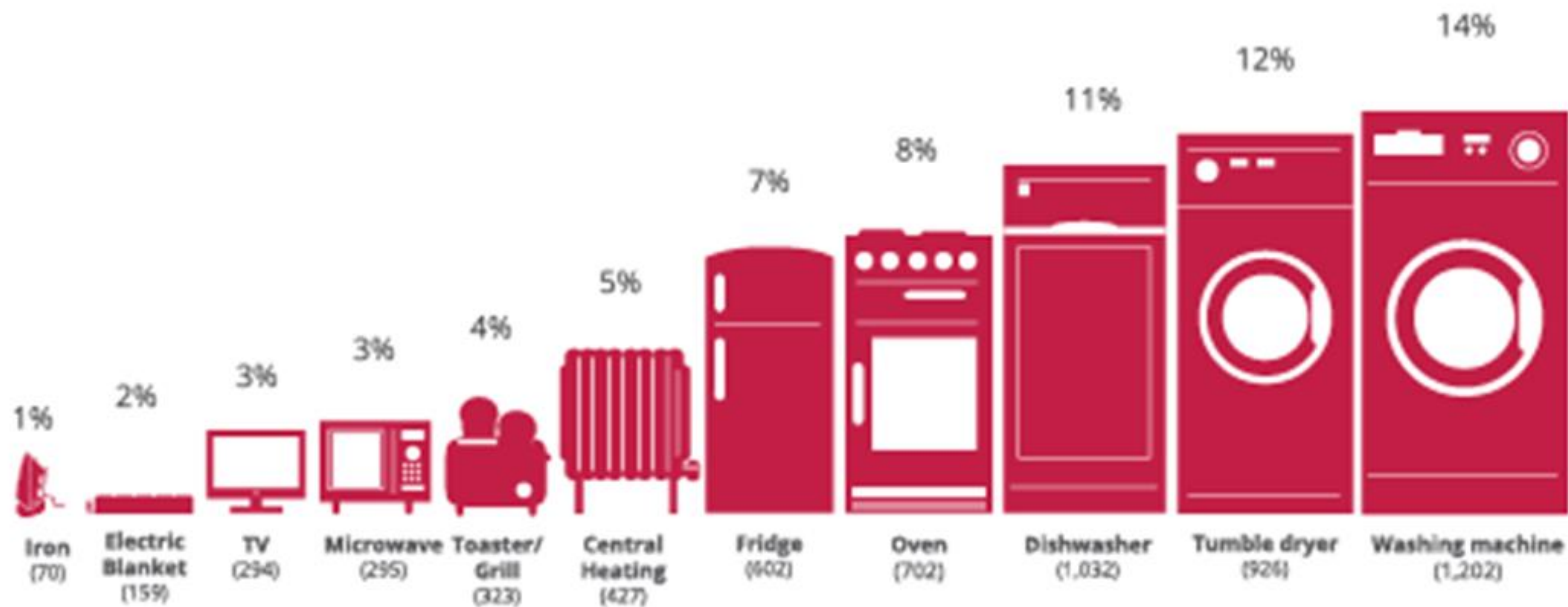


Figure 8.1. Areas of Wexford County greater than a 20min drive from a fire station in [3]

Electrics



Volume 2 objectives 2016

- **Early detection and warning of fire**
- **Improved protection of occupiers from fire**
- **New designated purpose group for community dwellings – 1 (d) introduced – instead of a congregated setting move people into housing in the community (home from home)**
- **Improved compliance with the regulations through the provision of a specific TGD for dwelling houses**
- **Compliance with, and reference to, new European Standards including the Eurocodes**

Fire Safety – Volume 2 – Dwelling Houses

- **Applies to works to dwelling houses, or buildings in which a material change of use takes place, where the works or the change of use commence or takes place, as the case may be on or after 1 July 2017.**
- **Google the above – freely available to all – encourage people to do this. All regulations are available.**
- **However, the adoption of an approach other than that outlined in the guidance is not precluded provided that the relevant requirements of the Regulations are complied with.**
- **Material alterations or changes of use of existing buildings such as heritage buildings, in these situations, alternative approaches based on the principles contained in the document may be more relevant and should be considered.**

