


### ESF COST Action C17: Fire Loss to Historic Buildings

The main objective of the Action was the definition at a European level of the degree of Loss to the Built Heritage to the Effects of Fire, and for the proposal of remedial actions and recommendations to combat such loss, using minimal invasive techniques.



During 2003 - 2008 the Action resulted in the subsequent publication of 18 related reports on the topic:

- 19 supported by Historic Scotland
- 4 by Riksantikvaren, Norway
- 1 each in Bulgaria, Slovenia, Switzerland, and Italy

Austria	Netherlands
Belgium	Norway
Bulgaria	Poland
Denmark	Slovenia
Finland	Spain
France	Sweden
Hungary	Switzerland
Israel	Turkey
Italy	UK
Macedonia	[USA + Russia]
(Baltic States)	


**Ingval Maxwell OBE**  
**DADun RIBA FRIAS CAABC ACA FSAScot**

*Fire and Flood in the Built Environment: Keeping the Threat at Bay*  
 COTAC Conference, London: 20 November 2014

**PUBLICATION CONTENT**

**COST Action C17 - CD**

Available at:  
<http://conservation.historic-scotland.gov.uk/publication-detail?pubid=7185>



**CATEGORY:** Research Building  
**PUBLICATION TYPE:** 5th Reports  
 Conference Proceedings / Abstracts  
 History Scotland  
 18.00

**AUTHOR:** COST

This is a CD which has PDFs of all the 17 volumes of the publications that were produced as a result of COST Action C17. These include the final report and conference proceedings published by Historic Scotland in the last year as well as various other conference proceedings, 3 volumes of Norwegian research and the findings of an international research project comparing British and Swedish methods of fire protection.

**CD ONLY PURCHASE HARD COPY**



Consider how long will it take to respond to an emerging incident?

A basic question for Historic Property Owners:

**What do you want left after your fire?**




**Hampton Court 1986**  
6 year rebuild

**Windsor Castle 1992**  
€56 m 5 year rebuild

**Hofburg Palace 1992**



**COPENHAGEN PALACE 1992**

**CHRISTIANIA PALACE 1982**

**LUZERN PALACE in a Chinatown 1982**



**Hampton Assembly Theatre 2011**  
a CD production rebuild cost



### Some Fire Statistics

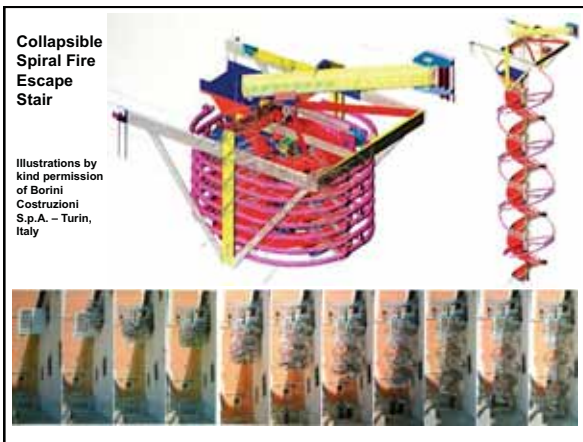
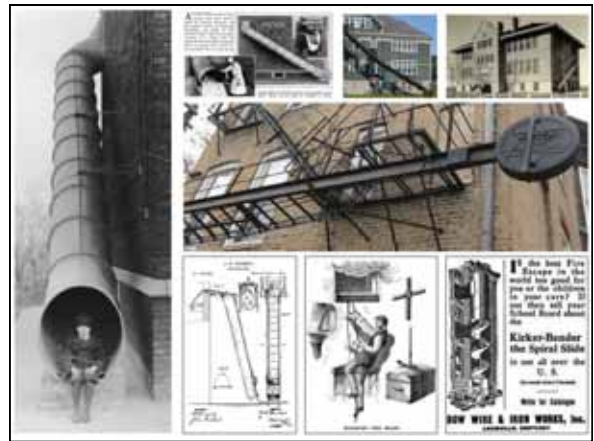
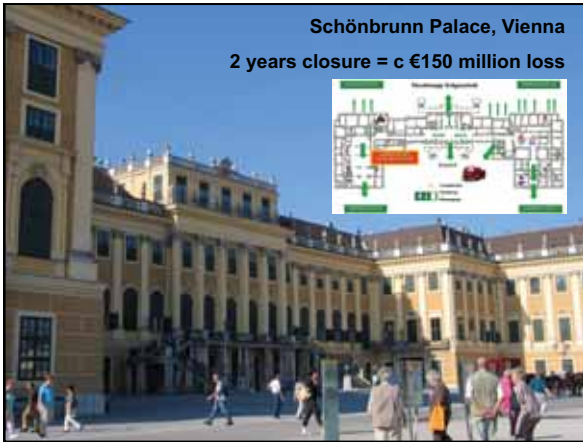
- US Museum losses**  
1999 - 2002: 60 museum fires losses at cost of \$2.25 million
- UK churches 1994/ 2004**  
392 fire incidents
- Scotland Listed Buildings**  
c450 fire incidents per annum
- England + Wales schools**  
c1,300 schools fire damaged/ annum costing €105 m/annum affecting c100,000 pupils
- UK Quality of life**  
900 people murdered and 700 killed by fire/annum

