



Action C17 Index to Associated Publications on CD Rom

Edited by Ingval Maxwell OBE

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Introduction: COST Action C17:

Built Heritage: Fire Loss to Historic Buildings

Project website:

http://www.heritagefire.net/

1. Problems to be solved:

The intention of the Action was to address the significant physical and cultural loss of Europe's built heritage to the damaging effects of fire. Across Europe, statistics on the real level of fire loss to the built heritage were, and are still, unknown but some consider it could be as high as one important building per day. An increasing international awareness of this potential high level of loss indicated that some response had to occur to co-operate more widely in this area of concern, and to address the related issues in a co-ordinated manner. In consequence, the Action's Draft Memorandum of Understanding, setting out a proposed work programme, was presented for consideration to the COST Office in Brussels on 21 December 2001.

2. Scientific Objectives and Approach (including innovation):

It was intended that the Action's aims would be achieved in a multi-disciplinary, multinational manner through the collaboration and integration of a variety of related projects to be undertaken by four Working Groups. The intention was to present the outcomes through the promotion of data, methodologies, and management systems. This approach was aimed at assisting a wide range of end-users balance fire engineering needs with conservation requirements in the future preservation of the European patrimony.

3. Achieved Scientific Results:

The Action considered and presented evidence on the:

- · Vulnerability of historic buildings to fire
- Risk assessment methodologies
- Protection of fabric and content
- Prevention of fire and fire spread
- Detection and suppression requirements
- Training and management of staff
- Insurance considerations

4 Policy Impact:

Working Group (WG) Activities which impacted on policy areas included:

Data, Loss Statistics and Evaluating Risks (WG 1)

- Data and Fabric analysis
 - Qualitative Risk analysis

Available and Developing Technology (WG 2)

- Available technology (Fabric and materials)
- State-of-the-art solutions

Cultural and Financial Value (WG 3)

Financial data and risk

Loss recovery

Property Management Strategies (WG 4)

- Support for property managers
- Staff training

5. Dissemination and Exploitation of the Results: spin-offs, publications, database operational at the end of the project, patent etc.:

Published articles on the work of COST Action C17 have included:

- "Cultural Exchange", December 2002 edition of Fire Protection and Fire Engineers Journal
- "The Challenge Before Us" Integrating Historic Preservation with Security, Fire Protection, Life Safety and Building Management Systems" Instituto Superiore Antincendio: Rome Conference Proceedings. April 2003
- "COST Action C17, Built Heritage, Fire Loss to Historic Buildings", Forum KGS/PBC/PCP Nr. 3/2003, BABS, Bern, December 2003.
- "Action Against Fire", October 2005 edition of Fire Protection and Fire Engineers Journal

TV exposure on the work of the Action included events at:

- Melhus, Trondheim field experiment on Norwegian TV News 16 April 2004
- · Varna, interview on Bulgarian TV News on 9th September 2004
- Varna, interview on Bulgarian TV News on 10th September 2004

Oral presentations at conferences and seminars on the work of the Action have included:

- Conservation Seminar, Fire Safety Officers Course, Fire Service Training College, Gullane, Scotland: 10 January 2003
- Integrating Historic Preservation with Security, Fire Protection, Life Safety and Building Management Systems, Instituto Superiore Antincendio: Rome, Italy 10-11 April 2003
- Slovenian FPA Conference, Ljubljana, Slovenia: 1-3 October 2003
- Fire Service Training and Research Trust, Edinburgh, Scotland: 14 July 2004
- International Workshop, Varna Free University, Bulgaria: 9-11 September 2004
- Fire Restoration of Historic Town Centre Conference, Chester, England: 19-20 October 2004.
- Strathclyde Fire Brigade Sprinkler Conference, Loch Lomond, Scotland: 27 October 2004
- Colvin Trust Conference, England: November 2004
- BASA Sprinkler Conference, Manchester, England: 11 November 2004
- FIRETECH Concluding Seminar, University of Ghent, Belgium: 30 November 2004
- Misure Antincendio e Patrimonio cultural: Santa Maria della Scala, Siena, Italy: 8 April 2005
- Fire Safety and the Historic Building Seminar, Dublin, Ireland: 14 April 2005
- BASA Sprinkler Conference, New Lanark, Scotland: 14 June 2005
- NFPA Cultural Resources Committee, New Lanark, Scotland: 15 June 2005
- COST + Cultural Heritage: Crossing Barriers, Florence, Italy 20-22 October 2005
- Eurosprinkler EC Parliament Seminar, Brussels, Belgium 7 March 2006
- 7th EC Conservation Conference, Prague, Czech Republic 1 June 2006
- Conservation Seminar, Fire Safety Officers Course, Fire Service Training College, Gullane, Scotland: 30 August 2006
- Schonbrunn Damage Limitation Team Seminar, Edinburgh, Scotland 29 September

