



THE INSTITUTION OF FIRE ENGINEERS

FOUNDED 1918 • INCORPORATED 1924

Learning Lessons from Global Events

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Past President and CEO of The Institution of Fire Engineers

Neil Gibbins QFSM FIFireE

- 40 years in fire- FF to Acting CFO
- National lead- CFOA- Fire protection
- Lead implementation of The Fire Safety Order
- President of IFE
- CEO of IFE
- Now strategic advisor- lead for IFE -Grenfell



IFE objectives

OUR VISION:

A global organisation of fire professionals striving to build a safer society

OUR MISSION:

To promote, encourage and improve the science, practice and professionalism of fire engineering

OUR VALUES:

Inclusivity, professionalism, value, learning, responsibility, independence and openness



Learning Lessons

- Sharing knowledge
- Identifying cause/reason
- Identifying improvements
- Measuring success



This session

- Historical perspective
- International challenges
- UK activity post Grenfell
- IFE support for global learning



Historical perspective

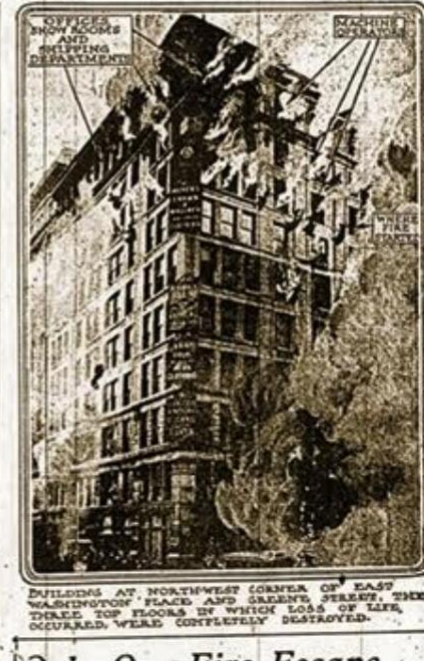


Triangle Shirtwaist Factory 1911



Historical perspective

HUNDRED AND FIFTY PERISH IN FACTORY FIRE;
WOMEN AND GIRLS, TRAPPED IN TEN STORY BUILDING,
LOST IN FLAMES OR HURL THEMSELVES TO DEATH



Historical perspective

Bangladesh factory fire kills 112 in Dhaka

Blaze broke out at the seven-storey factory on Saturday and firefighters recovered more than 100 bodies on Sunday morning



At least 112 people have been killed in a fire that raced through a multi-storey garment factory just outside of Bangladesh's capital, Dhaka.

Tazreen Fashion Dhaka Bangladesh 2012



Historical perspective



Cocoanut Grove 1942



Historical perspective



Station night club 2003



Historical perspective



lock



The same type of cladding was installed on the Grenfell Tower in 2016, as part of a £10m renovation.

Aluminium composite panels have a polyethylene or plastic core and an aluminium coating. It is a cheap building material widely used worldwide to clad high-rise apartment buildings.



▲ A picture of the fire at the Lacrosse tower in Melbourne's Docklands in 2014 which spread across the facade in a matter of minutes. Photograph: Gregory Badrock/Metropolitan Fire Brigade

There have been reports of fires involving aluminium cladding in residential towers in France, the United Arab Emirates, South Korea and the US.



