

Noel Mc Kenna

**Technical Guidance Document F**  
**VENTILATION 2002**

08/10/2006

# Introduction

- The purpose of the discussion will give an outline of the requirements within the Guidance Document and its application to the built environment.
- My Name is Noel Mc Kenna, and I am a Chartered Building Surveyor & Engineer. I lecture in Dundalk Institute of Technology and I own and manage a multi disciplinary practice in Co Monaghan.

TGD F

# Topics of Discussion

- The Requirement 'F1 & F2'
- Dwellings
- Non Domestic Dwellings
- Condensation in roofs
- Defects

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# Topic One

- The requirement F1 & F2.  
(F1)

“Adequate means of ventilation shall be provided for people in buildings, including adequate provision for the removal of water vapour from kitchens, bathrooms, and other areas where water vapour is generated.”

- (F2) “Adequate provision shall be made to prevent excessive condensation in a roof or in a roof void above an insulated ceiling.”

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# Dwellings

**Habitable rooms** other than a utility, kitchen, or a room containing a kitchen the following provisions for ventilation should be adequate:

Back ground ventilation having an area not less than  $6500\text{mm}^2$  and

A ventilation opening suitable for rapid ventilation having a total area of at least  $1/20^{\text{th}}$  of the floor area of the room.

# Dwellings continued 1

**Kitchen & Utility rooms** or a room containing a kitchen the following provision should be adequate:

**Background 6500mm<sup>2</sup> and**

**Rapid ventilation 1/20<sup>th</sup> floor area and**

**Mechanical extract ventilation extracting at a rate of 60lit / sec or at a rate of 30lit / sec were a cooker hood is in place. Or**

**Passive stack ventilation in accordance with BRE 13/94 incorporating an auto humidity sensitive vent inlet control grille.**

## Dwellings continued 2

ROOM	RAPID VENTILATION	BACK GROUND	EXTRACT VENT RATE
Habitable	1/20 <sup>th</sup> floor area	6500mm <sup>2</sup>	-----
Kitchen	1/20 <sup>th</sup> floor area	6500mm <sup>2</sup>	60lit / sec 30 lit / sec or PSV
Utility	1/20 <sup>th</sup> floor area	6500mm <sup>2</sup>	30 lit / sec or PSV
Bathroom	1/20 <sup>th</sup> floor area	-----	15 lit / sec intermittent or PSV
Sanitary	1/20 <sup>th</sup> floor area	-----	15 lit / sec or PSV

# Dwellings continued 3

**Ventilation of Habitable rooms through other rooms and spaces. E.g. conservatory which may be closable, rapid ventilation must not be less than  $1/20^{\text{th}}$  the combined floor area.**

**Ventilation of non-occupiable internal rooms:**

Height of Habitable rooms

- 2.4m to ceiling
- 2.1m to underside of lowest beam
- 2.1m to underside of bay window
- Area B not less than Area A / 2



# Non Domestic Dwellings

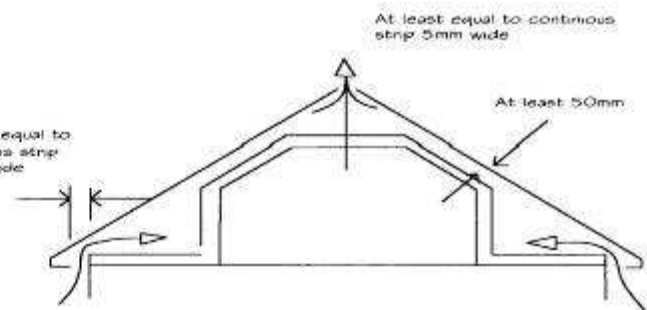
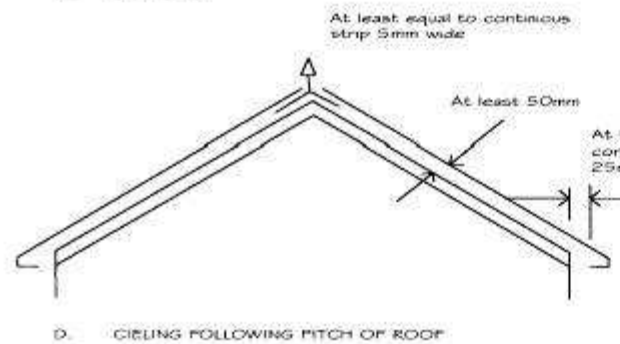
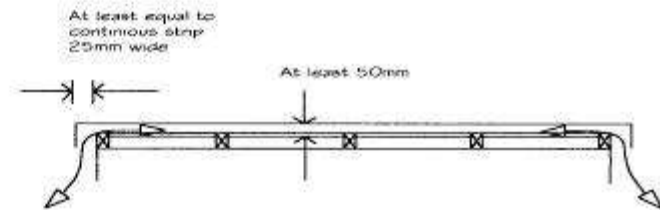
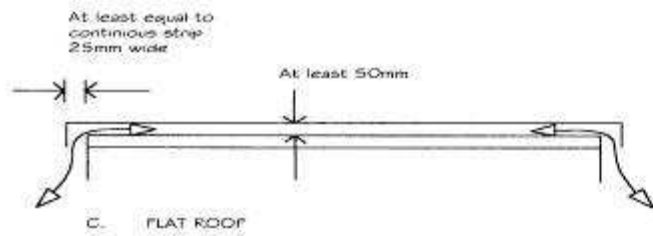
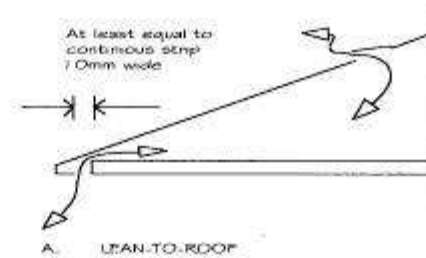
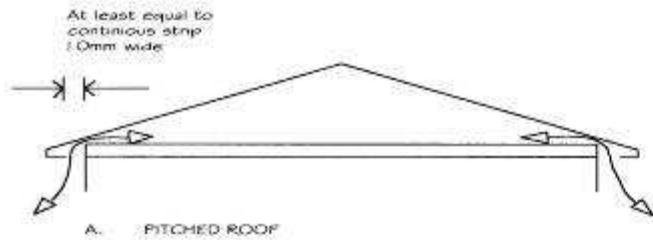
Kitchen	60 lit / sec – 30 lit /sec
Bathroom / shower	15 lit / sec bath / shower
Sanitary / washing	6 lit / sec / Wc or 3 air changes per hour

Rest room / smoking	16 lit / sec + 6500mm <sup>2</sup>
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# Condensation in Roofs

- Condensation in a roof and in the spaces above insulated ceilings should be limited so that, under normal conditions
- (a) The thermal performance of the insulating materials, and
- (b) The structural performance of the roof construction:
- Will not be substantially and permanently reduced.

## VENTILATING ROOF VOIDS



## Defects

- Dry rot
- Mould / algae
- Building unsuitable for occupation
- Building element failure
- Expensive to repair

# SUMMARY

- Remember there are buildings with special requirements, these include schools, workplaces, hospitals, commercial kitchens, plant rooms and car parks.
- Consult appropriate design guides and BRE / EU / BS standards