2006

- FACH Technical Group, Dubrovnik, Croatia 16 October 2006
- Schonbrunn Damage Limitation Team Seminar, Edinburgh, Scotland 19 April 2007
- Heritage Fire Seminar, Lodz, Poland 15 June 2007
- COST Heritage Training Conference, Genova, Italy 12 September 2007
- Swedish NHB Fire Conference, Solluntuna, Sweden 25 September 2007
- ECA Postgraduate Fire Seminar, Edinburgh, Scotland 5 May 2008
- Cultural Heritage and Fire Protection Issues Conference, Siena, Italy 23 May 2008

Contract number: COST Action C17 Start date – End date: 13/12/02 – 12/12/06

Contract type: COST network Duration (in months): 48

Coordinator details:

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Initiated with 5 Membership Signatory Countries in April 2002, the Action was formally launched the following December. Eventually the number of participating Signatory Countries stood at 20 - Austria, Belgium, Bulgaria, Denmark, Finland, France, Hungary, Israel, Italy, Macedonia, Netherlands, Norway, Poland, Serbia and Montenegro, Slovenia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom. In addition, Corresponding Membership interests were established with other organisations and networks, including:

Baltic Sea Countries -

- · Association of Castles and Museums around the Baltic Sea
- Federation of Finnish Insurance Companies

Europe -

- Comite Technique International de Feu (CTIF) Europe Commission
- Eurosprinkler Network

Russia -

- Russian Civil Defense and Disaster Management Research Institute
- International Informatization Academy
- WORLD Academy of Sciences for Complex Security
- Academy of State Fire Service of Emercom of Russia

UK -

- Scottish Historic Buildings Fire Liaison Group
- Historic Buildings Fire Research Co-ordinating Committee

USA -

NFPA Cultural Resources Committee



COST Action C17 Members: Final meeting: Rome, December 2006 (Photo: S Maxwell)



In an uncontrolled emergency situation the intensity of a fire can reach a temperature of over 1000° Celsius in only 3 minutes. This poses a major threat to life, building and contents alike. Yet, much complacency exists in the minds of heritage building owners when asked the challenging question "What do you want left after the fire?"

The intention of COST Action C17 was to address the significant physical and cultural loss of Europe's built heritage to the damaging effects of fire in a pragmatic manner. The aim was to provide building owners and other interested parties with relevant guidance and meaningful advice.

COST Action C17: ASSOCIATED PUBLICATIONS

Outcomes

In addition to the Three Volume Final Report produced in August 2007, and the Four Volume Conference Proceedings produced in May 2008, over the course of the Action a number of relevant publications have also been produced by Members. Combined, these new publications have greatly contributed to the debate on fire loss to Historic Buildings across Europe, and contain much useful new material on the subject.

At the outset of the Action Members were advised, and consulted, on the production of Historic Scotland's Technical Advice Note TAN 28 Fire Safety Management in Heritage Buildings published in 2005. Colleagues in Riksantikvaren (The Norwegian Directorate for Cultural Heritage), in conjunction with Historic Scotland, jointly produced three documents in support of the Action. In addition the Directorate also produced a further volume in support of C17's remit, all during 2006.