Historical perspective

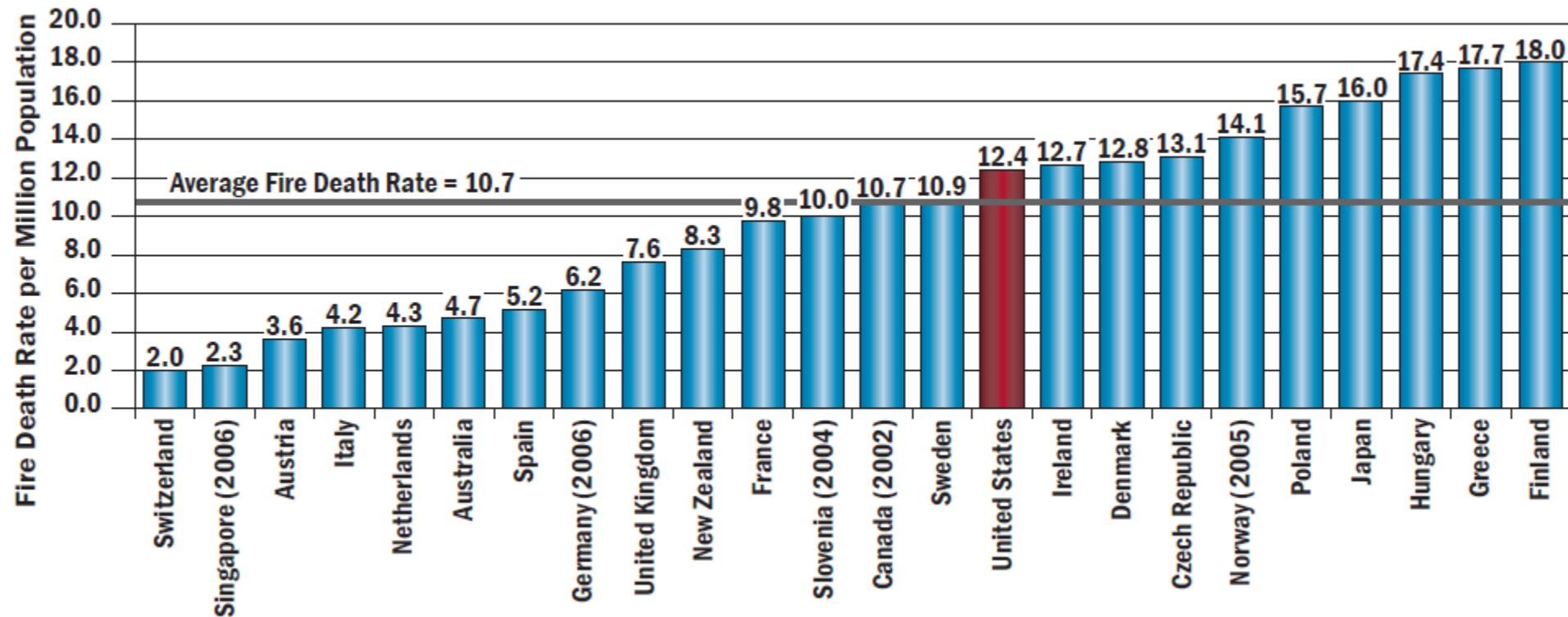


Grenfell London 2017



INTERNATIONAL CHALLENGES and VARIATIONS

Figure 1. 2007 International Fire Death Rates per Million Population



Sources: World Fire Statistics Centre fire death data and the United Nations (U.N.) Demographic Yearbook population estimate data.

