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Defence

Guidelines for combustibile external walls

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1. Introduction

The Defence Building Works Manual (BWM) specifies compliance and conformance requirements for Defence occupied buildings for the protection of Defence personnel and assets in support of Australian Defence objectives. The BWM specifies that building work on the Defence estate and other Defence occupied buildings must comply with the [National Construction Code \(NCC\)](#) and all relevant Defence policies. The policy requirements of the BWM are mandatory.

Chapter 4 of the BWM contains Defence requirements for new leases and renewal of leases for Defence occupied buildings. One of these requirements is to conduct a NCC audit that includes a Manual of Fire Protection Engineering (MFPE) fire safety survey report. Part of that reporting is to identify any combustible cladding in external walls in a building of type A or type B construction.

The relevant applicable provisions of the NCC are provided in Appendix A.

Where combustible cladding in external walls is identified, it is a requirement of the BWM to either:

1. replace all combustible cladding as necessary to achieve compliance with the deemed to satisfy provisions of the NCC relating to the use of combustible cladding, or
2. where retention of any combustible cladding is proposed, undertake a risk assessment of the cladding in accordance with the processes identified in these guidelines.

Notes:

- State and Territory requirements for building work are contained within the relevant building legislation. In general, these requirements specify that all new building works must comply with the current provisions of the NCC. It is noted that some jurisdictions impose a requirement for a performance solution report to be done if there is any combustible cladding left on a building.
- Performance solutions for combustible cladding may only be considered if the product and installation can comply with requirements of verification method CV3 of the NCC or where compliance with the relevant performance requirements is demonstrated by an appropriately qualified fire engineer based on the low fire and life safety risk associated with the cladding.
- Evidence that the remediation works will or have been completed and certified in compliance with State or Territory building legislation must be submitted to Defence for review as part of the stakeholder process.

In summary, the options above are to remove all cladding so that the cladding risk for the building is eliminated, or have an appropriately accredited fire safety engineer undertake a risk assessment – and performance solution where possible – of the cladding which includes actions and treatment measures to reduce the risk to an acceptable level.

It is noted that modification of a building to reduce combustible cladding risks to an acceptable level does not mean no risk and therefore this is something that all stakeholders need to understand and agree to. Defence are willing to consider an acceptable risk outcome provided the processes in this guide are met. It is noted that other stakeholders also need to agree to this outcome as part of the process, in particular insurers, fire services, and building owners. The fire safety engineer will also need to consider the impact of any previous performance solutions on the risk of combustible cladding.

The majority of this document provides guidance for option 2 above, however the building certification processes for full cladding risk remediation would be the same.

Specifically, the objectives of this report are to:

- define combustible cladding with respect to the scope of this guideline
- identify current State / Territory legislation and guidance
- describe minimum levels of experience / accreditation of professionals involved in the cladding assessment process
- provide the framework and minimum requirements / inclusions of a combustible cladding risk assessment and performance solution

- define risk rankings for evaluation with respect to action and timeframes
- describe the process if latent issues are identified whilst undertaking remediation works
- describe the building approval / certificate of completion process for any remediation works

This guideline has been developed in consideration of the documents, codes, standards, and guidance documents identified in section 3.

2. Definitions

The following Defence definitions found in the BWM and MFPE are relevant to this guide:

Accreditation. A permission accepted by or given by a State or Territory to a person which allows them to lawfully provide services or carry out work in their area of expertise and includes occupational registration or licensing as required in the State or Territory where the work is being performed.

Building of type A or B construction. Means a building that would be considered to be of type A or B construction applying the deemed to satisfy provisions in Part C of the NCC regardless of whether they have been subject to performance solutions relating to fire safety.

Combustible cladding. Means cladding forming part of an external wall or ancillary element attached to an external wall that is not non-combustible within the meaning of the NCC and includes but is not limited to aluminium composite panels (ACP) and expanded polystyrene (EPS) wall systems.

External wall. For the purposes of Volume One, means an outer wall of a building which is not a common wall. External walls include all components incorporated in them including the facade covering, framing, insulation and internal linings.

Ancillary element. Means an element that is secondary to and not an integral part of another element to which it is attached.'

3. Reference documents

This document should be read in conjunction with the following documents:

- Building Works Manual (BWM);
- Manual of Fire Protection Engineering (MFPE);
- [National Construction Code Volume One – Building Code of Australia \(NCC\) 2019 amendment 1](#) (NCC)
- [NCC Guide to Volume One 2019 amendment 1, Australian Building Codes Board, Australia](#)
- [Australian Building Codes Board, Advisory note, 2020.2.3, Fire performance of external walls and cladding](#)
- AS/NZS ISO 31000:2018 Risk management – Guidelines
- AS 5113:2016 Fire propagation testing and classification of external walls of buildings
- [Australian Fire Engineering Guidelines – Edition 2021, Australian Building Codes Board](#)
- [National Fire Protection Association, High rise buildings with combustible exterior wall assemblies: Fire risk assessment tool, final report, 2018](#)
- [Society of Fire Safety practice guide – Facade / external wall fire safety design, revision 002 dated March 2019](#)

4. Regulatory requirements

The following sub-sections provide context on the State or Territory requirements. These requirements change over time, so they need to be checked for currency at the start of any risk assessment / treatment strategy process. The following information is for guidance only. Further information is also provided in Appendix B.

4.1. NSW regulatory requirements

NSW Environmental Planning and Assessment Amendment

The Environmental Planning and Assessment Amendment (Identification of Buildings with External Combustible Cladding) Regulation 2018 required owners of certain buildings with external combustible cladding to register their building with the NSW Government through an online portal. For buildings occupied before 22 October 2018, the deadline for registration was 22 February 2019.

The regulation applies to class 2, class 3 and class 9 buildings of 2 or more storeys and to any class 4 part of a class 9 building of 2 or more storeys. Schedule 1 of the amendment defines external combustible cladding as:

- (a) *'any cladding or cladding system comprising metal composite panels, including aluminium, zinc and copper, that is applied to any of the building's external walls or to any other external area of the building, or*
- (b) *any insulated cladding system, including a system comprising polystyrene, polyurethane or polyisocyanurate, that is applied to any of the building's external walls or to any other external area of the building.'*

The NSW Cladding Taskforce and local councils have also been undertaking inspections to identify combustible cladding on buildings in NSW. The Department of Planning and Environment and local councils have issued orders to building owners requesting assessment of cladding risks by appropriately qualified experts.

NSW Building Products (Safety) Act 2017

Under the Building Products (Safety) Act 2017 (BPS Act) which came into effect in December 2017, the government has powers to identify, restrict and rectify building products which pose a safety risk in buildings. On 10 August 2018, Fair Trading NSW issued a notice under section 9(1) of the Act which prohibits the *'use of aluminium composite panels (ACP) with a core comprised of greater than 30 per cent polyethylene (PE) by mass in any external cladding, external wall, external insulation, facade or rendered finish in:*

- Class 2, 3 and 9 buildings with a rise in storeys of three or more and Class 5, 6, 7 and 8 buildings with a rise in storeys of four or more (Type A construction as defined in the Building Code of Australia); and
- Class 2, 3 and 9 buildings with a rise in storeys of two or more and Class 5, 6, 7 and 8 buildings with a rise in storeys of three or more (Type B construction as defined in the Building Code of Australia)'

Exemptions are granted to ACPs which have been tested and deemed to be non-combustible under AS 1530.1:1994 or have passed AS 5113 – Fire propagation testing and classification of external walls of buildings, subject to additional criteria.

