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The home for property professionals in Australia

## **I.F.S.S. (International Fire Safety Standards Coalition)**

Grenfell Tower Fire, London / Lacrosse Fire, Melbourne / Torch Tower, Dubai/ Mermoz Tower, Roubaix/ Residential Tower, Baku/ Wooshin Suites, Busan

## **Global fire safety and external wall cladding**

**Robert Hecek** LAFPI, CPV, LREA, MAICD  
Chair – APIV Ltd.

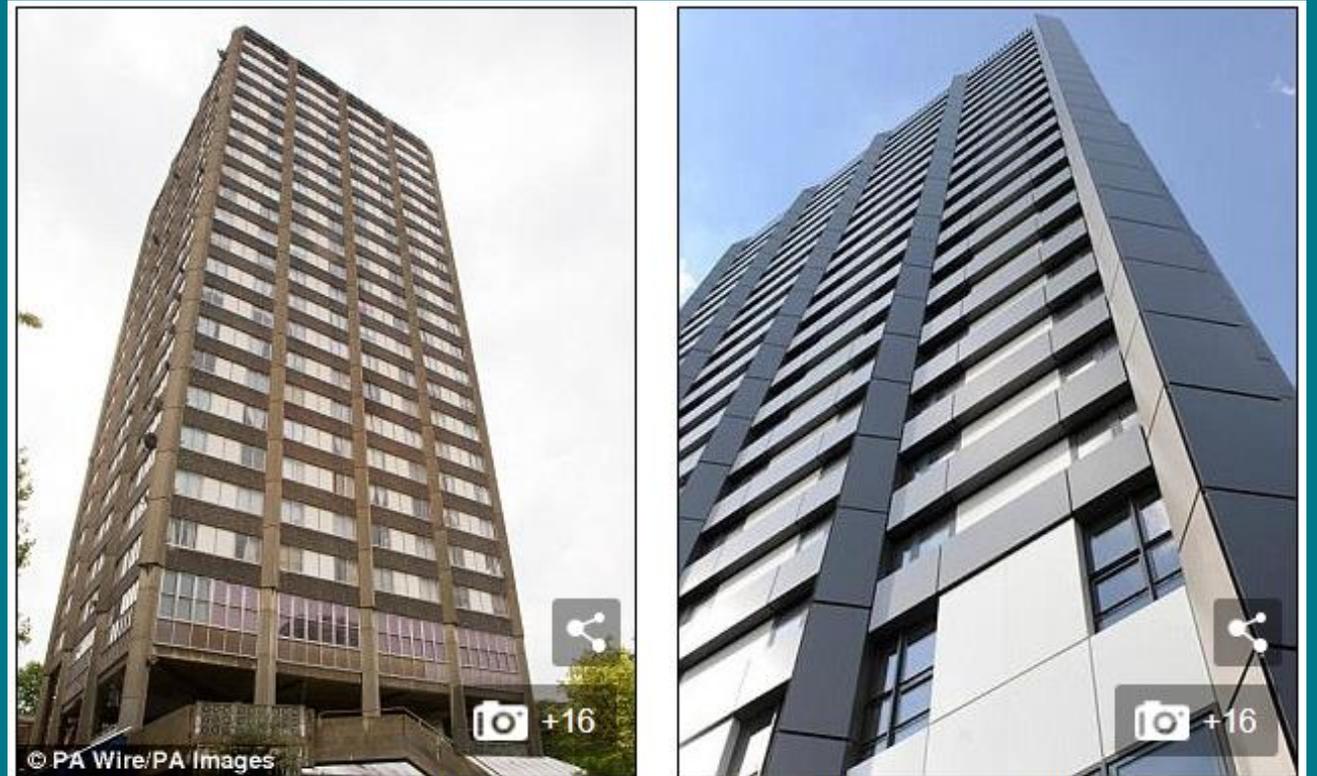
# What is cladding and why is it used on buildings

Following a deadly residential tower fire in London (June 2017), Australian authorities have been advised an audit of high-rise buildings with cladding is needed to ensure the material is fire-retardant.

While investigators say it is the cause of the blaze in which at least 72 people died, experts have blamed aluminium composite cladding – installed to make the buildings more energy efficient – for aiding the fire's rapid spread.