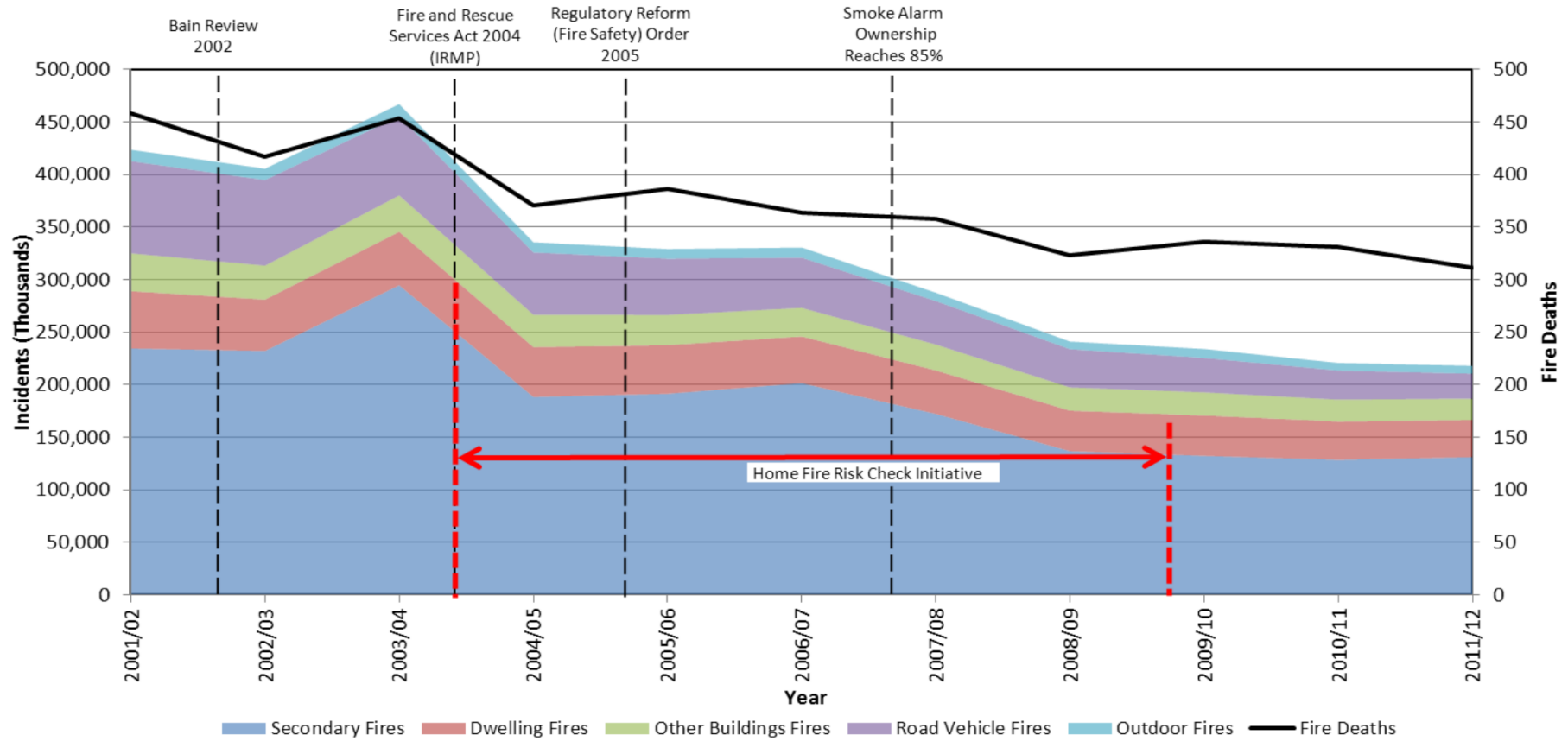
Note: Where 2007 data were unavailable, the death rate for the most recent year available is shown.



INTERNATIONAL CHALLENGES and VARIATIONS

- Singapore are shown consistently to have very low levels of deaths from fire, in terms of proportion of the population.
- Singapore had a rate per 100 000 of 0.02, or 8 lost lives per year.
- Russia had a rate of 7 deaths per 100 000, with a population of 144 million, 10 068 lives lost.
- Statistically, if Russia could achieve Singapore's fire death rate, their losses could fall from over 10 000 to under 300.





LAKANAL HOUSE- LONDON JULY 2009

In pictures: London tower blaze



Three children died after a fire swept through the 12-storey Lakanal House tower block in Camberwell, south-east London. Eyewitness Sarah Gresty said: "It was shocking to see the quantities of smoke and flames."



Ministers response post Lakanal

...Finally, in relation to Building Regulations, I have noted your concerns about the difficulties that some of those involved in the Inquests had with the interpretation of Approved Document B. I can assure you that my Department is committed to a programme of simplification. However, the design of fire protection in buildings is a complex subject and should remain, to some extent, in the realm of professionals. We have commissioned research which will feed into a future review of this part of the Building Regulations. We expect this work to form the basis of a formal review leading to the publication of a new edition of the Approved Document in 2016/17. The revision would be drafted in accordance with a new 'style guide' for Approved Documents, aimed at ensuring the guidance is capable of being more easily understood, and that the need to cross- reference is reduced.