In relation to the provisions for identification and rectification of buildings subject to product bans under Part 4 of the BPS Act, *'it does not matter if the building product was used in the building before the building product ban is in force.'*

The BPS Act enables a relevant enforcement authority – for example the local council – to identify and require rectification of an affected building to eliminate or minimise a safety risk posed by a banned building product. Under section 26 the Act, a building is *'made safe'* if the safety risk posed by a banned ACP is *'eliminated or, if it is not reasonably practicable to eliminate the safety risk, is minimised as far as practicable.'*

Guide for the Assessment of Buildings with Combustible Cladding

The NSW Government issued the Guide for the Assessment of Buildings with Combustible Cladding in September 2019¹. The purpose of the guide is to *'inform and assist councils and relevant authorities to undertake or review combustible cladding risk assessments and determine what, if any, next steps are necessary'*.

'The guide seeks to promote the consideration of a standard set of matters when undertaking an assessment of a building with combustible cladding, while acknowledging the various risk assessment methodologies and tools that are currently available.'

The Guide states that:

'Neither the cladding ban nor the cladding register automatically require rectification or other actions be taken with regard to cladding on a building. Councils, relevant authorities and the Commissioner for NSW Fair Trading (in the case of the banned product) may determine necessary actions to address the risk posed by the cladding and take any necessary compliance and enforcement actions.'

Project Remediate

Project Remediate is a voluntary program to replace flammable cladding for eligible class 2 residential apartment buildings. The NSW Government is offering support to eligible owners corporations in the form of interest free loans to fund the remediation work. Project remediate also provides quality assurance and program management services delivered by experience professionals.

The NSW Cladding Product Safety Panel (CPSP) was established as an expert panel to support the Cladding Taskforce and advise Government on suitable products and systems to remediate combustible cladding. The CPSP has prepared two advisory reports to date. Report 1² prepared by the CPSP outlined the initial findings and recommendations related to cladding products and systems endorsed for use in Project Remediate. Report 2³ includes an update on the CPSP undertakings and additional replacement cladding materials for Project Remediate.

The NSW Government has also published the Project Remediate Pattern Book⁴ which is a reference document to be utilised by all design teams and building contractors on Project Remediate to facilitate standard solutions and minimise re-design. The Pattern Book can be considered a best practice guide in relation to replacement of combustible cladding in class 2 residential buildings in NSW.

4.2. QLD regulatory requirements

An amendment to the Building Regulation 2006 was introduced in Queensland through the Building and Other Legislation (Cladding) Amendment Regulation 2018, which took effect on 1 October 2018. This legislation required owners of buildings to undertake an assessment of the materials used on the external walls of their building which are:

- Privately owned.
- A class 2 – 9 building.
- Constructed of type A or B construction.
- Constructed between 1 January 1994 and 1 October 2018.

The intent is to identify which buildings are affected by combustible cladding and whether cladding rectification works are likely to be required to achieve an acceptable level of safety.

The legislation required a three-stage checklist to be completed. The deadline for all parts of the checklist have now passed. The intent of these stages 1 – 3a was to determine if the building was considered an *'affected private building'* – ie a private building that has combustible cladding forming part of, or attached or applied to, an external wall or another external part of the building other than the roof and to engage a fire engineer to undertake a checklist.

¹ NSW Department of Planning, Industry and Environment, 2019, *Guide for the Assessment of Buildings with Combustible Cladding*

² Cladding Product Safety Panel – Report 1: initial endorsed products and systems for Project Remediate, 30 March 2021

³ Cladding Product Safety Panel Report 2: update on CPSP undertakings and additional replacement cladding materials for Project Remediate, 28 April 2022

⁴ NSW Government, Project Remediate, Cladding replacement pattern book, 1st edition, 09 August 2022.

Stage 3b of the checklist was required to be completed by 3 May 2021. This required building owners of affected private buildings to provide the Queensland Building and Construction Commission (QBCC) with the completed building fire safety risk assessment (BSFRA). The building owner must display a notice with the outcomes of the process in a public place and provide a copy of the building fire safety risk assessment to all lot owners and building tenants within 60 days.

Under section 160 of the Building Regulation, combustible cladding is defined as:

'Cladding that –

- (a) is made of a material of a kind that is not mentioned in the NCC, clause C1.9(e)(i), (ii), (iii), (iv) or (v); or*
- (b) is deemed to be combustible under AS 1530.1-1994 (Methods for fire tests on building materials, components and structures, Part 1: Combustibility test for materials), section 3.4(a), (b) or (c).'*

This process is retrospective in nature and requires a full review of any cladding materials despite any previous building approvals. The checklist process is overseen by the QBCC.

On 18 October 2019, the QLD Government introduced the Queensland Development Code (QDC) Mandatory Part 2.5 (MP 2.5) which applies to both new and existing buildings where cladding is proposed to be installed or proposed to be retained as part of building works or rectifications. QDC MP 2.5 prohibits the use of:

- ACP with a core of more than 30% PE by mass in an external cladding, external insulation or facade on all buildings.
- Expanded polystyrene (EPS) in an external wall insulation and finish (render) system – including as an attachment – on class 2 to 9 buildings of type A and B construction.

Clause 6 of QDC MP 2.5 permits ACP or EPS cladding to be retained on a building as part of cladding rectification work where a performance solution is developed by a registered fire engineer.

4.3. VIC regulatory requirements

In Victoria, the government established the Victorian Cladding Taskforce (VCT) to investigate and audit the extent of combustible cladding materials on Victorian Buildings. The VCT issued an interim report in December 2017 and a final report in July 2019. As part of its work the VCT established the State-wide Cladding Audit (SCA) program which is now administered by the Victorian Building Authority (VBA) in collaboration with local councils. The SCA involves audits of class 2 and 3 buildings with a rise in storeys of more than three – ie residential / transient accommodation buildings – and class 9 assembly buildings over two storeys. The taskforce report focused on places occupants sleep or gather⁵. Audited buildings are assessed by an independent Advisory Reference Panel that applies a risk assessment tool to triage buildings and make recommendations to the relevant local council for risk mitigation. The local council then makes its own assessment and will usually proceed to issue a building notice to remove the cladding or require owners to show cause as to why it can remain. Short term mitigation measures may also be required for higher risk buildings. Where an owners corporation wishes to retain some or all combustible cladding, the most common process is for it to apply to the Building Appeals Board for a determination that the retention proposal meets the performance requirements of the NCC or is otherwise appropriate. Applications to the Building Appeals Board are usually supported by a cladding risk assessment or similar report from a registered fire safety engineer.

