



Emerging Risks

Counterfeit & Defective Building Products

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Emerging Insurance Risks | Defective Building Products

- » Exterior aluminium cladding
- » Mould/leaky buildings
- » Structural steel
- » Plasterboard
- » Asbestos
- » Glass
- » Braided water hoses
- » Lead in drinking water?



Exterior cladding on buildings

Leaky cladding not the ONLY problem:

Grenfell Tower, London

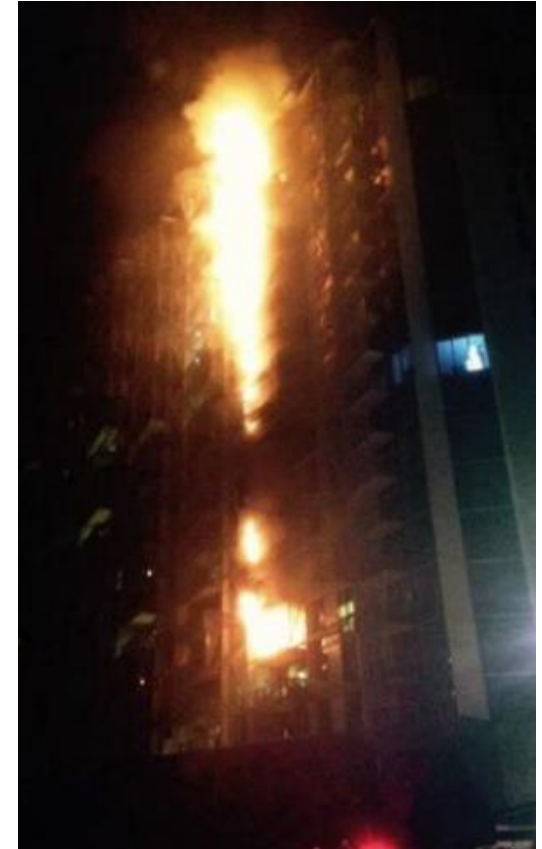
- June 2017 fire – **80 fatalities.**
- Building of 24 floors, 127 apartments refurbished at a cost of GBP\$10m in 2016, including the installation of exterior cladding.



Grenfell Tower, London

Lacrosse apartments, Melbourne

- November 2014 – devastating blaze, no deaths.
- Fireproof exterior cladding imported from China did not meet specifications.
- Subsequent audits by Victorian Building Authority (VBA) highlighted the huge scale of the problem



Lacrosse apartments, Melbourne

Other exterior cladding fires:

Dubai, UAE, The Torch, 2015 & 2017

- 79 Stories, Authorities acknowledged another 30,000 buildings have similar cladding

Dubai, UAE, Tamwheel Tower, 2012

- Fire started at top of 34 story tower and spread downwards.

Dubai, UAE, Tecom area tower and Al Tayer Tower, 2012

- Two separate incidents, 13 story and 14 story towers.

Roubaix, France, Mermoz Tower, 2012

- Fire started on 2nd floor, 18 tower – 1 fatality.

Dijon, France, 2010

- 7 fatalities.

Shanghai, China, 2010

- 28 Stories – 58 fatalities

Beijing Television Cultural Centre, 2009

- 44 stories – 1 fatality

The Water Club, Atlantic City, USA, 2007

- 38 Stories, fire before construction was complete.