# What is cladding?

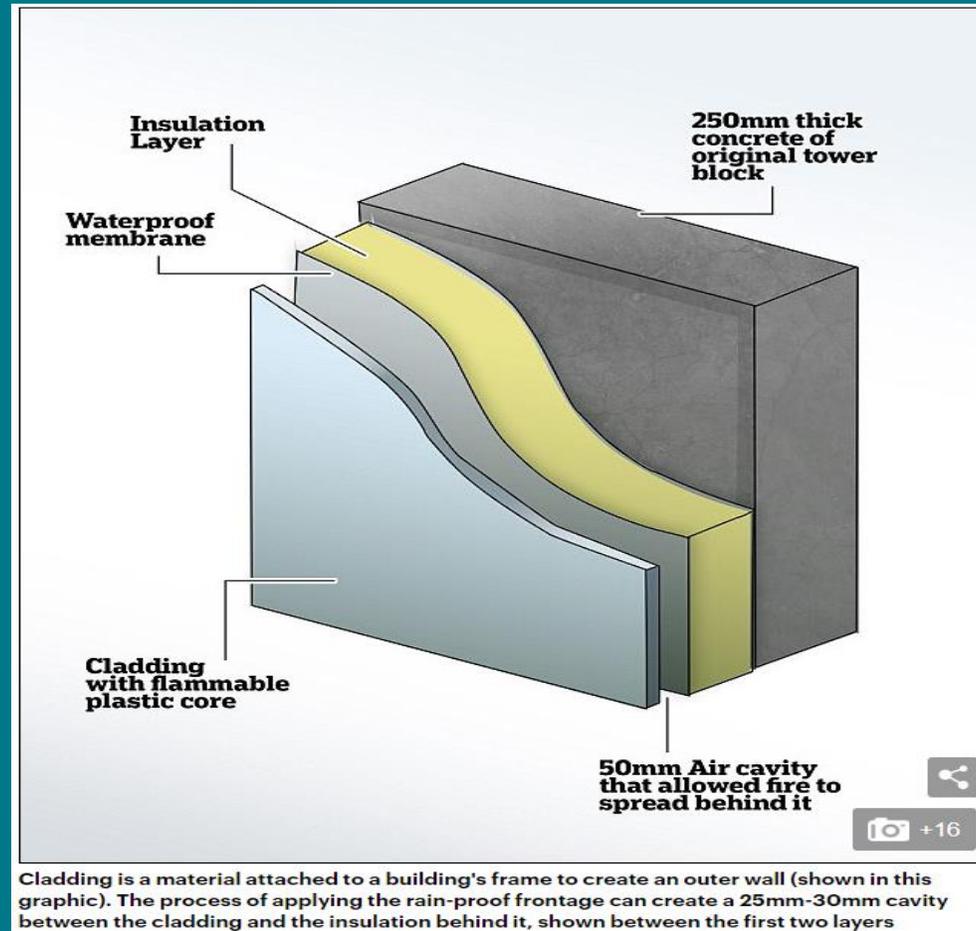
- Cladding is a type of “skin” or extra layer on the outside of a building.
- It can be attached to a building’s framework or an intermediate layer of battens or spacers.



**Grenfell Tower before the refurbishment (left) in 2011 and with the new cladding (right)**

<http://www.dailymail.co.uk/news/article-4604296/Was-cladding-blame-spread-tower-block-fire.html>

# What are the issues with aluminium composite panels (ACP)?



Cladding is a material attached to a building's frame to create an outer wall (shown in this graphic). The process of applying the rain-proof frontage can create a 25mm-30mm cavity between the cladding and the insulation behind it, shown between the first two layers

<http://www.dailymail.co.uk/news/article-4604296/Was-cladding-blame-spread-tower-block-fire.html>

# London fire: What happened at Grenfell Tower?



<http://www.dailymail.co.uk/news/article-4604296/Was-cladding-blame-spread-tower-block-fire.html>



<http://www.dailymail.co.uk/news/article-4604296/Was-cladding-blame-spread-tower-block-fire.html>

# What about the cladding at Grenfell Tower?

- Both the cladding and insulation on the outside of the building failed all preliminary tests by police.
- Zinc cladding originally proposed was replaced with an aluminium type.
- Cladding can create cavities which in some cases can cause a chimney effect, drawing flames up the cavity if there are no fire barriers.
- Reynobond PE (polyethylene) – an aluminium composite material – was “used as one component in the overall cladding system” of Grenfell Tower.