Effective 1 February 2021, the Prohibition of High-Risk Cladding Products Declaration nominates certain external wall cladding products to be prohibited from being installed on buildings of type A or type B construction in Victoria under section 192B (1) of the Building Act 1993. This ban has been introduced as *'these categories of external wall cladding products is or will likely cause occupants, members of the public and occupants of neighbouring buildings to be at risk of death or serious injury; and property to be at risk of a severe damage in event of a fire.'*

⁵ Media release – Banning Combustible cladding in Victoria, Patrick Lane, 10 March 2018

The products prohibited under this clause include:

- ACPs with a core of less than 93% inert mineral filler (inert content) by mass in external cladding as part of the wall system
- EPS products used in an external insulation and finish (rendered) wall system.

The Victorian Government has also established Cladding Safety Victoria who has responsibility for assisting owners of the highest risk buildings with cladding rectification including funding cladding replacement. The Government has allocated \$600 million to rectify class 2 buildings.

4.4. WA regulatory requirements

The WA Building Commission – Department of Mines, Industry, Regulation and Safety (DMIRS) – has conducted a state-wide audit on combustible cladding for high-risk and high-rise buildings. The audit includes class 2, 3, 4 and 9 buildings with cladding that are three storeys and over and were constructed or refurbished after 2000. The government releases status updates on its program quarterly. According to the latest update⁶ 1795 class 2, 3, 4 and 9 buildings have audited. 52 of these require remediation and have been referred to relevant local councils who have commenced enforcement action.

In addition, a guidance note was produced by DMIRS outlining the process to be carried out by fire safety engineers in addressing the hazard presented by combustible cladding.

On 6 October 2018, regulations were made to prescribe a new standard for non-combustible external walls for type A and B buildings. They must meet the DTS or if a performance solution is proposed relating to CP2 for avoiding spread of fire it must meet Verification Method CV3 (which includes passing AS 5113) but it need not meet the falling debris test in AS 5113 provided there is provision for safe evacuation or pose a risk to fire authorities. A person can apply to the Building Commissioner for a modification to the prescribed requirements. Remedial work on existing buildings with combustible cladding are exempt.

4.5. Australian Capital Territory

The ACT have established an Inter-agency Building Cladding Review Group to consider risks associated with combustible cladding. It has audited 466 government owned buildings. 70 were found to have potentially combustible cladding and further action is being taken to assess and, where necessary remediate these buildings. The ACT do not yet have an audit program for privately owned buildings. They do not have any bans on cladding but have issued guidance to practitioners about amendments to the NCC related to external cladding and their obligations to comply with the requirements of the NCC.

The ACT Government is hosting a [Register of Potential Suppliers](#) to assist private property owners who may have potentially combustible cladding to:

- identify whether the cladding on their building is combustible cladding; and
- if the cladding is found to be combustible, to provide costed options for remediation

The list is hosted by Major Projects and is publicly available to any building owner of any class of building in the ACT who would like a starting point in which to begin to address their combustible cladding rectification needs. The [Register of Potential Suppliers](#) website also includes other information and some fact sheets on cladding.

⁶ Dated 31 March 2021 https://www.commerce.wa.gov.au/sites/default/files/atoms/files/private_buildings_-_statewide_cladding_audit_update.pdf

4.6. South Australia

In South Australia cladding audits are being managed by the state government via Council Building Fire Safety Committees.

In February 2018, the government made regulations requiring that for any new building works involving a 'designated building product' a notice must be lodged with the relevant council prior to commencement of work containing prescribed information about the proposed use of the product. The notice requirement applies to type A and B buildings. A 'designated building product' is defined as a 'metal panel or lining formed with an aluminium, or similar thin metal sheet material, with any type of core material'.

4.7. Northern Territory

The Northern Territory government has not published any information about cladding audits or passed any new laws relating to the use of combustible cladding products.

Information related to non-conforming building products can be found at [Non-conforming building products | NT.GOV.AU](#).

4.8. Tasmania

The Tasmanian government issued a report entitled Tasmanian Aluminium Composite Panel Audit Summary in January 2019. It says the government identified 43 buildings with combustible cladding, only 1 of which required remediation work.

In December 2017 the government issued a determination that the use of any 'high risk products' on type A or B buildings requires approval from the state government. A high risk product is defined as ACP with a PE core used as an external cladding and rendered polystyrene.

5. Combustible cladding

Section 2 provides the definition of combustible cladding. A further description of ACPs and other common combustible cladding elements is provided in the sub-sections below.

Note. For any cladding all efforts should be made to identify the specific product and obtain relevant fire hazard test data as the sub-sections below provide general information only.

5.1. Aluminium composite panels (ACPs)

An ACP is made up of two thin aluminium sheets bonded to a polymer core, typically polyethylene (PE). Some ACPs have an entirely PE core, whereas other panels often referred to as fire retardant (FR), contain a percentage of non-combustible mineral filler with a polymer binder. Generally, the higher the mineral content, the better the product performs when exposed to fire. Therefore information about the percentage of polyethylene (PE) in the core is critical in determining the likely fire performance of an ACP.

PE is a hydrocarbon and as such is a combustible fuel source. It burns quickly when exposed to an open flame. PE is a thermoplastic and will tend to melt and drip when exposed to fire. This can lead to the delamination of the external aluminium lining which further exposes the PE core to the fire source. Additionally, the dripping of the core may result in secondary pool fires below the exposed panels or present a risk to occupants exiting the building or fire safety personnel attending to fight fire.

ACPs are typically grouped into four categories. The categories outlined in Table 1 have been defined by the Insurance Council of Australia⁷ and are similar to those identified by BRE Global for the full-scale façade fire tests of ACPs following the Grenfell disaster.

Table 1 Classification of ACPs

Category	Polymer %	Inert filler %	Comment
A	30 – 100	0 – 70	<ul style="list-style-type: none"> Defined as category 3 by BRE Global. Category A ACPs can be expected to burn rapidly, drip and delaminate irrespective of the insulation and sarking properties. Based on our experience this type of ACP is the most in existing building stock.
B	8 – 29	71 – 92	<ul style="list-style-type: none"> Defined as category 2 by BRE Global. Fire spread performance is highly dependent on the combustibility and configuration of the substrate materials including insulation and sarking. The testing undertaken by BRE Global indicates that a category B ACP with a substrate comprising non-combustible insulation and sarking represents a low risk of vertical fire spread. For category B ACPs, the Insurance Council of Australia states that <i>'where the insulation is considered close to non-combustible – eg mineral wool or fibreglass – and the sarking has a flame spread rating of less than 5 to AS 1530.2, the risk can be considered as low.'</i> Based on our experience this the second most common type of ACP in existing building stock after category A.
C	1 – 7	93 – 99	<ul style="list-style-type: none"> Defined as category 1 by BRE Global.
D	0	100	<ul style="list-style-type: none"> Category C and D materials represent a low risk of fire spread regardless of the substrate material. In our experience these ACP types are rarely found in existing building stock completed prior to 2016.

