


# Building Defects Forensic Analysis

Expert Witness  
Advisory  
Research

Dr Jonathan Drane  
[www.jondrane.net](http://www.jondrane.net)

## Unravelling the systemic causes of fire, structural & building defects through systemic analysis

### Forensic Analysis of Complex Problems related to Construction and Property Development Interfaces:



Dr Jonathan Drane is a recognised expert in property development, design and construction processes to legal, industry, academic and government sectors in the Australasian industry.

### Evidence Creation and Re-construction

Jonathan applies research methods to conduct evidence re-creation including content analysis, interview and chronology with the following:

- The recreation of construction events.
- Timeline re-construction.
- Forensic analysis of the causes of Building Defects and Construction Impacts.
- Design and Construction (D&C) complexities.
- Contractual deficiency.
- Document collection, databasing,

### Case Examples- Expert Witness

A high impact activity on one site is claimed to cause damage and cracks in an adjacent property. Jonathan reconstructed timelines and events to show that the impact had occurred but was far limited to the claimed amount.

A building construction project is claimed to have caused damage to an adjacent property. A time lapse analysis of photographic evidence proves otherwise.

### For further details

Contact Jonathan: [jon@jondrane.net](mailto:jon@jondrane.net)  
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See our master class web site: <https://mclass.jondrane.net/>  
Linked in Group: The Property Development Doctor  
<https://www.linkedin.com/groups/13668873/>



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Dr Drane is a researcher and advisor in  
complex property and construction matters.

### University Collaborations & Teaching Positions:

- UNSW Built Environment
- City Futures Research Centre UNSW BE
- Sydney University
- Western Sydney University
- MGSM
- ICMS

### Defects: Tower Tragedies

**Bankstown Fire 2012:** The Bankstown incident involved a fire in a multi-apartment tower which saw two young women jump from the fifth floor to escape the intense fire and flames. Tragically one of the women did not survive the fall. Fire brigade commentary noted that a fire door burned down in a matter of minutes instead of having a one to two hour rating.

**Docklands Lacrosse Fire 2014:** This 20 storey apartment tower saw 500 residents evacuated as the fire climbed the external balconies and engulfed seven floors. Later studies showed the façade materials to have contributed.

### Grenfell Tower UK 2017

The greatest tragedy in the era of tragedies, the Grenfell apartment tower was engulfed with rapidly ascending fire to see many people not survive.

### Torch Tower Dubai 2017

This high rise tower set fire and saw damage to 34 apartments over 64 floors. The residents thought it was a false alarm.

### Opal Tower Sydney 2018

Precast elements in the Opal Tower showed explosive failure leading to the evacuation of the occupants for weeks.