Fire Safety – Volume 2 – Dwelling Houses

- **Legislation - Structure**
- **Section 0 General Guidance**
- **Section 1 (B6) Means of warning and escape in case of fire**
- **Section 2 (B7) Internal Fire Spread (Linings)**
- **Section 3 (B8) External Fire Spread (Structure)**
- **Section 4 (B9) Internal Fire Spread**
- **Section 5 (B10) Access and Facilities for the Fire Service**
- **Appendix A – Performance of Materials and Structures**
- **Appendix B – Fire Doors**
- **Appendix C – Measurement**
- **Appendix D – Loft Conversions**

Fire Safety – Volume 2 – Dwelling Houses

Key points to note in Section 0

- **0.1.2 Volume 2 – guidance on non complex dwelling designs and timber frame to I.S 440, but if over 15m in height or a complex design or alternative approach is used then references to Vol 1 may be needed.**
- **0.1.5 New category of dwelling – Purpose group 1 (d)**
- **0.1.7 Definitions**
 - Community dwelling house
 - Dwelling
 - Dwelling House
 - Gallery
- **0.1.9 Alternative approaches and relevant guidance references for heritage buildings etc**
- **0.1.10 Operation, maintenance and use – maintenance advice should be provided on FDAS to owner**
- **0.1.16 Independent schemes of certification – third party certification**

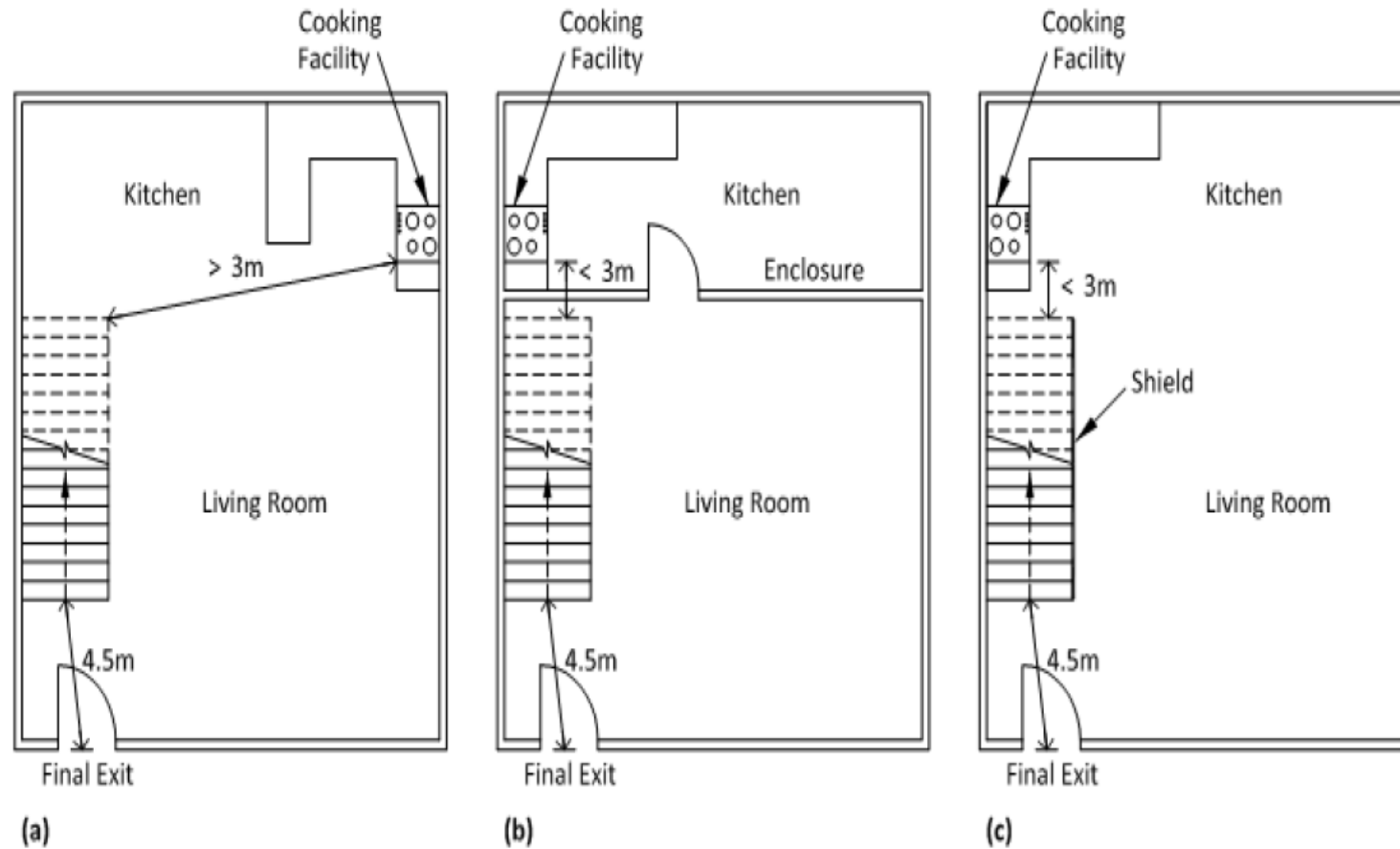
Fire Safety – Volume 2 – Dwelling Houses