⁷ Insurance industry aluminium composite panel and other combustible façade materials, residual hazard identification / reporting protocol, available : <http://www.insurancecouncil.com.au/issues-submissions/issues/insurance-industry-aluminium-composite-panels-residual-hazard-identification-reporting-protocol>, July 2 2019.

5.2. Timber cladding

Timber is classed as either softwood or hardwood, depending on the type of tree the timber comes from. When wood is exposed to external heating it will decompose into a mixture of volatiles and solid carbonaceous residue (char). The SFPE Handbook of Fire Protection Engineering⁸ states that a temperature of 300 °C is widely used for the onset of charring and Eurocode 5 also specifies 300 °C. The combustion of wood can be either flaming or smouldering depending on the intensity of external heat flux.⁹ Flaming combustion is the primary hazard when evaluating fire spread via external walls. Solid timber will not support flaming combustion unless an external heat flux is applied to the surface since the flame heat flux alone is not sufficient to sustain its own burning.¹⁰

Where external timber cladding materials are directly exposed to flaming from a compartment fire, they can be expected to ignite and contribute to vertical and horizontal fire spread. The extent and intensity of the façade fire spread will be influenced by several factors.

The heat flux received by a burning timber surface depends on the size and orientation of the surfaces relative to other burning and hot surfaces. For this reason, the burning rate will be higher and sustained for longer where the burning surfaces face each other or are in a wall–corner or wall–ceiling configuration, when compared to a single burning surface in one plane.

The ventilation conditions behind a timber cladding system have a significant influence on the speed and extent of external fire spread over the external wall. This is characterised by size and depth of cavities and the presence of cavity barriers. *‘Studies that directly compared non-ventilated and ventilated wooden façades concluded that wooden claddings with rear-ventilated cavities released almost twice as much energy as wooden façade claddings without rear-ventilated cavities, thus resulting in more severe flame formation and accelerated fire spread.’¹¹*

Where appropriate fire stops are incorporated behind a timber cladding system, or where the timber cladding system is vertically and horizontally discontinuous, the rate of fire spread will be significantly reduced, and self-extinguishment may occur outside of the area of direct flame impingement.

Other combustible materials behind the timber cladding – such as insulation – can also contribute to the fire intensity and subsequent fire spread performance of the wall system. The timber species, surface coating, and environmental factors will also influence the fire performance of timber cladding systems.

Most common timber species used in Australia will achieve a material group number of 3¹². A group 3 material is one that reaches flashover in more than 120 seconds but within 600 seconds when exposed to 100kW in a small room where the walls and ceilings are lined with the sample material.

⁹ Buchanan et al, Fire Safe Use of Wood in Buildings – Global Design Guide, CRC Press, 2022

¹⁰ Drysdale, D. An Introduction to Fire Dynamics. 2nd Edition. John Wiley & Sons Ltd., Chichester, Sussex, UK, 1998

¹¹ Engel, T, Werther, N. Structural Means for Fire-Safe Wooden Façade Design. Fire Technol 59, 117–151, 2023

¹² Warringtonfire, An Assessment of Solid Timber Wall and Ceiling Linings in Accordance with AS 5637.1:2015, EWFA Report No: 45980.10, 2018

5.3. EPS insulated sandwich panels

EPS is a lightweight cellular plastic which will melt at temperatures lower than 205 °C, forming an ignitable liquid fuel¹³. EPS can be ignited by an open flame and tends to shrink away from small stationary heat sources prior to ignition. To maintain burning, the heat source must be either sufficiently large or follow the shrinking material. This means that EPS may be difficult to light with a small flame such as a match but is likely to be ignited by a larger fire involving typical building combustibles.

Once ignited EPS can be expected to display rapid flame spread across exposed surfaces. EPS does not tend to smoulder or char. Burning EPS emits a very dense black smoke.

Encapsulation of the EPS core with metal linings which is done for a typical insulated sandwich panel will delay ignition by allowing the core to shrink away from the heat source without propagating flame spread. This reduces the likelihood of ignition from a sprinkler controlled fire.

Exposure to an uncontrolled or fully flashover fire resulting in external flaming can be expected to ignite the core irrespective of the metal lining enclosing the panels. This can lead to rapid vertical fire spread, delamination and deformation of panels, and secondary fires from the liquid fuel.

5.4. PIR panels

PIR is a thermosetting cellular plastic with a cross-linked polymer structure that provides a high melting point. Both PU and PIR foam are manufactured from the same components, but PIR uses a different ratio of materials that results in the polyurethane structure having a higher cross-link density and stronger chemical bonds. As a result, PIR foam is more thermally stable at higher temperatures.¹⁴

PIR can be expected to ignite rapidly upon direct flame exposure and burn steadily until the formation of a protective char layer, after which the burning rate is reduced. PIR does not tend to melt and drip, due to the formation the protective char layer. It has been shown that when PIR burns it generates toxic HCN and CO in dangerous quantities.¹⁵

¹³ FM Global, Loss prevention datasheet 1-57, Plastics in construction, 2018

¹⁴ Australian Modern Building Alliance, Physical properties of polyurethane insulation, reference paper 1, issue 1, February 2021

¹⁵ Sean T. McKenna Et Al, Fire behaviour of modern façade materials – Understanding the Grenfell Tower fire, Journal of Hazardous Materials 368 (2019) 115–123

6. Combustible cladding risk assessment

6.1. Overview

Fire safety risk assessment of external combustible cladding is to be undertaken in general accordance with:

- AS/NZS ISO 31000:2018 Risk management – Guidelines
- [Society of Fire Safety practice guide – Façade / external wall fire safety design – revision 002 dated March 2019](#)
- State or Territory government risk assessment guidelines.

This guide provides a framework for undertaking a combustible cladding risk assessment. The guide is not intended to define a prescriptive risk analysis methodology.

6.2. Consultation and approval

As the risk assessment methodology used will be dependent on a given level of subjectivity – eg when evaluating the likelihood of fire events, reliability of fire systems, and when applying risk rankings – a review of any proposed combustible cladding risk assessment is to be undertaken by the Fire Safety Engineering section of the Estate Engineering Policy Directorate otherwise known as DEEP.

It is also recommended that the State or Territory fire service review the combustible cladding risk assessment. The consultation may either follow a formal referral process to mirror State and Territory processes, or can follow a less formal process where operational requirements of the fire service have been met and agreed.

Note: In some instances, fire services may not formally respond to meeting requests or provide comments. The intent is to attempt to seek comment and provide evidence that this has occurred. Where no comment is received, then this will need to be noted.

6.3. Information required

The following information will be required to input into the risk assessment:

- MFPE fire safety survey report.
- Façade investigation report – Initial investigation of the external wall system by a façade engineer to identify combustible cladding. Where combustible cladding is identified, the associated wall system including the substrate, sarking, insulation, cavity barriers, and method of fixing the cladding must be clearly described.
- Physical sampling of the cladding – the extent of sampling required must be appropriate to identify all cladding elements on the building with a high level of confidence. The number of samples required must be commensurate with the extent and complexity of the cladding, and any other evidence available from the time of construction which may assist in identifying the type of cladding installed. Section 12.1 of the Queensland Government Guideline for assessing buildings with combustible cladding – version 3 November 2019 – provides reasonable recommendations for cladding material sample collection.
- Laboratory testing – Material characterisation testing of the combustible cladding and any insulation materials must be undertaken by an NCC accredited testing laboratory. Where applicable, the Insurance Council of Australia (ICA) category and a description must be identified.

