

## Scottish Resilience

### Scottish Fire and Rescue Advisory Unit

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Chief Officers



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Dear Chief Officer

## DEAR CHIEF OFFICER (SCOTLAND) LETTER 10/2009

### BUILDING CONSTRUCTION INFORMATION

1. This letter is intended to raise awareness of modern construction trends; to remind Fire and Rescue Services of the specific problems and risks associated with buildings which incorporate sandwich panel construction; and to remind of the continuing requirement to have in place effective premises risk information.

#### Modern construction trends

2. Recognising building construction types and the impact that building construction and features may have on fire behaviour, assists firefighters and incident commanders to make an assessment of the risks at operational incidents, including being alerted to critical safety issues.

3. Modern construction trends and the use of innovative construction products and techniques has resulted in a move away from traditional building materials. Some examples are the use of lighter and synthetic materials such as engineered wood, structural forms which “mimic” traditional forms of construction, increasing use of polymeric materials in construction and the use of panellised systems. As a consequence, it may be difficult during a fire to identify construction types and materials used.

4. Some information on modern construction is available in the CLG report '[BD 2503 Innovative Construction Products and Techniques](#)' which was issued in 2008; though modern construction evolves quickly as new building products come onto the market.

5. The performance of modern buildings in fire may be vastly different from traditional buildings in areas such as fire growth, load-bearing ability and failure. **Firefighters need to be aware that there have been advances in building construction and the associated difficulty in assessing performance in a fire.**

6. FRSs are requested to report any noteworthy fire performance involving modern construction to SFRAU using the 'Fires and Incidents of Special Interest' procedure. The procedure is contained in Dear Firemaster Letter 3/2004.

### **Sandwich Panel Construction**

7. Firefighters should have an understanding of the different generic types of sandwich panels used in building construction and need to be aware of the risks posed when fighting fires in buildings which include sandwich panel construction.

8. Sandwich panels can have different core materials. Panels with a combustible core can add to the fire loading and affect fire performance. Information in respect of sandwich panel construction has previously been issued. Dear Firemaster Letters (DFM) 8/1994, 3/1996 and 13/1999 alerted FRSs to the problems associated with sandwich panels. The Fire Research and Development Group report 'Firefighting Options for Fires Involving Sandwich Panels' issued in 1999, described the hazards and appropriate actions that need to be taken to maintain firefighter safety whilst fighting fires in buildings of sandwich panel construction.

9. FRSs are reminded of the importance of this existing guidance but also need to be mindful that since the issue of the guidance, there have been developments in the manufacture and use of sandwich panels, such as the use of flammable blowing agents.

10. Where operational premises risk information is held in respect of buildings containing sandwich panel construction, this should include a record of the existence of the panels, the nature of the panel core and the potential fire performance.

### **Risk Information**

11. Fire and Rescue Authorities and Boards have a duty to make arrangements for obtaining information to comply with their duty under sections 9 (firefighting), 10 (road traffic) and 11 (other functions) of the Fire (Scotland) Act 2005. Section 27 of the Act contains powers for authorised employees to obtain this information.

12. Similarly, there is a requirement under the Health and Safety at Work etc Act 1974 and specifically, the Management of Health and Safety at Work Regulations 1999, to have appropriate arrangements to identify risks to health and safety and provide relevant and comprehensible information about those risks in order to secure health and safety.

13. The requirement to provide information about risks is potentially wide and includes the provision of operational premises risk information. FRSs are reminded that as part of the legal responsibility, they should have an effective system of operational premises risk information that contains safety critical information on hazards and risks to assist operational personnel and incident commanders in assessing and evaluating risk to identify the preventative and protective measures to be taken.

14. Arrangements should be in place to ensure that relevant information is recorded, accessible and provided in a suitable format. Information recorded should, where appropriate, include building construction features and the potential performance in fire.

15. Since 1 May 2005 there has been a requirement for local authorities to hold information on construction of buildings through a building standards register. Whilst this register mainly applies to new buildings and those existing buildings being altered, extended or converted, information from the register on construction specifications, could inform operational preplanning.

16. The provision of information to operational staff on premises risk is included in the ongoing CLG programme of development of national operational guidance and it is expected that national guidance will be issued in due course.

Yours faithfully

A handwritten signature in black ink, appearing to read 'B Fraser', written in a cursive style.

**BRIAN FRASER**  
**Head of the Scottish Fire and Rescue Advisory Unit**