**Pictured: The new plastic cladding hangs charred and melted underneath the windows of the Grenfell tower in west London**

<http://www.dailymail.co.uk/news/article-4604296/Was-cladding-blame-spread-tower-block-fire.html>

# What about other tower blocks?

- The UK government has carried out tests on 600 buildings around the country, and so far at least 434 of them have failed.
- Tests have been conducted with focus on the filler – the core of the cladding panel – to check how combustible it is.
- This is an exhaustive and costly process that has taken considerable time to complete.
- Questions are now – who will meet the cost of removal/replacement in hundreds of affected buildings?

# What about other tower blocks?

- The Grenfell Tower Inquiry commenced in London on 21 May 2018.
- The first stage of the Inquiry was conducted through 2018 and the UK Prime Minister, Mrs Theresa May, appointed Sir Martin Moore-Bick as Chair.
- Dame Judith Hackitt was appointed to undertake a review of the building regulatory system, and published a final report in May 2018. It will lead to legislation changes and changes to building standards at the conclusion of the Inquiry that propose to stop fires of this sort for the future.
- IFSS Coalition has now been formed to address these international issues and work has commenced on a new global fire safety standard.

# Lendlease pays £5m to replace flammable cladding (UK)

- LENDLEASE has agreed to pay £5 million (AU\$9.33 million) to replace flammable cladding on two tower blocks in Manchester's Green Quarter in a landmark backflip after residents were told they had to meet the costs.
- March 2019, it was announced that Lendlease and freeholder Pemberstone will pay for the costs at the blocks, Vallea Court and Cypress Place.
- This comes after two years of campaigning and in September last year UK Secretary of State for Housing James Brokenshire threatened to ban 60 companies including Lendlease and Pemberstone, from tendering for government contracts as well as face financial penalties.
- Only half a dozen or developers announced they would wear the costs and at the time, Lendlease resisted calls that it pays for the replacement.

# UK Government allocates £200m to replace Grenfell-style cladding - 9<sup>th</sup> May 2019

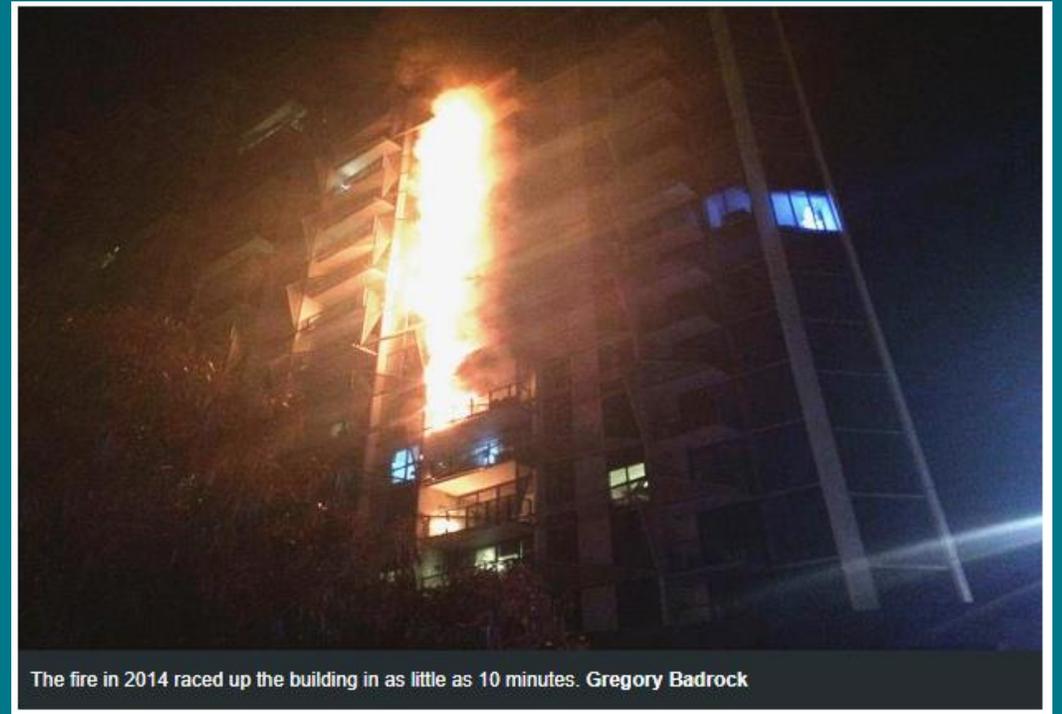
- UK Prime Minister Theresa May confirmed the government will allocate £200m to fix private tower blocks wrapped in combustible Grenfell-style cladding.
- The prime minister said the money would be made available to remove and replace unsafe aluminium composite (ACM) cladding from 170 privately owned high-rise buildings.
- The money would not cover the costs of removing all of the cladding, and would not cover the costs of other ongoing fire protection measures including 24-hour waking watch patrols of corridors.
- Combustible non-ACM cladding and other fire safety problems such as faulty or missing fire breaks in wall systems would not be covered.
- Having spent months trying to persuade property companies to pay with only limited success, housing ministers moved to step in with public funds.



