Building Regulations & Guidance issued!

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Advisor (Retired)
Building Standards Section
Overview

1. Change to TGD B and need for testing to EN test standards.

2. Guidance issued for:
   1. TF walls,
   2. floors and
   3. roofs. (Coming soon)
Building Regulations – Current Status

- **Part A** – Structure (2012)
- **Part B** - Fire Safety (2017)
- **Part C** - Site Preparation and Moisture Resistance (2018)
- **Part D** – Materials & Workmanship (2013)
- **Part E** – Sound (2014)
- **Part F** - Ventilation (2009)
- **Part G** – Hygiene (2011)
- **Part K** - Stairways, Ladders, Ramps & Guards (2014)
Dept. Concerns

- External walls/loadbearing walls fire resistance
- Party walls in Timber frame
- Flooring types now being used and their fire resistance especially “Engineered joists”
- Penetrations of the fire resistant layer
- Trusses requiring fire resistance from the underside
Fire Test Chamber

Thermocouples in Chamber
External wall after fire test
External Wall 30 Min. Fire Resistance

Plan

Figure 2  Wall Type 2 (WT2) - Service Cavity Wall
External Wall 30 Min. Fire Resistance

Figure 4  Wall Type 4 (WT4) - Service Cavity Wall
External Wall 30 Min. Fire Resistance
New Fire tests since the release of the Guidance

Wall Types WT 2 & WT4 tested with 12.5mm Type F board.

Both lasted substantially longer than 30 minutes.

12.5mm Type F (Fire line board) can be used in place of 15mm Type A plasterboard on these constructions.
Separating (Party) Wall

• Integrity of wall just being breached
• Note jacks underneath loading studs
• 15mm Type F facing board
• 15mm Type A behind
• Both fixed directly to studs with screws or staples
• 9mm OSB racking board.
• Fibreglass between studs.
Separating Wall 60 Min. Fire resistance

Plan

Figure 5  Separating Wall Type 1 (SWT1)
Hot News Internal wall 30 Min. Fire Resistance to EN 1365

• Load bearing Timber stud
• 12.5mm Type A plasterboard both sides
• Meets 30 Minutes requirement.
• Also achieved 30 Min. with 9mm OSB as racking board
Engineered Joists

IS 440 8.8.3 States
“These joists usually have specific ceiling constructions for fire resistance (different to those for solid joists) and the designer's recommendations (or those in this Standard if they are more onerous) in these areas shall be followed.”
Engineered Joists

- 15mm Type A plasterboard
- Metal web joists @400mm centres
- Flooring over
- Loaded for dwelling
Engineered Joists
Floor Fire Test
Floor Fire Test
Solid Joist on TF Wall

Section

Figure 1(a) Solid Joists @ 400mm c/c
Figure 2(a) Metal Web Joists @ 400mm c/c
I Joist on TF Wall

Section

Figure 3(a) I Joists @ 400mm c/c

- STRUCTURAL DECK - Minimum 18mm T&G, OSB 3, Plywood or P5 Chipboard
- I JOIST AT 400mm c/c (Min. Depth 219mm)
- 47 x 47 min. Solid Timber Flange
- 10mm Thick OSB 3 Web
- 15mm Type A Plasterboard
- Rim Board to be 44mm x (Depth of Joist)
Internal Stud/Joist junction
Floors with open void space

- Where floors are constructed to have open void space by the use of “Engineered Joists” or counter battens below traditional solid joists then:
- Penetrations, such as down-lighters, soil vent pipes or ventilation duct heads must be fire stopped by the use of fire collars, fire hoods or fire rated products
Engineered Joists

30 minutes fire resistance: No apertures (downlighters, service penetrations etc.) should be present except where fitted with an approved light fitting or an appropriate proven penetration sealing system.
Engineered Joists

30 minutes fire resistance: No apertures (downlighters, service penetrations etc.) should be present except where fitted with an approved light fitting or an appropriate proven penetration sealing system.
30 minutes fire resistance:
Only openings fitted with an approved light fitting or an appropriate proven penetration system are satisfactory. No other openings are permitted.
Truss roofs requiring 30 min. ceiling

- 3 storey dwellings
- 2 storey dormers
- Bungalow dormers
- Ceilings over garages
Truss roofs requiring 30 min. ceiling

- 15mm type F plasterboard.
- On 47mm thick trusses at 600mm centres.
- Board joints nogged with 35x60mm @1200mm centres
- With insulation over
Truss roofs requiring 30 min. ceiling
Truss roofs requiring 30 min. ceiling

- Roof Loading
- service loading
Truss roofs requiring 30 min. ceiling
Joint with Gang nail plate after fire
One board solution BUT on 47mm truss

ALL BOARD EDGES SUPPORTED ON 35x60mm BATTENS

47mm Wide Truss @ 600mm c/c
Airtightness Membrane

15mm Type F Plasterboard (Directly fixed to Trusses)

ALL PENETRATIONS TO BE FIRESTOPPED

Figure 1(a) Roof with 47mm Trusses @ 600mm c/c
One board solution with service void BUT on 47mm truss

ALL BOARD EDGES SUPPORTED ON 35x60 BATTENS

47mm Wide Truss @ 600mm c/c
Airtightness Membrane
15mm Type F Plasterboard (Directly fixed to Trusses)
35x44mm Battens @ 400mm c/c
Service Void
12.5mm Type A

NO PENETRATIONS TO TYPE F PLASTERBOARD (UNLESS FIRESTOPPED)

Section
Figure 1(b) Roof with 47mm Trusses @ 600mm c/c (with service void under)
One board solution on counter battens @400mm with all edges nogged on 35mm trusses @600mm

Figure 2 Roof with 35mm Trusses @ 600mm c/c
(Single Board Solution)

35mm Wide Truss @ 600mm c/c
Airtightness Membrane
35x60mm Battens @ 400mm c/c
15mm Type F Plasterboard
(Fixed to Battens)
ALL BOARD EDGES SUPPORTED ON 35x60mm BATTENS

ALL PENETRATIONS TO BE FIRESTOPPED
Two board solution on counter battens @400mm on 35mm trusses @600mm (No Noggins)

ALL PENETRATIONS TO BE FIRESTOPPED
Dormer: One board solution with all edges nogged on 47mm truss
Two board solution on counter battens @400mm with all edges nogged on 35mm trusses@600mm
### 3 Storey Dwelling Requirements

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Thank You for your attention!

GENERAL ENQUIRIES

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