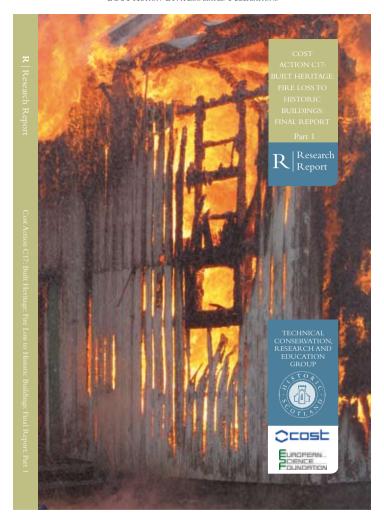
In 2003 Swiss, and in 2003 and 2006, UK colleagues also used material emerging from the Action to support the production of related documentation in their countries.

Conference Proceedings were published following the 2004 Action C17 event in Varna, Bulgaria, and Conference Abstracts were printed following the International Conference in Ljubljana, Slovenia during 2006.

In total 16 new volumes can therefore be directly attributed to the influence and work of COST Action C17 and these are presented on this CD in PDF format.

It was my privilege and pleasure to Chair such a productiive Action. These remarkable results have only been possible due to the commitment and dedication of its members. Through their unstinting support, and ready willingness to share their knowledge and expertise, much has been done to seriously address this real area of concern.

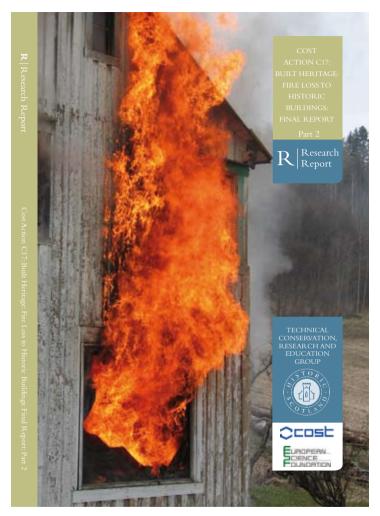
Ingval Maxwell OBE Edinburgh July 2008



COST Action C17: Built Heritage: Fire Loss to Historic Buildings Final Report Part 1

284pp A4, 2007 (PB) ISBN 978-1-904966-53-1

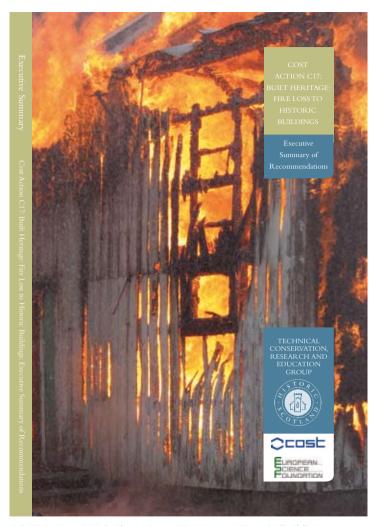
Part 1 sets out the scene for the Actions work and outlines the scale of their loss to Built Heritage. The Findings of each of the four Working Groups and also presented.



COST Action C17: Built Heritage: Fire Loss to Historic Buildings Final Report Part 2

156pp A4, 2007 (PB) ISBN 978-1-904966-53-1

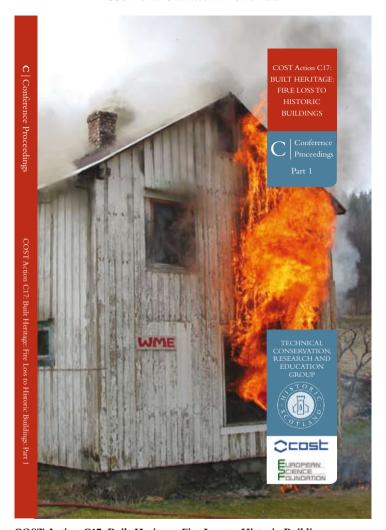
Part 2 Offer supporting Annexes, listing historic building fires, contact details of Members and Evaluation Reports on the Actions work.