The following supplementary information is highly recommended where available:

- Any previous fire engineering assessments applicable to the building.
- Any applicable annual fire safety maintenance records for the building.
- A copy of the building approval, construction certificate, occupancy permit or equivalent documents.

- A list of essential fire safety measures installed in the building including the standard of performance to which they are installed.
- Architectural floor plans, elevations and sections.
- Detailed façade shop drawings
- Emergency evacuation diagrams
- Any relevant product information, Codemark certificates, fire test reports, or other evidence of suitability relating to the installed cladding.

Note. Proposals to support retention of combustible cladding cannot rely on Codemark certificates that have been withdrawn or were not current at the time of building approval for the project.

6.4. Phase 1: Initial review

The combustible cladding risk assessment must include the following as a minimum:

- Identify any applicable State / Territory regulatory requirements for combustible cladding.
- A description of the building and fire safety measures, in particular evacuation provisions, detection and warning systems, and firefighting provisions.
- Describe the building use, occupant characteristics and fire hazards.
- Identify any fire engineering assessments applicable to the existing building. Describe any existing performance solutions relating to the combustible cladding, or performance solutions and associated requirements which could be impacted by the combustible cladding.
- Describe the combustible cladding and the associated external wall system including type of cladding, appearance and location, substrate, insulation, and fixing method. It may be necessary to identify multiple combustible cladding elements or wall systems subject to the specific materials identified, location, and extent.
- Identify fire hazards associated with the cladding such as adjacent fire source features, fire load, openings in external walls, ignition sources, proximity to exits, proximity to fire-fighting equipment.
- Review available documentation regarding the compliance of the combustible cladding with the NCC applicable at the time the risk assessment is being prepared. Advise whether compliance with the NCC can be established based on the documentation provided.
- Fire safety engineer to provide a recommendation based on experience as to the likely outcome of the assessment so that a decision can be made as to whether there is any benefit to completing a detailed risk assessment, or whether full remediation is likely to be required.

6.5. Phase 2 – detailed risk assessment

Undertake a risk assessment of the combustible cladding installed on the external walls of the building and document the findings in a report. The scope of the risk assessment must include:

- Analysis of the likelihood of the combustible cladding being involved in a fire. This analysis should consider both internal and external sources of ignition.
- Analysis of the potential consequences of a fire involving the combustible cladding with respect to the building's fire safety strategy. This must consider the consequences of a cladding fire with respect to fire spread, occupant evacuation, and fire brigade intervention.
- Considering the likelihood and consequences of a fire involving the combustible cladding, the risk is to be ranked as low, moderate, high, or very high as per the definitions provided in section 8.
- An evaluation of the combustible cladding is to be provided based on the risk analysis. A risk treatment strategy will be required for a moderate or higher risk outcome.
- Undertake a workshop with the project stakeholders to review the findings of the combustible cladding risk assessment.

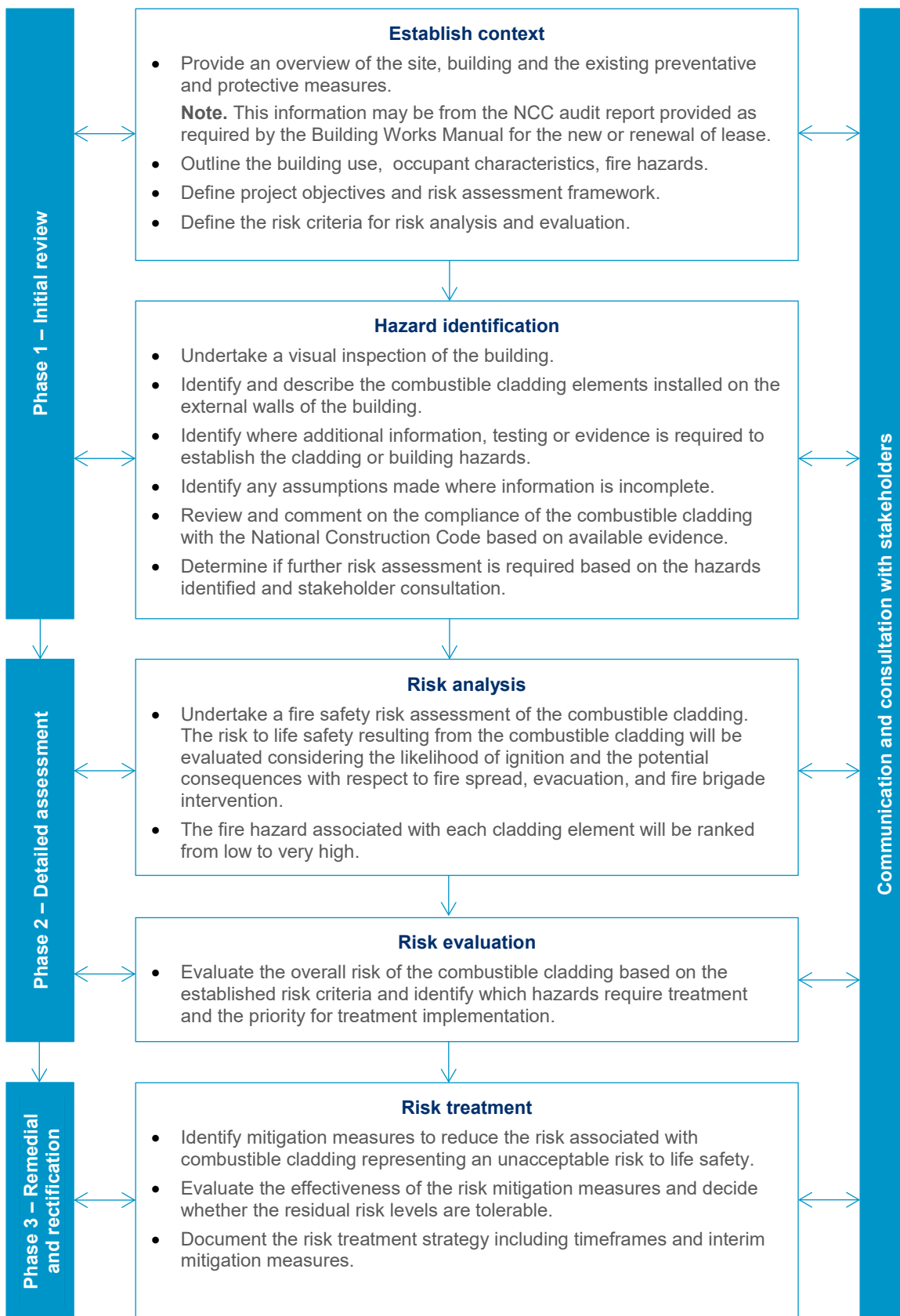
6.6. Phase 3 – risk treatment

The risk treatment strategy must include:

- Identify mitigation measures to reduce the risk associated with combustible cladding.
- Analysis of the effectiveness any mitigation measures and residual risk where combustible cladding is proposed to be retained. Where it is not reasonably practicable to eliminate risks, the treatment measures must reduce the residual cladding risk to low.
- Undertake a workshop with the project stakeholders to review the findings of the combustible cladding risk assessment and proposed risk treatment measures.
- Once agreed with the stakeholders, document the risk treatment strategy including timeframes and interim mitigation measures.

