

NHMF Maintenance Conference – 25th January 2011

The past, the present and the future

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BRE Fire and Security

Overview

- UK fire statistics
- Learning from a past incident
- Where is the progress?
- Looking forward

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Statistics



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Learning from a past incident



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Learning from past incidents



Knowsley Heights, Liverpool, April 1991

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Where is the progress?



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Where is the progress?

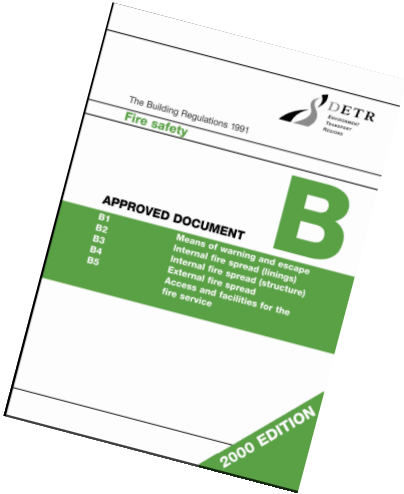
Old guidance on external cladding

External wall construction

13.7 The external envelope of a building should not provide a medium for fire spread if it is likely to be a risk to health or safety. The use of combustible materials for cladding framework, or of combustible thermal insulation as an overcladding or in ventilated cavities, may present such a risk in tall buildings, even though the provisions for external surfaces in Diagram 40 may have been satisfied.

In a building with a storey 18m or more above ground level, insulation material used in ventilated cavities in the external wall construction should be of limited combustibility (see Appendix A). This restriction does not apply to masonry cavity wall construction which complies with Diagram 32 in Section 10.

Advice on the use of thermal insulation material is given in the BRE Report *Fire performance of external thermal insulation for walls of multi-storey buildings* (BR 135, 1988).



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Where is the progress?

New guidance on external cladding

External wall construction

12.5 The external envelope of a building should not provide a medium for fire spread if it is likely to be a risk to health or safety. The use of combustible materials in the cladding system and extensive cavities may present such a risk in tall buildings.

External walls should either meet the guidance given in paragraphs 12.6 to 12.9 or meet the performance criteria given in the BRE Report *Fire performance of external thermal insulation for walls of multi storey buildings* (BR 135) for cladding systems using full scale test data from BS 8414-1:2002 or BS 8414-2:2005.

The total amount of combustible material may also be limited in practice by the provisions for space separation in Section 13 (see paragraph 13.7 onwards).



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Where is the progress?



The Whiteinch block, Curle Street Glasgow
February 2008 - Permarock render system

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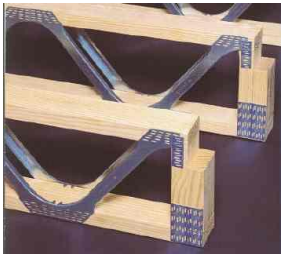


Looking forward - Structure



Tyres

Structural
insulated panel -
SIP



Truss web
steel joist

Straw



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Looking forward - Insulation



Sheep's wool is a natural insulation made into slabs from wool from British hill sheep
High Nitrogen content



Hemp Batt insulation is made of natural hemp fibres and treated with inorganic salts to provide fire resistance

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Looking forward – Green roofs



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Looking forward - Technology



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Summary

Statistics

- Fire deaths have decreased by approximately 50% over the past 40 years
- Increased awareness raising as well as improved regulation

Learning from a past incident

- Lessons from the past are being learnt
 - Mechanism for investigation of incidents
 - Further research to build the evidence base

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Summary continued

Where is the progress

- Process of investigation, research, and implementation works
 - Revisions to Approved Document B
 - Revisions to British Standards

Looking forward

- We need to be aware that the innovations in designs, products and materials that are supporting more sustainable and environmentally friendly buildings may introduce unexpected fire risks
- We need to ensure that the fire issues are dealt with logically and professionally and not subject to simple commercial pressures

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Postscript

"Those who cannot learn from history are doomed to repeat it."

"Those who cannot remember the past, are condemned to repeat it,"

From *Reason in Common Sense* 1905-1906. George Santayana (1863–1952), U.S. philosopher, poet.

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Thank you

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