# *Australian cladding issues*

## Melbourne Lacrosse building fire - 25 November 2014

- The Lacrosse building, situated at 673 La Trobe Street Docklands Melbourne, is a twenty three (23) storey mixed-use building which includes fifteen levels of apartments.
- The fire at the Lacrosse building is a first in Melbourne in that it directly affected approximately 450 to 500 people who required immediate evacuation and accommodation.
- Fortunately in this incident there were no fatalities or serious injuries.



The fire in 2014 raced up the building in as little as 10 minutes. Gregory Badrock

<http://www.afr.com/real-estate/lacrosse-building-owners-have-to-replace-cladding-before-case-starts-20171024-gz7f34>

# Lacrosse apartment owners awarded \$5.7 million in damages

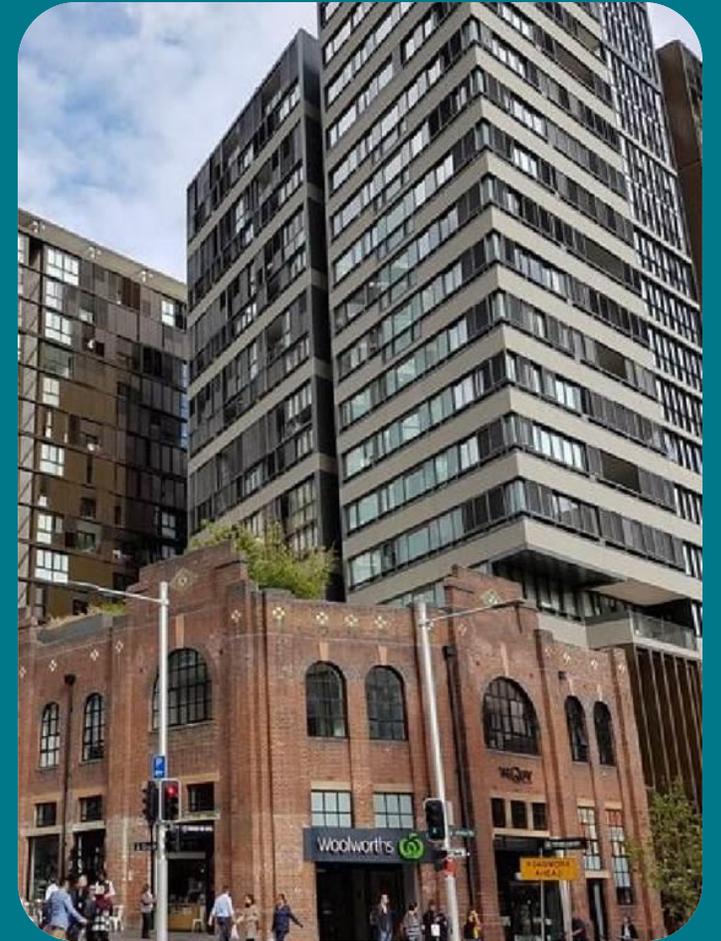
- In March 2019 the owners of apartments at Melbourne's Lacrosse tower in Docklands won more than \$5.7 million in damages in a lawsuit launched after a fire fuelled by flammable cladding caused significant damage to the building in November 2014.
- That claim for damages covered the cost for owners of replacing non-compliant cladding, damaged property, additional insurance premiums and "anticipated future losses".
- In a decision handed down in the Victorian Civil and Administrative Tribunal (VCAT) by Judge Ted Woodward, LU Simon(Builder) was ordered to pay more than \$5.7 million to apartment owners.
- However, most of that money would be paid to LU Simon by the architect, fire engineer and building surveyor who worked on the project, after Judge Woodward found they had breached contractual obligations

