Technical Guidance Document B
2006 Section 1.5 Dwelling Houses

Wexford County Fire Service

23rd November 2016

Use of the Guidance

"In general, Building Regulations apply to the construction of new buildings and to extensions and material alterations to buildings. In addition, certain parts of the Regulations apply to existing buildings where a material change of use has taken place"

".....Where works are carried out in accordance with the guidance in this document, this will prima facie, indicate compliance with Part B of the Second Schedule of the Building Regulations..."

"In the case of material alterations or changes of use of existing buildings, the adoption of the guidance in this document without modification may not, in all particular circumstances be appropriate."

"No works shall be carried out to a building which would cause a new or greater contravention in the building of any provision of these Regulations."

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Fire Safety Building Regulations

- **B1 Means of escape in case of fire:**

  "A building shall be so designed and constructed that there are adequate means of escape in case of fire from the building to a place of safety outside the building, capable of being safely and effectively used."

Means of escape in Dwelling Houses

- Dwelling houses will generally have a single escape stairway and there is a risk that this may become unusable due to smoke. Protection/enclosure to the stairway is required.

- Windows, if suitably located and constructed, can in some situations provide an alternative means of escape. With increasing height, windows become unsuitable for escape but may be useful for rescue.
- Early warning of fire can be achieved by the provision of an appropriate smoke detection and alarm system.

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2 storey houses

- Any habitable room which is an inner room should be provided with a window for escape or rescue;

- The stairway should be enclosed in storey height construction and discharge directly to open air; or
  - If there is a less favourable open plan arrangement the stairway discharges to within 4.5m of a door at ground floor level leading directly to open air.
  - The stairway does not discharge into a kitchen;
  - The kitchen is enclosed in storey height construction or where the stairway passes within 3m of the kitchen, it is enclosed in storey height construction.

3 storey houses

- No habitable inner rooms except at 1st and 2nd floor level and is provided with window escape/rescue;

- Unless the upper storey is separated from the lower storey by FR construction and is provided with an alternative escape route to its own exit, the internal stairway should:
  - Be a protected stairway;
  - Connect the ground to all upper storeys;
  - Either deliver directly to a final exit or give access to at least two independent escape routes delivering to alternate final exits;

>3 storey houses

- No habitable inner rooms except at ground and 1st floor level and is provided with window escape/rescue;
- The internal stairway should:
  - Be a protected stairway;
  - Connect the ground to all upper storeys;
  - Either deliver directly to a final exit or give access to at least two independent escape routes delivering to alternate final exits;
- An alternative escape route by way of an escape stairway should be provided from each storey which has a floor 7.5m or more above the ground or access level. If this is a protected stairway then it should be separated from the lower floors by FR construction.