7. Framework for combustible cladding risk assessment

The following framework is to be used as the basis of the risk assessment:



8. Criteria for evaluation

The outcomes of this risk assessment are intended to assist in making decisions, based on the risk analysis, about which cladding elements require treatment and the priority for treatment implementation.

Considering the overall risk ranking established for each cladding element, the risk definitions provided in Table 2 must form the criteria for evaluating treatment recommendations and priorities.

Table 2 Risk evaluation criteria

Cladding risk ranking	Action and timescale
Low	<p>No immediate action is required.</p> <p>The risk is broadly acceptable. The performance of the combustible wall element is not considered to impact on the building's fire safety strategy.</p> <p>No major additional fire safety measures are required. However, there might be a need for reasonably practicable improvements that involve limited cost.</p>
Moderate	<p>Action is required in the medium term.</p> <p>The performance of the combustible wall element may impact on the building's fire safety strategy to a limited extent.</p> <p>Treatment measures are necessary to reduce the risk. These measures should take cost into account and be implemented within a defined time period.</p>
High	<p>Action is required.</p> <p>The risk could be substantial. The performance of the combustible wall element may contribute to the defeat of one or more aspects of the building's fire safety strategy.</p> <p>Treatment measures are necessary to reduce the risk as a high priority. The treatment is likely to require the partial or full removal of the combustible element.</p> <p>Interim fire safety measures are necessary to manage the risk until a treatment plan is implemented.</p>
Very high	<p>The combustible element represents an intolerable risk. Treatment measures are to be implemented immediately to reduce the risk.</p> <p>It may be that the building or part should not be occupied until the risk is reduced.</p>

9. Deliverables

The following deliverables are required:

- A façade investigation report that identifies the specific combustible external cladding on the building in accordance with ICA classifications or other applicable measure and also describes the associated wall systems and substrates.
- A phase 1 combustible cladding risk assessment report
- If necessary, phase 2 and 3 cladding risk assessment reports including any treatment strategies for any cladding representing a moderate or higher risk to life safety for to safely.
- Meeting with stakeholders to discuss proposed methods of work, assist with understanding / resolution of issues and on-going advice and assistance to Defence as requested. The Defence Fire Safety Engineering section shall be a stakeholder for all Defence projects involving combustible cladding risk assessments.

10. Skills and Qualifications

Defence requires the risk assessment and any proposed treatment strategy / remediation works associated with combustible cladding to be undertaken by appropriately qualified and accredited people including but not limited to a building surveyor, façade engineer and fire safety engineer.

The façade engineer is to have demonstrated experience in preparing reports for external wall combustible cladding and be able to remove samples (and make good) and facilitate laboratory testing such that the ICA categories of the testing – and the make up of the wall systems – is reported on.

The fire safety engineer preparing the combustible cladding risk assessment is to be:

- listed on the National Engineering Register for the Special Area of Practice of Fire Safety Engineering; or
- registered as a fire safety engineer with a State or Territory body.

All consultants and the building surveyor must have and maintain professional indemnity insurance of an acceptable level to Defence which does not exclude combustible external wall insurance.

The consultant must have and maintain for the term of the engagement an in-depth understanding of all relevant statutory requirements and policy frameworks for the Services, including any relevant applicable Australian and international standards. These include:

- the Building Works Manual (BWM)
- the Manual of Fire Protection Engineering (MFPE), and
- the [National Construction Code – Building Code of Australia \(NCC\)](#).

11. Proposed building approval / certification process

The ABCB through the guide that they produce and the new wording in the non-combustibility clause introduced in the amendment to the 2016 and 2019 editions of the NCC has clarified that the requirement for non-combustibility applies to *'external walls and common walls, including all components incorporated in them including the façade covering, framing and insulation.'*

This means that the external wall includes all elements from the external cladding to the internal lining and everything in between. There are some concessions for gaskets, caulking, sarking and the like, but there are no DTS provisions that could now be interpreted as allowing for combustible external wall cladding in buildings of type A and B construction.

The risk assessment must be undertaken having regard to the above clarification, regardless of when the cladding was installed and how the NCC may have been interpreted at that time. This does not mean that all combustible cladding must be removed as it is possible that 'low risk' cladding may be retained without representing an unacceptable fire and life safety risk for the building.

The outcomes of the risk assessment process are that combustible cladding on a building will be determined to have a 'very high', 'high', 'moderate' or 'low' risk rating.

Where ratings are greater than 'low' risk, further assessment and / or remediation works are required. Where remediation works are required, the processes noted in the sub-sections below need to be considered.

11.1. Building works approval and certification

The NCC is not a legal document in its own right. It is empowered by various State, Territory and Commonwealth building legislation. For Defence the Building Works Manual is the policy that triggers compliance with the NCC for building works.

The general rules of building legislation require all new buildings to comply with the NCC in force at the time of building approval stage.

It is a requirement of this process that evidence that remediation works will or have been completed and certified in compliance with State or Territory building legislation must be submitted to Defence for review as part of the stakeholder process.

State and Territory requirements for building work are contained within the relevant building legislation. In general, these requirements specify that all new building works must comply with the current provisions of the NCC. It is noted that some jurisdictions impose a requirement for a performance solution report to be done if there is any combustible cladding left on a building.

If all cladding that is identified as an acceptable 'low' risk is retained on the building, then it is not new work and not required by Defence to be subject to the new approval processes for new works. However, if the State or Territory does require this, that legislation must be followed.

Any cladding that is replaced is recommended to meet the deemed-to-satisfy (DTS) provisions of the NCC for non-combustibility or the concessions in clause C1.9 if applicable.

Performance solutions for combustible cladding may only be considered if the product and installation can comply with requirements of verification method CV3 of the NCC or the fire engineers are willing to address combustible cladding as meeting the performance requirements on the basis of the 'low' risk being able to demonstrate compliance with the relevant performance requirements.

Note. Fire safety engineers and approval authorities may be hesitant to provide any performance solutions due to the increasingly difficult insurance market.

The outcome of the remediation works needs to confirm that the result of the works (treatment strategy) will result in a 'low' risk rating outcome. A 'low' risk rating does not mean that there is no risk. This needs to be explained and agreed by all stakeholders.

It is also important that the works are compliant with the weatherproofing requirements of the NCC. In the case of weatherproofing, there are no DTS provisions of the NCC, so part of the mandatory requirements will be the need for building work specific performance solutions to address NCC weatherproofing requirements.