# Lacrosse apartment owners awarded \$5.7 million in damages

- In his ruling, Judge Woodward found the architects Elenberg Fraser had failed to remedy "defects in its design", specifically designs which allowed the "extensive use" of aluminium composite panels (ACPs).
- He also found the building surveyor, Gardner Group, breached its agreement with LU Simon by failing to exercise due care when it issued a building permit in 2011 for those architect plans.
- Thirdly, he found the fire engineer, trading as Thomas Nicolas, failed to recognise and warn the builder that the ACPs proposed for use on the building did not comply with the building code.
- As a result, he ordered that the three parties pay LU Simon a combined total of 97 per cent of the damages owed to apartment owners.
- This is a landmark case distributing liability on a proportional basis.

# Sydney apartment owners face \$12.5 million bill to remove flammable cladding (Dec 2018)

- Hundreds of apartment owners in an inner-city development may have to pay up \$45,000 each in special levies to cover the estimated \$12.5 million cost of removing and replacing 10,000 square metres of flammable cladding.
- The Quay, a 282-unit, mixed-use development in Chinatown, Sydney is one of 435 identified as “potentially high-risk” by the NSW government’s Cladding Taskforce earlier this year.
- The NSW government in August 2018 declared combustible cladding a banned product, meaning it must be removed from any building on which it has been installed, often to the tune of millions of dollars.



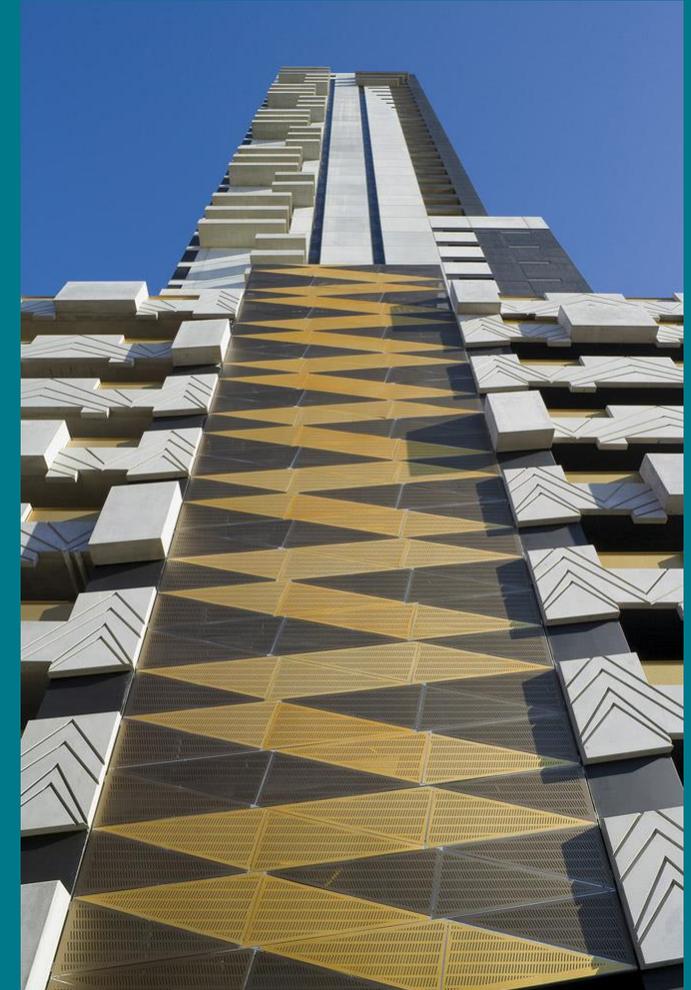
# Sydney unit owners face uncertainty over who will foot \$7m bill to remove illegal cladding (Aug 2018)



- Residents of 45 Bowman St in Pyrmont, Sydney will have to foot the bill to have illegal cladding removed from their building.
- This apartment building is covered in a flammable and dangerous cladding now considered illegal.
- The owners face a \$7 million bill to have it replaced because of mounting pressure by insurers and now legislated by the state government to remove it.
- Each owner will need to pay \$10,000 per quarter for five years to replace the illegal cladding.