Mikolc, Hungary, 2005

- Fire started on the 6th floor, 11 story tower – 3 fatalities



Beijing Television Cultural Centre

Regulatory reform

Australia

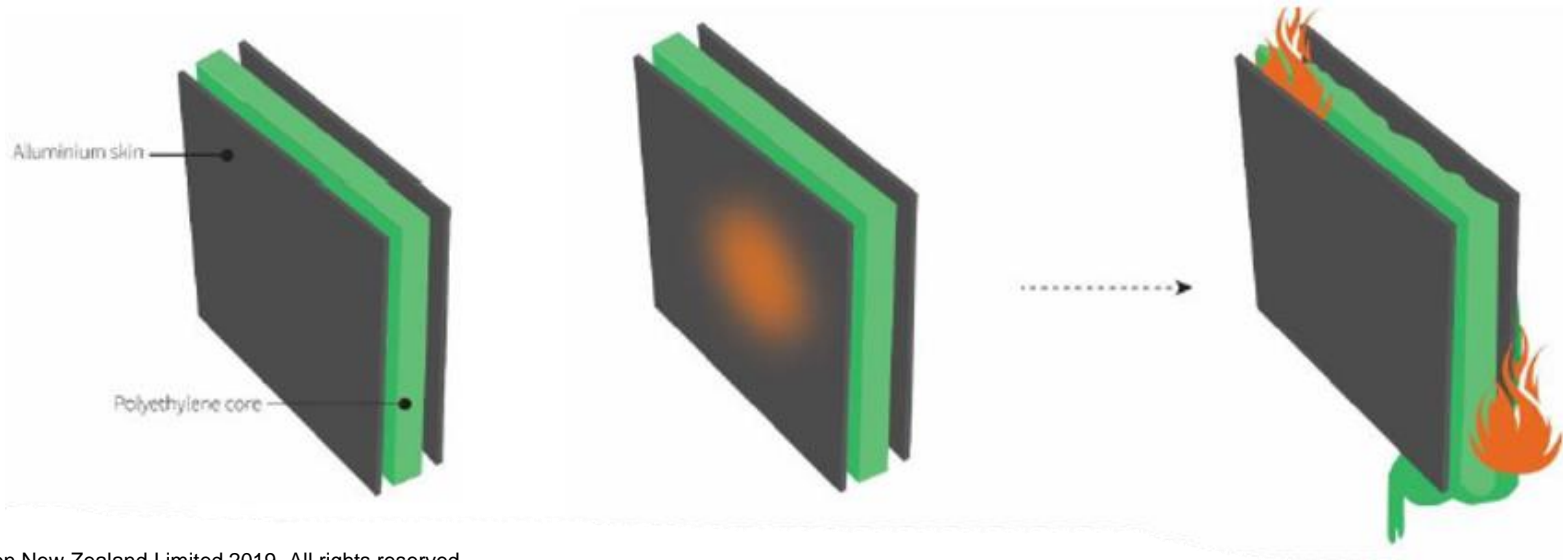
Various state government initiatives have since started to address the issue in VIC, NSW & QLD

New Zealand

- No major fires yet;
- No definitive action by regulators;
- Insurer response is mixed but becoming consistent.
- Some checks by government agencies, but very limited in scope.

NSW

- Ban imposed effective 15 August 2018
- NSW Cladding Regulation
 - Commences 22 October 2018
 - Registration of buildings with 'external combustible cladding'



Leaky / Mouldy Buildings

NZ repair bill estimated at NZD\$11bn and counting...

New Zealand

- Building industry crisis in NZ affecting many buildings built between 1994 and 2004.
- Especially timber framed buildings.
- Especially any building with defective exterior cladding systems.

Mould a by-product of leaky buildings

- What is the leaky issue and what is a structural issue?



Structural Steel

Steel imported from Asia:

- An increasing amount of steel is being imported from Asia into Australia and New Zealand.
- Steel too brittle can fracture.
- Steel too malleable can deform.
- NZD \$450m Huntly bypass – Chinese steel failed tests – NZ 2016
- Busselton bridges – Vietnamese steel fails tests – WA 2015
- NZ construction site – steel piles failed under pile-driver.



Kolkota flyover, India, 2016 – at least 27 fatalities. Primary cause suspected of being failure bolts, possibly due to brittle steel.

Structural Steel

Steel imported from Asia:

- Charges against multiple New Zealand steel suppliers allege earthquake mesh and floor slab mesh was not tested and certified:
 - Steel & Tube Holdings – NZ 2017
 - Timber King Ltd – NZ 2017
 - NZ Steel Distributor Ltd – NZ 2017

What percentage of structural steel is tested in ANZ to ensure it meets specification?