Whilst cladding related work may not need to be referred to a fire service under State or Territory requirements it is considered that they are mandatory referral agency in this process.

Note: In some instances, fire services may not formally respond to meeting requests or provide comments. The intent is to attempt to seek comment and provide evidence that this has occurred. Where no comment is received, then this will need to be noted. The consultation may either follow a formal referral process to mirror State and Territory processes, or can follow a less formal process where operational requirements of the primary and secondary fire service have been met and agreed.

The end result is that the as-constructed works should be recorded in building compliance files so that the extent of works and approvals are in place for the future of the building.

A building surveyor will need to be engaged for any replacement works. Part of the building surveyor's role will be to review the proposal with regard to whether the new works meet the DTS provisions of the NCC or whether a performance solution is required. In particular, the building surveyor will need to determine whether the proposed replacement cladding meets the DTS provisions of the NCC and provide evidence of compliance in the form of a certificate of occupancy or the like for completed works.

11.2. Interim measures

The combustible cladding risk assessment should provide interim measures that the building owners should instigate as a priority until remediation works are undertaken. The requirements of the reports should be confirmed as being in place.

Interim measures include reasonable actions which can be readily implemented to reduce the risk associated with combustible cladding prior to treatment and remediation. These measures may include the following subject to the cladding risk ranking:

- Removal of fire loads and ignition sources away from cladding
- Removal of hazardous goods located near combustible cladding
- Making building occupants aware of combustible cladding hazards
- Enhanced evacuation procedures
- Risk management of any building uses or processes which could result in ignition of combustible cladding elements
- Risk management of building maintenance works – such as hot works – which could result in ignition of cladding
- Provision of additional first aid firefighting equipment near combustible cladding
- Provision of physical barriers around cladding where appropriate
- Informing local fire services of the cladding hazards and requesting an operational risk assessment
- Enhanced maintenance of essential fire safety measures
- Holistic testing of fire safety systems to confirm adequate performance
- Additional signage at building entry / fire services equipment to identify the cladding hazards
- Fire watch procedures where appropriate detection and warning systems are not installed.

11.3. Latent façade issues

It is possible that the removal of combustible cladding will identify latent issues within the external wall – such as combustible insulation or sarking, gaps at floors and facades not being sealed and the like.

The scope of works needs to be clear and have regard to the level of remediation that is being undertaken.

Should latent issues be identified that are not proposed to be treated, then the building owners and insurers – and other stakeholders – will need to be made aware of the identified issues.

11.4. Construction stages

If buildings are proposed to remain occupied while specific remediation works are undertaken, then the development of an interim fire safety strategy is to be agreed for the period of works. The interim strategy must review and provide recommendations with regard to maintenance of the existing passive and active fire prevention measures such as fire and smoke compartmentation, access to alternative exits, hydrants, hose reels, sprinklers, extinguishers, smoke detection, a building emergency warning system and an emergency management plan.

Appendix A Applicable provisions of NCC

The following clauses from the NCC are recommended to be considered in the evaluation of the external wall cladding:

Schedule 1 definitions

The following definitions are relevant to the interpretation of the requirements for external walls and ancillary elements:

'External wall, for the purposes of Volume One, means an outer wall of a building which is not a common wall

Ancillary element means an element that is secondary to and not an integral part of another element to which it is attached.'

C2D10 – Non-combustible building elements

- (1) *In a building required to be of Type A or B construction, the following building elements and their components must be non-combustible:*
- (a) *External walls and common walls, including all components incorporated in them including the facade covering, framing and insulation.*
 - ...
- (4) *The requirements of (1) and (2) do not apply to the following:*
- (a) *Gaskets.*
 - (b) *Caulking.*
 - (c) *Sealants.*
 - (d) *Termite management systems.*
 - (e) *Glass, including laminated glass, and associated adhesives, including tapes.*
 - (f) *Thermal breaks associated with—*
 - (i) *glazing systems; or*
 - (ii) *external wall systems, where the thermal breaks—*
 - (A) *are no larger than necessary to achieve thermal objectives; and*
 - (B) *do not extend beyond one storey; and*
 - (C) *do not extend beyond one fire compartment.*
 - (g) *Damp-proof courses.*
 - (h) *Compressible fillers and backing materials, including those associated with articulation joints, closing gaps not wider than 50 mm.*
 - (i) *Isolated—*
 - (i) *construction packers and shims; or*
 - (ii) *blocking for fixing fixtures; or*
 - (iii) *fixings, including fixing accessories; or*
 - (iv) *acoustic mounts.*
 - (j) *Waterproofing materials applied to the external face, used below ground level and up to 250 mm above ground level.*
 - (k) *Joint trims and joint reinforcing tape and mesh of a width not greater than 50 mm.*
 - (l) *Weather sealing materials, applied to gaps not wider than 50 mm, used within and between concrete elements.*

- (m) Wall ties and other masonry components complying with AS 2699 Part 1 and Part 3 as appropriate, and associated with masonry wall construction.*
 - (n) Reinforcing bars and associated minor elements that are wholly or predominately encased in concrete or grout.*
 - (o) A paint, lacquer or a similar finish or coating.*
 - (p) Adhesives, including tapes, associated with stiffeners for cladding systems.*
 - (q) Fire-protective materials and components required for the protection of penetrations.*
- (5) The following materials, when entirely composed of itself, are non-combustible and may be used wherever a non-combustible material is required:*
- (a) Concrete.*
 - (b) Steel, including metallic coated*
 - (c) Masonry, including mortar.*
 - (d) Aluminium, including aluminium*
 - (e) Autoclaved aerated concrete*
 - (f) Iron.*
 - (g) Terracotta.*
 - (h) Porcelain.*
 - (i) Ceramic.*
 - (j) Natural stone.*
 - (k) Copper.*
 - (l) Zinc.*
 - (m) Lead.*
 - (n) Bronze.*
 - (o) Brass.*
- (5) The following materials may be used wherever a non-combustible material is required:*
- (a) Plasterboard.*
 - (b) Perforated gypsum lath with a normal paper finish.*
 - (c) Fibrous-plaster sheet.*
 - (d) Fibre-reinforced cement sheeting.*
 - (e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.*
 - (f) Sarking-type materials that do not exceed 1 mm in thickness and have a Flammability Index not greater than 5.*
 - (g) Bonded laminated materials where—*
 - (i) each lamina, including any core, is non-combustible; and*
 - (ii) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm;*
 - (iii) the Spread-of-Flame Index and the Smoke-Developed Index of the bonded laminated material as a whole do not exceed 0 and 3 respectively; and*
 - (iv) when located externally, are fixed in accordance with C2D15.’*

C2D14 – Ancillary elements

An ancillary element must not be fixed, installed, attached to or supported by the concealed internal parts or external face of an external wall that is required to be non-combustible unless it is one of the following:

- (a) *An ancillary element that is non-combustible.*
- (b) *A gutter, downpipe or other plumbing fixture or fitting.*
- (c) *A flashing.*
- (d) *A grate, grille or similar cover not more than 2 m² in area associated with a building service.*
- (e) *An electrical switch, socket-outlet, cover plate or the like.*
- (f) *A light fitting.*
- (g) *A required sign.*
- (h) *A sign other than one provided under (a) or (g) that—*
 - (i) *achieves a group number of 1 or 2; and*
 - (ii) *does not extend beyond one storey; and*
 - (iii) *does not extend beyond one fire compartment; and*
 - (iv) *is separated vertically from other signs permitted under (h) by at least 2 storeys.*
- (i) *An awning, sunshade, canopy, blind or shading hood other than one provided under (a) that—*
 - (i) *meets the relevant requirements of Table S7C7 as for an internal element; and*
 - (ii) *serves a storey—*
 - (A) *at ground level; or*
 - (B) *immediately above a storey at ground level; and*
 - (iii) *does not serve an exit, where it would render the exits unusable in a fire.*
- (j) *A part of a security, intercom or announcement system.*
- (k) *Wiring.*
- (l) *Waterproofing material installed in accordance with AS 4654.2 and applied to an adjacent floor surface, including vertical upturn, or a roof surface.*
- (m) *Collars, sleeves and insulation associated with service installations.*
- (n) *Screens applied to vents, weepholes and gaps complying with AS 3959.*
- (o) *Wiper and brush seals associated with doors, windows or other openings.*
- (p) *A gasket, caulking, sealant or adhesive directly associated with (a) to (o).'*

Limitations

C2D14 does not apply to ancillary elements fixed, installed or attached to the internal face or lining of an external wall.

Notes

C2D14 does not prevent the mounting of domestic air-conditioning condenser units on external walls.

Explanatory Information

Ancillary elements fixed, installed or attached to the internal face or lining of an external wall may be subject to other provisions such as C2D11.

C2D15 Fixing of bonded laminated cladding panels

- (1) *In a building required to be of Type A or B construction, externally located bonded laminated cladding panels must have all layers of cladding mechanically supported or restrained to the supporting frame.*
- (2) *An externally located bonded laminated cladding panel need not comply with (1) if it is one of the following:*
 - (a) *A laminated glass system.*
 - (b) *Layered plasterboard product.*
 - (c) *Perforated gypsum lath with a normal paper finish.*
 - (d) *Fibrous-plaster sheet.*
 - (e) *Fibre-reinforced cement sheeting.*
 - (f) *A component of a garage door.*

Notes

For C2D15(1), mechanical support or restraint means fixing that does not solely rely on chemical adhesive and includes concealed fixing systems such as cassette fixing, channel-type fixing and face fixing.

Explanatory Information

For structural requirements relating to the fixing of cladding, refer to Section B. For most cladding systems, the requirements of Section B will necessitate mechanical fixing of the cladding panel to the supporting frame.

Appendix B Summary of cladding ‘bans’ and other measures taken by each Australian Jurisdiction – as at 1 June 2021 (in order of when action taken)

Jurisdiction	Date of Action	Action	Product description	Buildings to which it applies	Other comments
Tasmania	27 Dec 2017	Determined to be a ‘high risk product’	ACP with a PE core used as external cladding & rendered polystyrene	Type A or B	Must seek approval from State Government to use a ‘high-risk’ product
https://www.cbos.tas.gov.au/_data/assets/pdf_file/0012/405003/Directors-determination-Building-Product-Accreditation-High-Risk-Building-Products-Dec-2017.pdf					
South Australia	13 Feb 2018	Defined as a ‘designated building product’	metal panel or lining formed with an aluminium, or similar thin metal sheet material, with any type of core material	Type A or B	Must lodge a notice with council with prescribed information about the use of the product prior to building work commencing
https://www.legislation.sa.gov.au/LZ/V/R/2018/DEVELOPMENT%20(BUILDING%20CLADDING)%20VARIATION%20REGULATIONS%202018_36/2018.36.UN.PDF					
Victoria	1 Feb 2021 Replaced Ministerial Order 13 March 2018	Prohibition of high-risk cladding product declaration	ACP with a core of less than 93% inert mineral filler by mass and EPS used in external wall insulation and finish (rendered) systems	Type A or B	Prohibited from use
https://www.vic.gov.au/banning-dangerous-cladding-and-keeping-victorians-safe					
New South Wales	15 Aug 2018	Prohibit the use subject to exemptions	ACP with a core comprised of greater than 30% PE by mass in any external cladding, external wall, external insulation, façade or rendered finish	Type A or B	Exemption if on or after 1 July 2017: the product is not deemed combustible by passing AS 1530.1-1994; or the product and proposed external wall assembly has passed AS 5113 and there is a statutory declaration to confirm the wall will be installed identical to the tested prototype.

Jurisdiction	Date of Action	Action	Product description	Buildings to which it applies	Other comments
https://www.fairtrading.nsw.gov.au/trades-and-businesses/construction-and-trade-essentials/building-products/aluminium-composite-panel-ban					
Western Australia	6 Oct 2018	Prescribes a new standard for non-combustible external walls. They must meet the DTS or if a performance solution is proposed relating to CP2 for avoiding spread of fire it must meet Verification Method CV3 (which includes passing AS5113) but it need not meet the debris test in AS 5113 provided there is provision for safe evacuation (see Building Regulations 2012 - regulation 31HA)		Type A or B	A person can apply to the Building Commissioner for a modification. Remedial work on buildings with combustible cladding are exempt
https://www.commerce.wa.gov.au/sites/default/files/atoms/files/ib_107_the_building_amendment_regulations_no.2_2018.pdf https://www.legislation.wa.gov.au/legislation/prod/filestore.nsf/FileURL/mrdoc_41389.pdf/\$FILE/Building%20Amendment%20Regulations%20(No%202)%202018%20-%20%5B00-00-00%5D.pdf?OpenElement					
Queensland	18 Oct 2019	Prohibits the use	ACP with a core of > 30% by mass in an external cladding, external insulation or façade. EPS in an external wall insulation and finish (render) system – including as an attachment	For ACP All buildings For EPS class 2-9 buildings of Type A or B	ACP of greater than 30% can be retained on a building as part of an alternative solution for cladding rectification work
https://www.hpw.qld.gov.au/SiteCollectionDocuments/QDCUseOfExternalCladding.pdf https://www.hpw.qld.gov.au/SiteCollectionDocuments/BuildingAndPlumbingNewsflash568.pdf					
Australian Capital Territory & Northern Territory	Have not introduced bans but have issued guidance to practitioners about amendments to the NCC and their obligation to comply with the requirements of the NCC				

Abbreviations:

ACP – Aluminium composite panels

EPS – Expanded Polystyrene

PE – Polyethylene

Type A construction – Class 2, 3 and 9 buildings with a rise in storeys of 3 or more and class 5, 6, 7 and 8 buildings with a rise in storeys of 3 or more of 4 or more

Type B Construction – Class 2, 3 and 9 buildings of 2 with a rise in storeys of 2 and class 5, 6, 7, and 8 buildings with a rise in storeys of 3

NOTE. The above is a summary – links to relevant documents are included for specific wording and definitions