GRENFELL TOWER JUNE 2017



GRENFELL TOWER JUNE 2017- Public domain

- **Cause- Fridge Freezer**
- **Time of incident**
- **Time of year x 2**
- **Floor of origin**
- **Aspect of building – wind direction**



GRENFELL TOWER - UK reaction

- **Police investigation**
- **Public Inquiry**
- **Independent Review of Building Regulations and Fire Safety**

- **Coroners inquests**
- **Civil legal cases**



Press release

Interim report into the Review of Building Regulations and Fire Safety

News release issued on behalf of the independent review into building regulations and fire safety.

Published 18 December 2017

From: [Ministry of Housing, Communities & Local Government](#)



The Chair of an independent review into building regulations and fire safety has found that a “universal shift in culture” is required to rebuild trust amongst residents of high-rise buildings and significantly improve the way that fire safety is assured.

Related content

Published by

[Ministry of Housing, Communities & Local Government](#)



Interim Report - Overall Findings

- There needs to be a significant culture change to increase ownership and responsibility.
- Current regulatory system for ensuring fire safety in high rise and complex buildings is not fit for purpose.
- Problem connected to the culture of the construction industry and the effectiveness of the regulator that oversees it.
- This applies throughout the building life cycle, both during construction and occupation.
- Industry needs to own and take responsibility for managing and maintaining integrity of buildings once they are in use.



Interim Report – Emerging Themes

- **Regulations & guidance** complex and unclear.
- Clarity of **roles and responsibilities** is poor.
- Means of assessing and ensuring **competency** is weak.
- **Compliance, enforcement and sanctions** processes are too weak.
- **Route for residents** to escalate concerns is unclear and inadequate.
- The **system of product testing** is not clear.



The UK fire safety system

- Goal based Building Regulations
- Goal based Fire Regulations
- Goal based Fire cover/attendance



The UK fire safety system

- Standards v Requirements
- Certainty v Flexibility?
- Flexibility = innovation?
- Innovation = improvement?
- Safer ? Quicker? Less cost?



The UK fire safety system

- Goal keepers-
 - Architects
 - Procurement
 - Contractors
 - Building control
 - Responsible person (FSO)
 - Risk assessor
 - Fire safety order enforcer



The UK fire safety system

Golden Threads?

Comprehensive guidance supporting Building Regulations

Understood and applied by design team

Buildings constructed in accordance with design


Buildings managed by persons aware of fire safety design

Feedback from real world failures /near misses refines guidance



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Firefighter Safety

The IFE Firefighter Safety Database is designed to enable firefighters and others to learn from past experience where that experience has resulted in injury or loss of life to firefighters, or where critical learning points have been identified.

Supported by the National Operational Guidance and National Operational Learning programme, all UK Fire and Rescue Services, willing international Fire and Rescue Services and other organisations, we hope and believe the database will become a world-leading safety resource.


The information in the database does not apportion blame, imply judgment or make any accusation of wrong-doing. It exists solely to promote understanding of what happened at major incidents and so help prevent injury or loss of life in similar future incidents.

Firefighter Safety Incidents

Resources of Interest

Incidents of Interest

Acknowledgements



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historic
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The Institution of Fire Engineers

Incident directory

1985 - Bradford City Football Stand

[Go back](#)

Date of event;

11th May 1985

Time of event;

Approximately 15:40 (fire initially noticed)

Name of premises;

Valley Parade Stadium, Bradford City Football Ground.

Location;

Bradford, West Yorkshire, England, United Kingdom (UK).

Number of fatalities (if relevant);

56

Fire service area;

West Yorkshire Fire Brigade, now West Yorkshire Fire and Rescue Service.

Nature of incident;

Fire.

Property/premises/environment type;



100
historic
years



Summary

- Fire professionals have a key role in sharing learning
- Identification of cause
- Identification of lessons to be learned
- Sharing of learning
- Developing the body of knowledge
- Refining guidance- increasing effectiveness in an ever changing environment



Summary

Thank you for listening

Happy to expand

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Stay safe!





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