What will happen if an earthquake occurs in NZ after 10 or 20 years of importing defective steel?

Risk management solutions

- Larger companies/projects – independent testing and certification of imported steel
- Smaller builder – check that their suppliers carry out such tests.



Plasterboard

Defective Plasterboard imported from China:

- Low grade fly ash waste used in the plaster composition.
- **Allegedly emitting several gases.**
 - Carbon Disulfide
 - Carbonyl Sulfide
 - Hydrogen Sulfide
- **Corrosion of metal**
 - Breakdown of electrical equipment
 - Rusting of galvanised nails and truss supports
- Economic cost in USA estimated at more than USD\$15bn. (National Underwriter)

Remedy

No standard procedure. Complete re-build of entire interior often required.



Asbestos

Asbestos in building products imported from China:

Australia: some recent examples:

- **Acetylene welding gas cylinders imported into Australia** (Asbestos Safety and Eradication Agency 25 October 2017)
- **Storage tanks at Port Pyrie smelter** (The Australian 24 August 2016)
- **Roof panels at Perth's Children Hospital** (ICA 15 July 2016)
- **Metal skirting from China at the site of the Queensland Government's Executive Building** (ICA 15 July 2016)
- **Concrete fibre sheeting used in construction in at least 64 construction sites in Australia** (Asbestos Safety and Eradication Agency February 2016)
- **Plasterboard in new buildings in Canberra** (Worksafe ACT 2014)

New Zealand: Does NZ have the same problem?

- Less reports, but it is highly likely the same level of problem exists.



Nickel Sulfide inclusions & other glass issues

Some recent examples:

Exploding glass has been identified as an emerging risk in city buildings

- **Heavy glass sheets fell off balconies**
 - Wellington High rise – 2016
- **Two balcony balustrades came crashing down**
 - Melbourne – July 2017
- **Frightening series of ‘spontaneous’ glass balcony explosions**
 - At Melbourne apartment buildings – likely due to balcony balustrades (containing nickel sulphide)
- **Windows shattered 6 stories up**
 - International House, Barangaroo, Australia – August 2017



NEW ZEALAND / REGIONAL

Glass balcony sheets fall from Wellington high rise

1:13 pm on 12 May 2016

Share this



Heavy glass sheets have fallen off balconies on a high rise in central Wellington and smashed onto the road.



Braided water hoses

The extent of the problem:

- Flexible braided water hoses – connect kitchen and bathroom taps and appliance to the fixed water pipe outlets.
- Popularity started 15 years ago – now failing.
- IAG and Suncorp report hoses causing a significant percentage of householders insurance claims.
- Industry estimates – costing Australian insurers and their customers AUD\$500m to \$750m per year.
- If the same level of problem exists in New Zealand, this could cost insurers and their customers NZD\$100m to \$150m per year.



Lead in drinking water?

Very latest emerging risk:

- Lead in drinking water
 - Leaching from brass taps
 - Very new and still being examined
 - New Scientist article:



NewScientist

Lead in Australia's drinking water is leaching from brass taps



By Alice Klein

"The proof is in the plumbing, Low-Level lead contamination of water is widespread in Australian homes, with brass tap fittings the most likely source"

Australian Health Guidance statement issued July 2018



enHealth Guidance Statement

Lead in drinking water from some plumbing products

enHealth recommends that every effort should be made to reduce exposure to lead in the environment, including lead that may be dissolving into drinking water from some plumbing products.

Insurance

Classes of insurance affected:

- **Construction Insurance** (before completion) —————→ **Rectification of faulty work is usually excluded but fire or collapse would be covered**
- **Property Insurance** (after completion) —————→ **Rectification of faulty work is usually excluded but fire or collapse would be covered**
- **Public Liability** (liability of builders, tradespeople and owners)
- **Products Liability** (liability of manufacturers, importers, builders and tradespeople)
- **Professional Liability** (engineers, project managers, certifiers and councils)
- **Builders Warranty** (structural components) (not widely purchased)

