# The consequences of tragic events

## Statement from Structural-Safety.

In humanitarian, social and engineering terms, the catalyst for profound change is often a catastrophe whose name is remembered for years to come. The Grenfell Tower fire in London (Figure 1) will become one such tragedy and the ramifications of the fire will resonate into the future. The heartfelt sympathy of everyone goes to the families and friends of the victims who died, those who were so grievously wounded, and those whose futures will have been so damaged.

Other tragic fires, such as Bradford City football stadium (1985), Kings Cross underground station (1987) and Piper Alpha oil platform (1988), resulted in changes to the design and construction of stadiums, underground railways and offshore platforms respectively. Their names remind us of the event but not of the human cost.

Forty-nine years ago, a small gas explosion at high level on the Ronan Point block of apartments in London triggered a disproportionate and progressive collapse (Figure 2). Eventually, this resulted in changes to Building Regulations in the UK and elsewhere, changes to the approaches to structural robustness, and new generations of safer towers. A form of failure not previously encountered led to a transformation by learning from a disaster.

The same must happen with Grenfell Tower, where performance across a range of issues has clearly not been as intended, with consequences that have so horrified the public and experts alike. The full implications will not be known for some time. It is, of course, essential that as much as possible of the forensic evidence will be collected and preserved. Importantly, the announcement of a public inquiry means that evidence and recommendations will be in the public domain and not, as is often the case with collapse investigations, hidden behind non-disclosure agreements. The terms of reference must be wide, the inquiry must proceed quickly, and its findings must be published as soon as possible and widely disseminated. Particularly those with implications for other tower blocks and perhaps other large buildings. The voices of those with knowledge and experience, as well as the public, must be listened to and recommendations implemented. Communities rightly expect their homes, hospitals, schools and places of work to be dependably safe and secure. Not vulnerable to unconfined fire or other disastrous events.

**Figure 1**
**The ramifications of the Grenfell Tower fire will resonate into the future**

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**Figure 2**
**The Ronan Point collapse led to changes to UK Building Regulations**

SCOSS was set up in 1976 to monitor issues of structural safety in the built environment and it has exercised that role ever since. From 2005, CROSS has collected confidential reports on concerns about structural safety. Consequently, Structural-Safety (SCOSS and CROSS combined) has a unique insight into the causes of many failure events and into how lessons can be learned and disseminated to benefit the public and the industry. This information will be available to the inquiry.

Those engaged in the development of large buildings – be they clients, architects, quantity surveyors and cost consultants, structural engineers, mechanical and electrical engineers, fire engineers, regulators and local authorities, researchers, main contractors, suppliers, subcontractors, surveyors, resident engineers and clerks of works – must always have a care for the safety and well-being of occupants and those who may be sent in as rescuers. Government departments too. There are high ethical standards to be maintained, as well as legal duties and the exercise of diligent and competent work and oversight. Structural engineers can, and should, demonstrate leadership where issues critical to life safety are involved. There must be action from government and industry.

*Structural-Safety combines the activities of CROSS and SCOSS to work with the professions, industry and government on safety matters concerned with the design, construction and use of building and civil engineering structures.*
*Web: www.structural-safety.org*