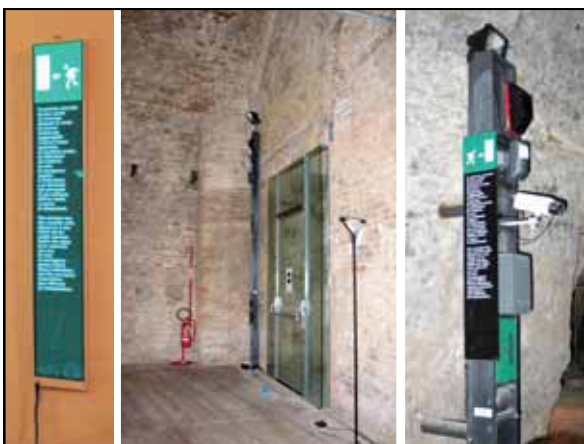
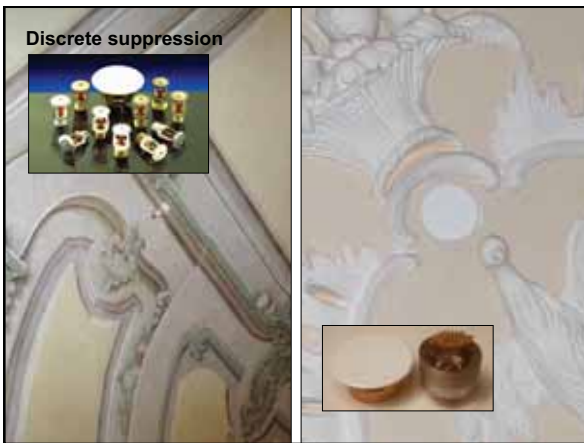
**2013 United States Fire Loss Clock**

- A fire department responded to a fire every 28 seconds
- One vehicle fire was reported every 187 seconds
- One structure fire was reported every 88 seconds
- One home structure fire was reported every 88 seconds
- One person died from a fire every 22 minutes
- One person lost their job every 22 minutes

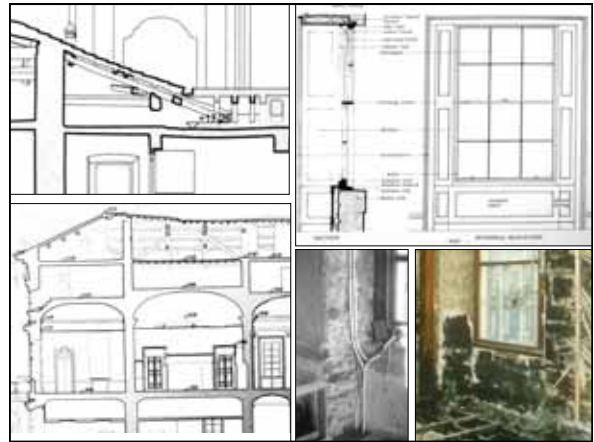












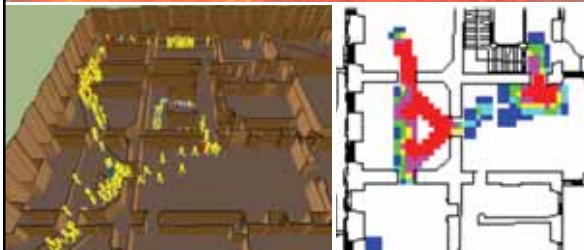
**1: Fire systems should be essential to meet the objectives of the protection of life, building and contents**



**2: Installed systems should be appropriate to the risks being considered**



**3: Installed systems and approach should be compliant with legislation**



**4: Retrofitting fire systems should involve minimal intervention on the historic fabric and its detail**



**5: Installed systems should be designed to sensitively integrate with the historic fabric and its detail**



**6: Fire systems should be reversible: adopting a “plug-in plug-out” installation philosophy**



### Key questions and issues

- Are we serious about protecting Europe's patrimony?
  - Are we content to remain in the dark about fire loss statistics to the built heritage and its contents?
  - Do we want to continue to let the heritage burn?
  - How do we address the heritage complacency?
- 
- Building protection automatically improves life safety
  - Retrofitting modern technology helps assure building safety
  - Immediate suppression is less damaging than full scale fire fighting
  - Much can be achieved through mutual collaboration if a balanced, sensitive and strong lead is planned for and adopted, understanding the historic fabric, its value and authenticity