COST Action C17: Built Heritage: Fire Loss to Historic Buildings Executive Summary of Recommendations

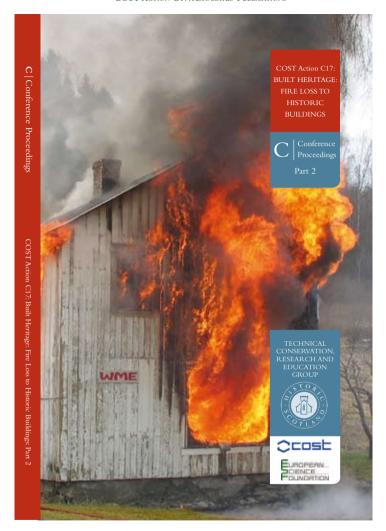
22pp A4, 2007 (PB) ISBN 1-978-1-904966-53-1

The Executive Summary Notes the range of countries involved in the Action's work and sets out the findings emanating from the activities of the four working groups.



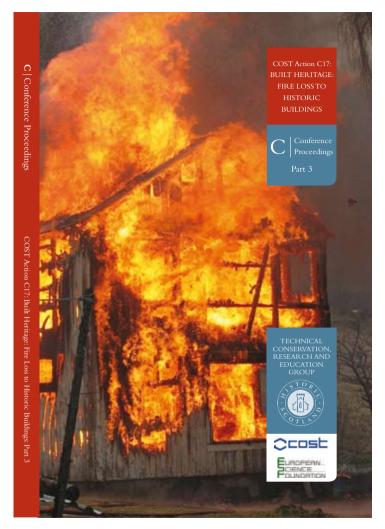
240pp A4, 2008 (PB) ISBN 1-904966-61-6

Part 1 Offers papers and presentations given to the Action at its meetings in Edinburgh (September 2003), Vienna (December 2003), Trondheim (April 2004) and Stockholm (June 2004).



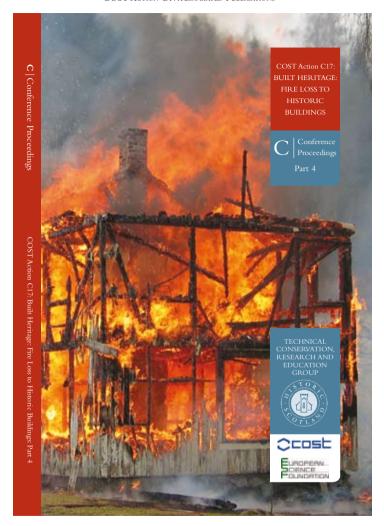
250pp A4, 2008 (PB) ISBN 1-904966-61-6

Part 2 Offers papers and presentations given to the Action at its meetings in Vienna (July 2004), Varna (September 2004), Paris (October 2004), and Vienna (December 2004).



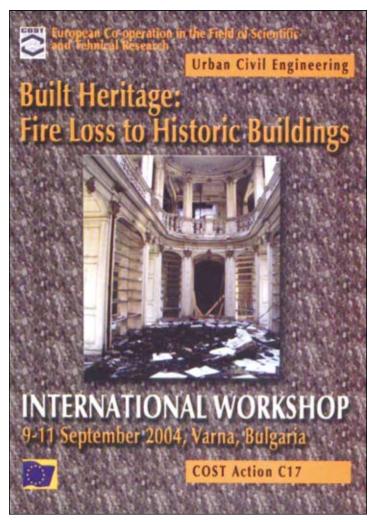
 $292 pp\ A4, 2008 (PB)\ ISBN\ 1\text{--}904966\text{--}61\text{--}6$

Part 3 Offers pages and presentations given to Action at its meetings in Siena (April 2005), Helsinki (October 2005), Ljubljana (May 2006).