# Neo 200 apartment fire renew fears over flammable cladding

- The City of Melbourne issued an emergency order for the Neo 200 apartment complex after flammable cladding, the same used in London's Grenfell Tower, caught on fire early morning in February 2019.
- Residents were evacuated from the 40-storey complex at 182-200 Spencer St after a fire started on the 22nd floor and reached the 27th floor as well as the 21<sup>st</sup>, before it was extinguished.
- MFB chief officer said the building is clad with the same material as London's Grenfell Tower, which killed 72 people when a fire broke out.
- This is the second cladding fire in Melbourne after Lacrosse tower in 2014.



# Cladding crisis spreads into the Australian suburbs as nine more products are classed as non-compliant

- Thousands more properties could now be caught up in Australia's cladding crisis, after authorities issued an alert warning against the use of another nine types of cladding in February 2019.
- The alert will affect an unknown number of under-construction dwellings, including single-storey family homes, which had previously been largely unaffected but now may not be compliant with building codes.
- The decision, by Australia's leading building product accreditation agency, to withdraw support for the cladding materials has left industry experts stunned.
- The Victorian Building Authority (VBA), which regulates the state's building sector, issued an alert stating that CertMark International had withdrawn nine certifications for cladding systems.



<https://www.abc.net.au/news/2019-02-21/melbourne-skyline-generic-showing-suburbs/10832612>

# Resimac introduces building cladding restrictions -Monday 20<sup>th</sup> May

- The non-bank lender has announced that a unit or apartment in buildings with non-compliant cladding will not be considered a valid security type across its prime and specialist loans.
- Resimac announced that, from Monday (20 May), it will no longer accept as security any unit or apartment located within a building or development with non-compliant external cladding, or where compliance cannot be determined.
- The policy change applies to new prime and specialist applications for units and apartments, as well as pipeline applications where a valuation had not been received and reviewed by 20 May.
- In cases where the valuation report notes that the unit or apartment is located within a building that “appears” or is known to be clad, Resimac will require confirmation by a relevant expert (such as an engineer, builder, surveyor or certifier) that the cladding is compliant.
- Additionally, where the unit or apartment is located within a building or development known to have compliant cladding, evidence will need to be provided that the strata insurer was aware of the cladding, as well as the compliance status of the cladding, prior to approving cover.

# Measures being taken in Australia to prevent future disasters

- This requires national legislation however no comprehensive move has been made to-date on a federal government level.
- Current Federal Government position:
  - Senate Standing Committee on Economics has produced an interim report with recommendations.
  - Customs Amendment (Safer Cladding) Bill 2017 has been passed.
  - Amendment 1 to the National Construction Code 2016 Volume 1.
  - Codemark Certificate of Conformity (ABCB).
- Major states have taken measures:
  - Victoria - Changes to Local Government Act 1989(VIC) Cladding Rectification Agreements (CRA)
  - New South Wales – Ban on certain building products retrospective.
  - Queensland – Building and other legislation(cladding) amendments regulation 2018

# *Other Global cladding issues*

## Blaze in the Dubai Torch skyscraper for second time

- A fire ripped through one of the world's tallest residential towers in Dubai on Friday August 4<sup>th</sup> 2017.
- The tower was evacuated, no injuries were reported, and there was no immediate word on the cause of the blaze.
- This is the second time this tower has been engulfed in a cladding fire.



Flames shoot up the sides of the Torch tower residential building in the Marina district, Dubai, United Arab Emirates, in this August 4, 2017 picture by Mitch Williams. Mitch Williams/Social Media Website/via REUTERS

<https://www.thesun.co.uk/news/4166631/dubai-tower-fire-the-marina-torch-latest-updates/>

# Blaze in Mermoz Tower, Roubaix France



<https://foursevenfive.com/reason-foam-fails-2-unacceptable-fire-hazard/>



<https://www.insidehousing.co.uk/insight/insight/grenfell-the-french-connection-53571>

“A problem has been detected, it is now not a question of abandoning the insulation of houses, but we must now quickly examine, if we shouldn’t be using other insulation materials..”

# Building fire kills 16, injures at least 50 in Azerbaijan



Fire engulfing an apartment building in Baku. Photo: Trend.

# Fire guts 38 storey high rise building in Busan, Korea



<http://www.koreaherald.com/view.php?ud=20101118000855>

A helicopter drops water to put out a blaze at the Wooshin Golden Suites apartment block in Haeundae, Busan. The fire was extinguished two-and-a-half hours after it started. No casualties were reported but the authorities estimated the damage to the building to be substantial.

