



Assessment of fire damaged structures

When a fire occurs, it can have a devastating effect on the fabric of a building. Whether a fire damaged structure is a historic building or a modern construction, the ability of the Engineer to judge the extent of damage to structural elements can mean the difference between demolition and practical reuse—if repair and reuse can be justified, considerable savings can accrue.

At LeeMcCullough we can provide advice on the fitness of structural elements following fire damage through our experience of assessing fire damaged structures and an understanding of the nature of the damage to structural materials caused by a fire. To complement this, one of our Associates has completed the Diploma in Fire Safety Practice at Trinity College.

Damaged timber structures can usually be assessed simply through the residual cross section. For other materials, the key to assessing their structural capacity after a fire is to estimate the temperature reached by the material. A close up visual inspection of the structure immediately after the fire (together with 'clues' from the condition of non structural elements) can often provide evidence of this. In some cases the only reliable way to confirm structural capacity is by material testing.

Where structural elements are found to be overloaded because of reduced capacity due to fire damage, our Structural Engineering experience will often allow us to provide a remedial solution, especially if the building is historic in nature and the alternative would be a loss of historic fabric.



LeeMcCullough
Consulting Engineers

Fire Damage

Some previous reports:

- Harcourt Green
- Woodside House Swords
- TCD Pharmacy building

At LeeMcCullough we have been providing civil and structural engineering services for over 40 years with many repeat commissions from Architects and Clients. We now provide that same level of service and dedication to our new Fire Engineering service. For new buildings, refurbishments and historic conservation projects we can provide the following:

- Fire Safety Certificate pre planning advice
- Fire Safety Certificate Compliance Reports
- Fire Safety Certificate Compliance drawings
- Specifications
- Certificate of compliance
- Site Inspections

We also provide a number of complementary services including:

- Disability Access Certificate Compliance Reports
- Disability Access Certificate Compliance Drawings
- Structural Fire Protection Design
- Fire Safety Audits
- Appraisal of fire damaged structures
- Structural Engineering
- Civil Engineering

At LeeMcCullough we seek to identify and resolve issues early, safely addressing demanding building challenges and delivering our solutions on time and cost efficiently.

When it comes to fire safety, recognising the potential danger and understanding the behaviour of fire are key to successful design outcomes.