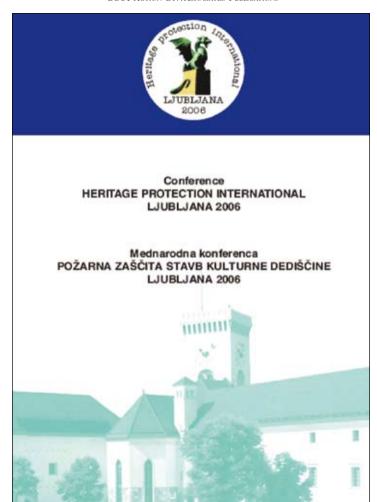
280pp A4, 2008 (PB) ISBN 1-904966-61-6

Part 4 Offers pages and presentations given to the Final Conference of the Action in Rome (December 2006) together with reports on its four short term Scientific Missions and details of associated printed publications.



COST Action C17: Built Heritage: Fire Loss to Historic Buildings International Workshop 9-11 September 2004, Varna, Bulgaria.

172pp, 2006 (PB) ISBN-10:954-751-072-X, ISBN-13:978-954-751-072-2 Conference Proceedings of 14 papers presented at the COST Action C17 International Workshop in Varna, Bulgaria in September 2004, with a Summary of each and an Interim Progress Report on the work of the Action to date.



Heritage Protection International Ljubljana 2006

64pp, 2006 (PB)

Conference abstracts of 22 papers presented at the joint Slovensko Zdruzenje Za Pozarno Varstvo (SZPV), American Fire Protection Association (NFPA) and COST Action C17 International Workshop in Ljubljana, Slovenia in May 2006, with speaker CV's.



DEPUTY FIREMASTER DAVID DALZIEL

GRAMPIAN FIRE BRIGADE

INTERNATIONAL RESEARCH PROJECT

BRIGADE COMMAND COURSE 2002



SAFEGUARDING OUR BUILT HERITAGE AND PROTECTING IT FOR THE FUTURE



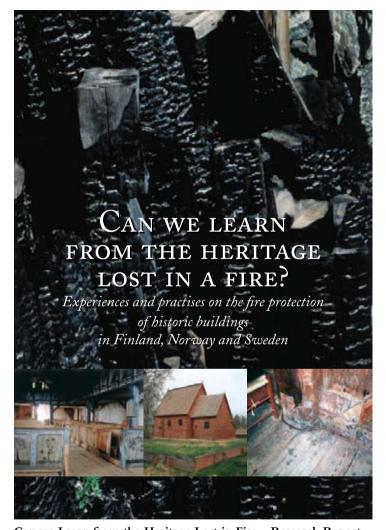


APRIL 2003

Safeguarding our Built Heritage and Protecting it for the Future

148pp 2003 Un-published Fire Service College Thesis

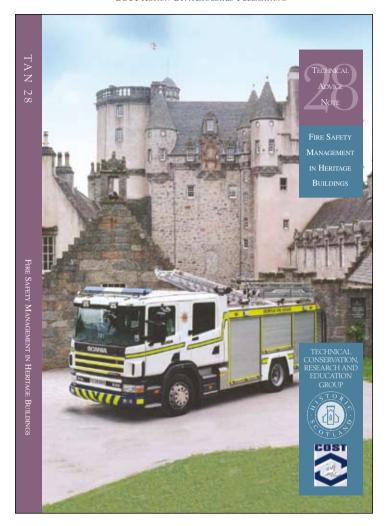
Building upon contacts achieved via the COST C17 network, the report is a comparative study between the UK and Sweden to investigate the degree of liaison between the fire services and the heritage bodies.



Can we Learn from the Heritage Lost in Fire – Research Report 80pp A4, 2004 (PB) ISBN 951-616-115-4, ISSN 1236-6439

Jointly produced by the Nordic Council of Ministers, National Board of Antiquities, Riksantikvaren and Riksantikvarieämbetet, this publication is the result of the "Can we learn from the heritage lost in fire?" project in which Finland, Norway and Sweden consulted about

their experiences and knowledge of fires and fire protection in historic buildings.