# Valuer's responsibilities and liabilities

- In view of the issues with Combustible Cladding API(Australian Property Institute) entered into discussion with the banking / lending industry on risks associated, and recommended solutions:
  - Provide guidance to Members (Valuers) when preparing valuation reports that address 'cladding' in a consistent manner, and to lenders so that they are aware of what further enquiries they must make prior to reliance on valuation reports for mortgage and lending purposes.
  - Members undertaking valuations of real property need to ensure that they are not holding themselves out as building/construction experts, unless they hold appropriate qualifications/certification. Expert assessment by a building surveyor or certifier is required to determine whether cladding is building code compliant.

# Valuer's responsibilities and liabilities

- A Valuer's role is to report on risk items that are identifiable from the inspection of the subject property in accordance with accepted valuation practice. Valuers should remember that they are not qualified building/construction experts and should not be assuming or stating that 'cladding', or the method of attachment, on a particular building is compliant or non-compliant.
- The Valuer should however identify whether the building, in which the subject property is located, appears to be 'clad' and note this in the valuation report.
- For the purpose of this Member Advice "appears to be clad" means that the building/development is either wholly or partially 'clad' with aluminium composite panel (ACP), expanded polystyrene (EPS) or similar products, excluding glazed areas.

# Conclusion

- This is a world wide problem that has huge repercussions.
- Australia has taken steps to identify potential problems on a state basis but it needs to be driven nationally by the Federal Government as in the UK.
- Since 2005 there have been 19 fires worldwide involving cladding material alone.
- Decline of our manufacturing base means majority of our cladding is imported from overseas.
- Whilst regulatory bodies/state governments are progressing on significant reforms on non-compliant building products, this will provide little assistance to owners/occupiers of existing buildings who face replacement of non-compliant cladding installed.

# WHAT IS THE SOLUTION?

- New Global Fire Safety Standard
- I.F.S.S. – International Fire Safety Standards Coalition
- I.F.S.S. met at the inaugural meeting on the 9<sup>th</sup> July 2018
- The meeting was held at UNECE, Palais des Nations, Geneva, Switzerland

# IFSS Inaugural Meeting

- Present:

Gary Strong – Chair

Adrian Dobson

Alexander Aronsohn

Ben Bradford

Bobby Chakravarthy

Chris Dubay

Daniel Joyeux

Domencia Carriero

Dr Graham Smith

Danny Hopkin

Dwyane Sloane

John Campbell

Jane Duncan

Ken Creighton

Kevin Hughes

Martin Russel-Croucher

Patrick O’Flynn

Richard Harral

Robert Hecek

Sofie Hooper

Tim Neal

- In attendance by phone:

Beth Tubbs

Judith Zakreski

- Apologies:

Don Bliss

Diane Dale

Diane Marshall

David Scott

Dominic Sims

Francesca Berriman

Fred Krimgold

Gulnara Roll

Hywel Davies

Jeff Harper

John Harrington

Jonathon Barnett

Martin Conlon

Mike Pfeiffer

Martin Shipp

Peter Chua

Paul Everall

Paul Wilkins

Robert James

Rick Riding

Simon Ho

Simon Lay

Stephen Remo

Thomas Moullier

# IFSS Inaugural Meeting – Geneva July 2018



# IFSS Inaugural Meeting

- The coalition consists of local and international professional bodies and standard-setting organisations committed to developing and supporting a shared set of standards for fire safety in buildings in the public interest. The standards aim to set and reinforce the best practise professionals should adhere to ensure building safety in the event of a fire.
- International Financial Reporting Standards (IFRS) is adopted in 130 countries and represents what is on accountants balance sheet. Once developed, IFSS underpins IVS (International Valuation Standards) which underpins IFRS. IFSS will ensure confidence, trust, transparency, comparability and consistency with positive impact on current world economy.
- As the property market has become increasingly international with investments flowing across national borders, the sector still lacks a consistent set of high level global principles that will inform the design, construction, and management of buildings to address the risks associated with fire safety.

# IFSS Inaugural Meeting

- Differences in materials testing and certification, national building regulations or codes, and standards on how to manage buildings in use, particularly higher risk buildings, means there is confusion, uncertainty and risk to public.
- Once the high-level standards are developed, the IFSS Coalition will work with professionals around the world to deliver the standards locally. The standards will be owned by the IFSS Coalition and not by any one organisation. As it's first order of business the IFSS Coalition has set up a Standards Setting Committee that draw on a group of international technical fire experts to develop and write the high-level standards to ensure they are fit for purpose across global markets.