- **Purpose Group 1 (a) – Dwelling with no storey > 4.5m** has one or two storeys
- **Purpose Group 1(b) – Dwelling with storey/s > 4.5m** will typically have three storeys above ground level and also has guidance for dwellings that have four or more storeys above ground level (7.5m kick in – alternative escape)
- **(Purpose Group 1 (c) – Flats and Maisonettes**
 - **BS5588: Part 1: 1990 and sub-section 1.4 of TGD-B;**
 - **BS 9991: 2015**
 - **Existing flats guide issued by DHPCLG.**
 - **Fire safety certificates required – horizontal separation)**
- **Purpose Group 1(d) – Community dwelling house**
 - **Fire safety in community dwelling houses – code of practice Sep 2017**
 - **Upper limit of 6 residents 8 bedrooms and limited to 3 storeys**

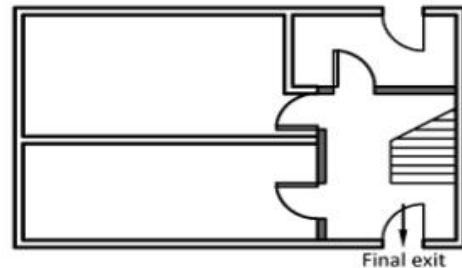
Means of warning and escape in case of fire. A dwelling house shall be so designed and constructed that there are appropriate provisions for the early warning of fire and there are adequate means of escape in case of fire from the dwelling house to a place of safety outside the building, capable of being safely and effectively used

- Issues do arise -
- Fire Authority (S13 of FSAs) advice on planning applications , will contact designer to re submit solutions as part of planning grant.

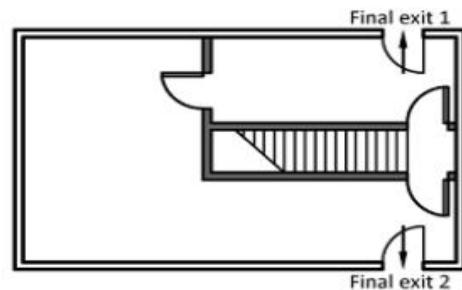
Stairs into the kitchen/ living area: diagram 1 clearer



Escape stairs - dwellings 4 storeys and more



(a) Protected stairway delivering directly to the final exit.