TAN 28 Fire Safety Management in Heritage Buildings

112pp A4, 2005 (PB) ISBN 1 904966 11 X

Published by Historic Scotland this Technical Advice Note aims to reconcile the continued use of historic buildings with protection from loss by fire. Building management measures are outlined in addition to offering an overview of fire legislation, standards and codes.

Riksantikvaren - The Norwegian Directorate for Cultural Heritage (RNDCH)

Analysis of Sprinkler Failures in Listed Heritage Buildings

Analysis of unintended activations of water based extinguishing systems in Norwegian heritage buildings





February 2006

Analysis of Sprinkler failures in Listed Heritage Buildings – Research Report 16pp A4, 2006 (PB)

Produced for Riksantikvaren (The Norwegian Directorate for Cultural Heritage) in support of COST Action C17 this volume considered the causes and effects of a series of Norwegian cases where sprinkler failures have occurred.

RESEARCH REPORT

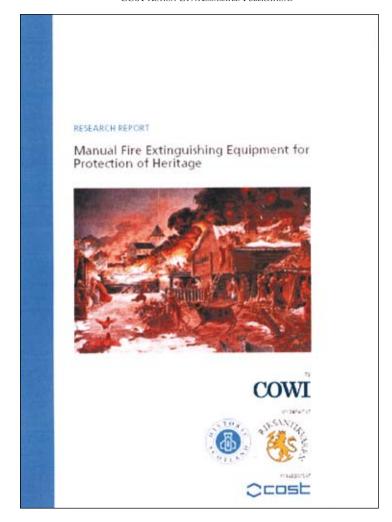
Hypoxic Air Venting for Protection of Heritage





Hypoxic Air Venting for Protection of Heritage – Research Report 80pp A4, 2006 (PB) ISBN 82-7574-037-1

Produced for Riksantikvaren (The Norwegian Directorate for Cultural Heritage) with Historic Scotland's sponsorship in support of COST Action C17, this publication examines innovative systems for modifying air oxygen concentration in enclosed spaces, setting out the scientific background and considering heritage building fire protection application potential.



Manual Fire Extinguishing for Protection of Heritage – Research Report 62pp A4, 2006 (PB) ISBN 82-7574-039-8

Produced for Riksantikvaren (The Norwegian Directorate for Cultural Heritage) with Historic Scotland's sponsorship in support of COST Action C17, this publication evaluates manual fire fighting techniques, equipment and extinguishing media, taking particular account of impact on historic contents and building fabric.

RESEARCH REPORT

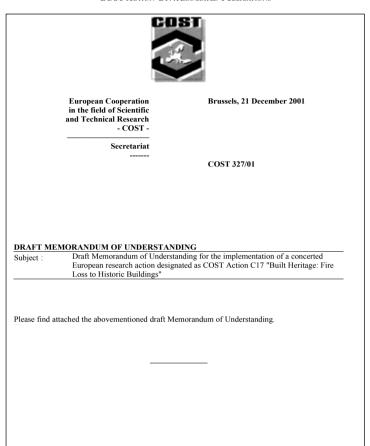
Minimum Invasive Fire Detection for Protection of Heritage





Minimum Invasive Fire Detection for Protection of Heritage Research Report 40pp A4, 2006 (PB) ISBN 82-7574-040-1

Produced for Riksantikvaren (The Norwegian Directorate for Cultural Heritage) with Historic Scotland's sponsorship in support of COST Action C17, this publication reviews the available range of fire detection equipment for historic buildings application, including line heat detection and area fire detection for wider townscape protection.



COST Action C17: Memorandum of Understanding

COST 327/01

This draft Memorandum of Understanding was submitted to and approved by The COST Office Its content formed the framework in which COST Action C17 carried out its work.

DG C III

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Trinity Cathedral, St Petersburg, Russia on fire August 2006 (Photo www.englishrussia.com)



Porvoo Cathedral, Finland following fire May 2006



15th C Södra Råda Church, Sweden after fire in 2001: (Photo: National Heritage Board)



Water drenching test, Stave Kirk, Norway: (Photo: Riksantikvaren)

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