## The IFSS standard setting committee is asked to consider:

1. the desire for non combustible external cladding & insulation on all high risk buildings - should this be mandatory, how do we define 'non combustible'
2. the desire for sprinkler systems in all high risk buildings
3. the desire for fire and smoke detection central systems in all high risk buildings
4. the essential need for measures to deal adequately with smoke in all high risk buildings
5. the essential need for compartmentation to limit the spread of fire
6. the essential need for a fire strategy in all high risk buildings
7. the essential need for a fire risk inspection and assessment to be conducted at least annually on all high risk buildings and at least every five years on all other buildings
8. the essential need for fire engineers/professionals to be engaged early in the design of new high risk buildings and to ensure the final building delivered complies with the design
9. the essential need for inspection during construction and during the life of an existing building to ensure essential fire safety products and detailing is delivered and maintained as designed.

## The IFSS standard setting committee is asked to consider:

10. to consider the definition of high risk buildings
11. to consider extending the standards beyond life safety to building preservation in the interests of society (for certain buildings such as hospitals and historic buildings)
12. to consider fire risk management of buildings and structures post completion
12. to consider the different building codes and regulations that already exist and to recommend changes and/or alignment to these as necessary to ensure consistency globally
13. to consider the retrospective application of the standards to existing buildings and structures
14. to consider the different test standards for fire testing materials and combinations that already exist and to recommend changes and/or alignment to these as necessary to ensure consistency globally
15. to consider a framework of competencies
16. to consider the development of a certificate of compliance publicly displayed in all buildings which meet these standards.

# Standard Setting Committee

- The SSC is independent and will act independently. Although members have been nominated by Coalition members, each individual is to act independently. No individual on the committee will represent any organisation, sector or geographic region. It is vital that each member work on the basis of their own skill, knowledge and expertise while taking an international and independent perspective in the public interest.
- The committee consists of a number of individuals decided by the Coalition Trustees. The SSC will decide and confirm their own Chair, Vice Chair and Executive Secretary.
- All Coalition Trustees were invited to nominate individuals (from their organisation and/or beyond) to sit on the SSC.
- Coalition members nominating individuals have the responsibility to nominate individuals able to act independently and with the skills fit for the task.

# Standard Setting Committee Members

- Executive Secretary – Alexander Aronsohn
- Ales Jug
- Ben Bradford
- Beth Tubbs
- Birgette Messerschmidt
- Daniel Joyeux
- Dr Paul Stollard
- Dr Tony Enright (Australia)
- Dwayne Sloan
- Frances Peacock
- Dr Graham Smith
- Greg Payne (Australia)
- Jeff Wood
- John Lewis
- Kevin Hughes
- Lorna Stimpson
- Martin Conlon
- Professor Sam Allwinkle
- Robert Thilthorpe
- Tim Neal
- William Koffel

# Conclusion

It might not be the case that professional bodies working alone can achieve universal implementation of one international set of standards. We need the active support of governments, companies, and other interested entities.

The key to winning government support is the fact we are a Coalition. While governments might support their 'local' body or department to set standards, multiple world governments are not all going to support the same private body or an individual nation's department to set an international standard.

Through creating a shared, united, international process and set of standards, we can win the trust of governments and other key stakeholders. Through a world class standard setting process and governance model we can avoid the fragmentation and inconsistency of professional bodies going it alone and never achieving the Coalition aims of global consistency of fire safety in the public interest.

# International Fire Safety Standards – Get Involved

The IFSS Coalition encourages you to get involved in the project.

## *Who can sign up?*

- **Full members** of the Coalition must be professional bodies and not-for-profit organisations
- **Supporters** of the Coalition are commercial organisations.

## *How do I sign up?*

- To become a full member or supporter of the Coalition, contact [gstrong@rics.org](mailto:gstrong@rics.org).

## *Stay Updated*

If you are not registering as a member or support organisation you can still sign up to receive project updates.

## *Our Website*

Please visit our website: <https://ifss-coalition.org/coalition-organisations/>

# SUPPORT AND JOIN US!



# Sources

- [www.yourhome.gov.au](http://www.yourhome.gov.au)
- Australian Building Codes Board
- NSW Government
- <http://www.planning.nsw.gov.au>