(b) Protected stairway affording access to two independent escape routes.

GROUND FLOOR PLANS

KEY

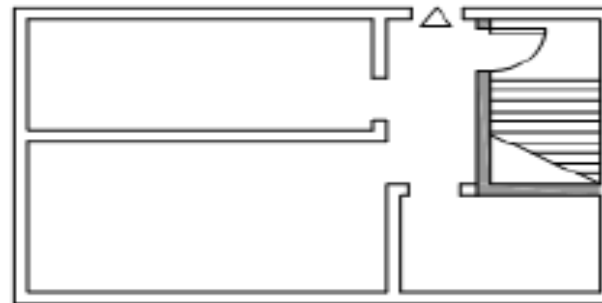


30 min. fire-resisting construction

Fire door (FD 20)

Storey over 7.5m – alternative exit - 4 storeys and more

Example of alternative exit



PLAN

Stair separated from landing to allow access to alternative exit

For timber frame construction dwelling with more than three storeys – automatic sprinkler system should be installed to BS 9251:2014

- **Fire detection and alarm systems**
 - **I.S. 3218 2013 --Grade D system: An installation of self-contained mains-powered smoke or heat alarms each provided with an integral standby power supply. Where multiple units are provided all devices shall be interconnected so that detection of fire by any one unit will provide an audible alarm from each unit. (Radio linked yes)**
 - **Category LD2 system for purpose group 1(a) and 1(b)**
 - **Category LD1 for purpose group 1 (d)**
 - **Appendix k of I.S. 3218, need this one for certification**

- **Fire detection and alarm systems**

Category LD2: Interconnected self-contained mains powered/battery backed Smoke/Heat Alarms (as Grade D above) shall be suitably located in:

- (1) all circulation areas that form part of an escape route within the dwelling, and
- (2) all high fire risk areas/rooms e.g. kitchen, living rooms, garages, utility rooms and
- (3) all bedrooms.

Where professional rooms, (see 1.3.9.6) are provided the FDAS should also cover this area

Category LD1: Includes all those areas specified in LD 2 but also includes all rooms and areas (including attics/lofts/other spaces) in which a fire might start, other than toilets, bathrooms and shower rooms.

? For the LD2 – include the attic

Section 1 Means of warning and escape in case of fire(cont.)

1.3.9.9 Galleries

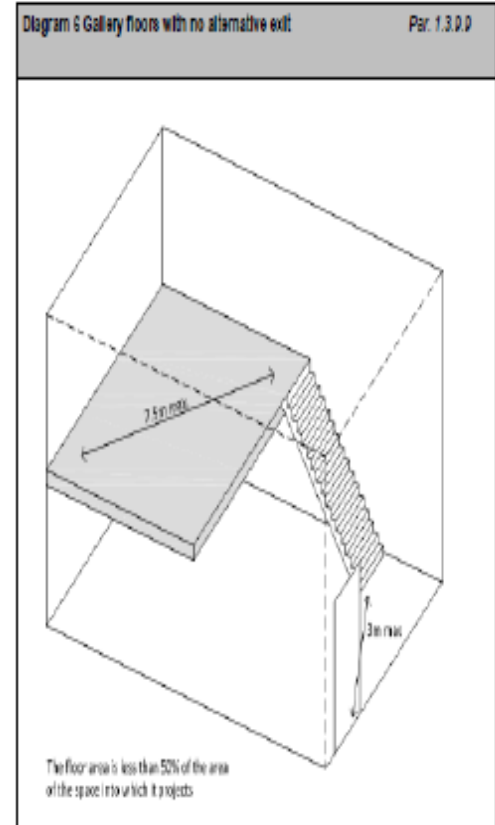
Treated as a storey to comply to 1.3.2, 1.3.3, 1.3.4

Requires fire resistance to floor(in all cases)

Second means of escape (window or door)

Gallery with no alt. exit designated only where:

- It is not designed as a sleeping area
- Does not project into more than 50% of room
- 3m travel distance to door in room
- 7.5 m from of stairs head to any point on gallery
- Cooking facilities either:
- Enclosed in storey height construction
 - Not less than 3m from stair(see Dig.6)
 - Does not prejudice escape from gallery



Part K

Loft Conversions

1.1.15 Spiral stairs with goings less than recommended in Table 2 of BS 5395 Part 2: 1984 and alternating tread stairs would not normally be regarded as acceptable. However, they may be considered in the conversion of a loft where space is limited i.e. where there is not enough space to accommodate stairs satisfying par. 1.1.1 to 1.1.14 above and the stairs serves only accommodation which will be used infrequently and, where the accommodation includes only one habitable room.

Section 3 Internal Fire Spread (Structure)

3.5.3 Limits to Compartment sizes

Clarification on extent of compartmentation required in dwelling houses.

3.5.4.3 exception to requirement for non combustible separating walls only allowed in T.F. construction to IS 440

3.5.4.6 Diagram 10

Junction of separating wall and roof

3.6.2 Provision of cavity barriers

Deletion of Dig. 17

Clarification of requirements

Diagram 12 Vertical cavity barrier at junction of separating wall

3.7.8. Highlight Reference to ASFP publications

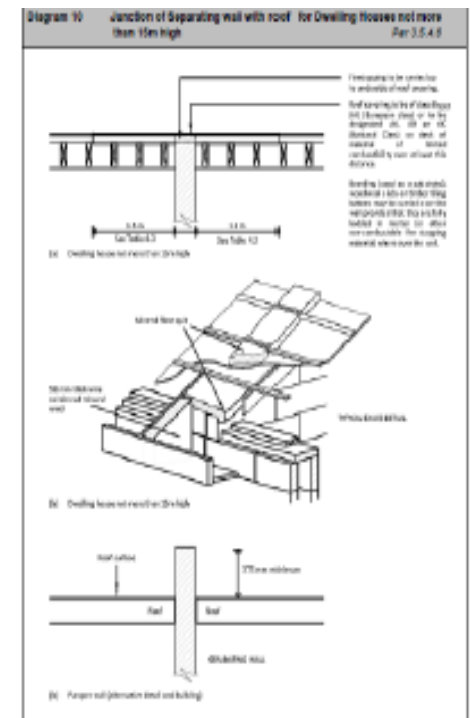
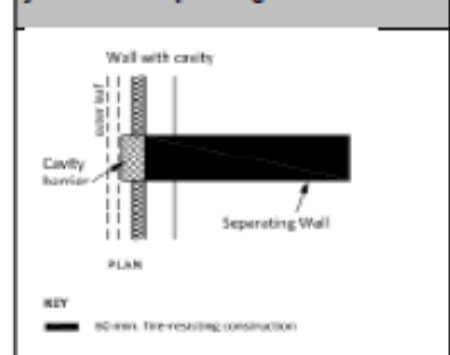


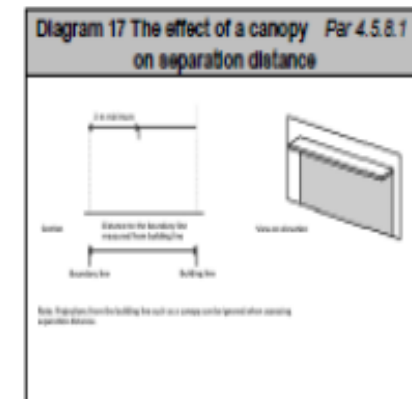
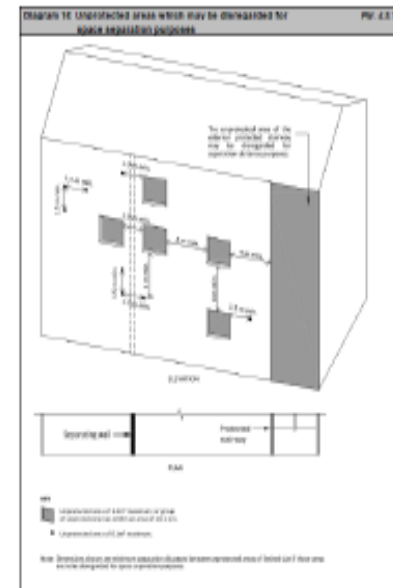
Diagram 12 Vertical cavity barrier at junction of separating wall Par. 3.6.2.