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>3 storey houses

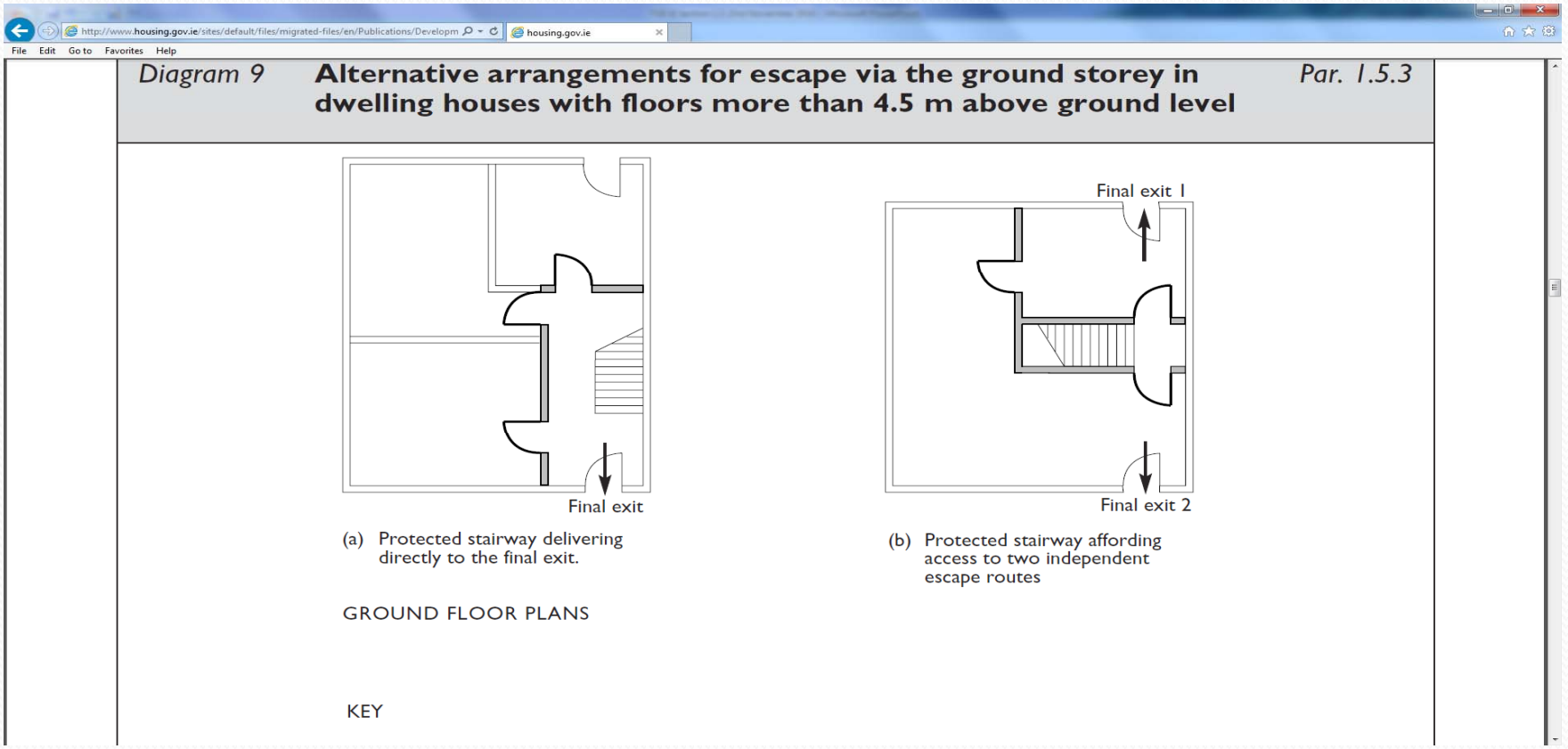

Diagram 9 **Alternative arrangements for escape via the ground storey in dwelling houses with floors more than 4.5 m above ground level** *Par. 1.5.3*

Final exit

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

Final exit 1

Final exit 2

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

GROUND FLOOR PLANS

KEY

FDAS

- LD1 or LD2 (BD5839 Part 6 2004 compliant);

- LD1 system
  - all circulation areas that form part of the escape route;
  - Rooms/areas except for toilets, bathrooms and shower rooms.

- LD2 system
  - all circulation areas that form part of the escape route;
  - High fire risk rooms/areas including the kitchen and living room.

Attics (Stoves)????

Windows for Escape or Rescue

- Unobstructed clear open area of 0.33m2;
- Minimum width/height of 450mm;
- Bottom of window between 800mm – 1100mm above floor;
- Dormer window or rooflight less than 1.7m from eaves measured along the slope of the roof;
- Area beneath should be suitable to support a ladder and be accessible by the fire services (or others) for rescue purposes;
- Any roof, balcony or canopy under should be structurally adequate to support those escaping or rescuing.

Loft Conversions

- If two storey and converting existing roof space then the following can be applied as an alternative to the above:
  - Enclose existing stairs in FR walls/partitions:-
    - Extend to final exit; or
    - Give access to at least two exits separated by FR construction.
  - New stairway may rise over existing stairs within the same enclosure; or
  - New stairway may rise from an existing room if separated from the existing room and the rest of the house by FR construction with a self closing door top and bottom;
- Doorways;
- Glazing;
- The new storey should be separated from the rest of the house by FR construction.

General Provisions

- Inner Rooms
  - A habitable room should not be an inner room unless it is located at basement, ground or first (and provided with window escape/rescue);
- Windows for escape or rescue
  - All bedrooms in dwelling houses other than those with a door at ground level should be provided with window escape/rescue;
- Heat producing appliances to Part J recommendations e.g. Stoves
- Electrical installations to ETCI National Rules

General Provisions

- Basements should:-
  - be separated from ground by FR construction;
  - a stairway serving the upper levels should not serve it;
  - Any inner habitable room should be provided with an alternative MOE;
  - The FDAS should cover the basement areas.

Fire Safety Building Regulations

- **B3 Internal Fire Spread (Structure):**

  (1)"A building shall be so designed and constructed that, in the event of fire, its stability will be maintained for a reasonable period."

  (2) (a)"A wall common to two or more buildings shall be so designed and constructed that it offers adequate resistance to the spread of fire between those buildings."

  (2)(b)"A building shall be sub-divided with fire resisting construction where this is necessary to inhibit the spread of fire within the building."

  (3)"A building shall be so designed and constructed that the unseen spread of fire and smoke within concealed spaces in its structure or fabric is inhibited where necessary."

  (4)"For the purposes of sub-paragraph 2(a), a house in a terrace and a semi-detached house are each to be treated as being a separate building"

Dwelling Houses

- Any wall separating semi-detached dwelling houses, or houses in a terrace, should be constructed as a compartment wall; and
- The dwellings should be considered as separate buildings.

- If a small garage is attached to (or forms part of) a dwelling house, the garage should be separated from the rest of the house:-
  - 30 min FR for any wall / floor between it and house (incl. FD30 rated Fire Doors);
  - Any ope to be at least 100mm above garage floor;

Fire Safety Building Regulations

- **B5 Access and Facilities for the fire service**

A building shall be so designed and constructed that there is adequate provision for access for fire appliances and for such other facilities as may be reasonably required to assist the fire service in the protection of life and property.

Dwelling Houses

- Department recommendations for site development works for housing areas; and
- Section B5 of TGD-B 2006
- Fire fighting water:-
  - 480 litres/minute for two storey housing estates;
  - 1200 litres / minutes for >3 storey multi occupied housing estates.