Section 4 External Fire Spread

4.5.7 Diagram 16 Unprotected areas-revised diagram

4.5.8.1 Diagram 17 New diagram and requirement on the effect of a Canopy on separation distance



Section 5 Access and facilities for the Fire Service

5.4.2 Provision of Vehicle access-45m to principal entrance

5.4.4 Design of access roads within site of dwelling house

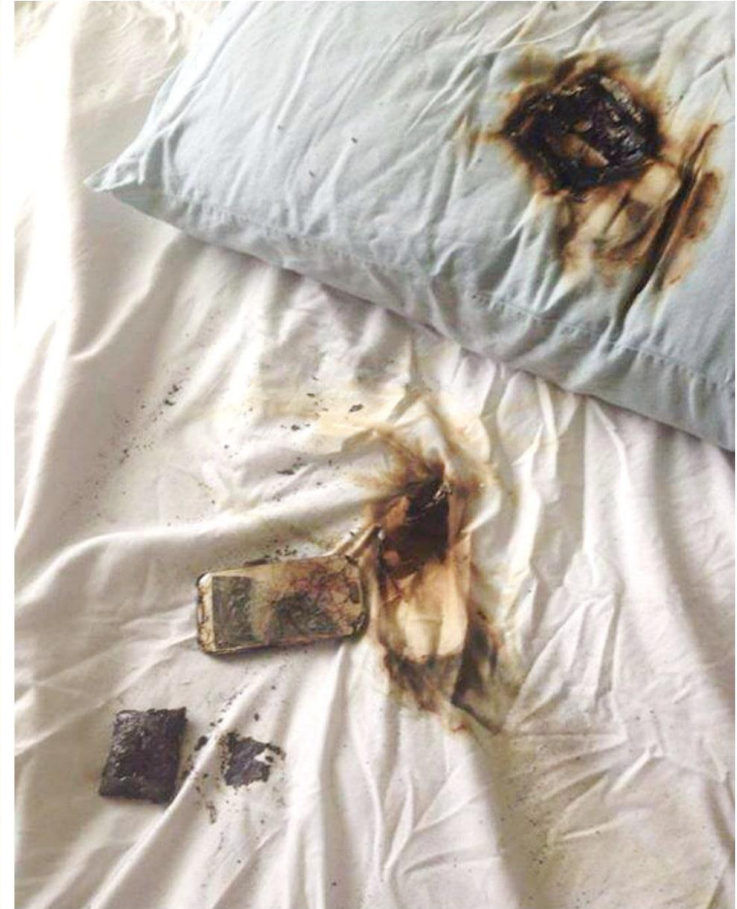
Table 5.1 Note: includes reference to a hammerhead and *“Recommendations for site development works for housing areas”* 1998

5.4.5.1 Photovoltaic Panels – provision for isolation – ref ET101 requirements:

Electrics



Bedroom



Stoves

- **Technical Guidance Document TGD Part J - Heat Producing Appliances 2014**
- **BFCMA document**
- **Installer credentials – granny**
- **Existing and new homes – who signs off**
- **Where was stove made – CE**
- **Flue – angles, connections where**
- **Draught versus ventilation**
- **Solid non combustible chimney or up through the house or out through the wall?**
- **CO alarm and smoke detector in attic**
- **Furry friends and flue life span**

Stoves



Stove fires



Stove fires



Night-time Routine





Class B standard fire appliance – who wants this?