

# Office of the State **Building** Surveyor

## National Construction Code 2025 Volume 1 – Key Changes from 2022 Amendment 2

Date: March 2025

Presenter: Michael Ho, Building Surveyor





# Purpose and Learning Objectives

## Purpose

Ease the transition to the upcoming NCC 2025 – Volume 1 and equip the practitioners with the skills to confidently apply the NCC 2025 – Volume 1 to their commercial projects.

## Learning Objectives



### Identify Key Changes

Distinguish critical updates in Section B to Section J compared to NCC 2022 Amendment 2 baseline requirements.



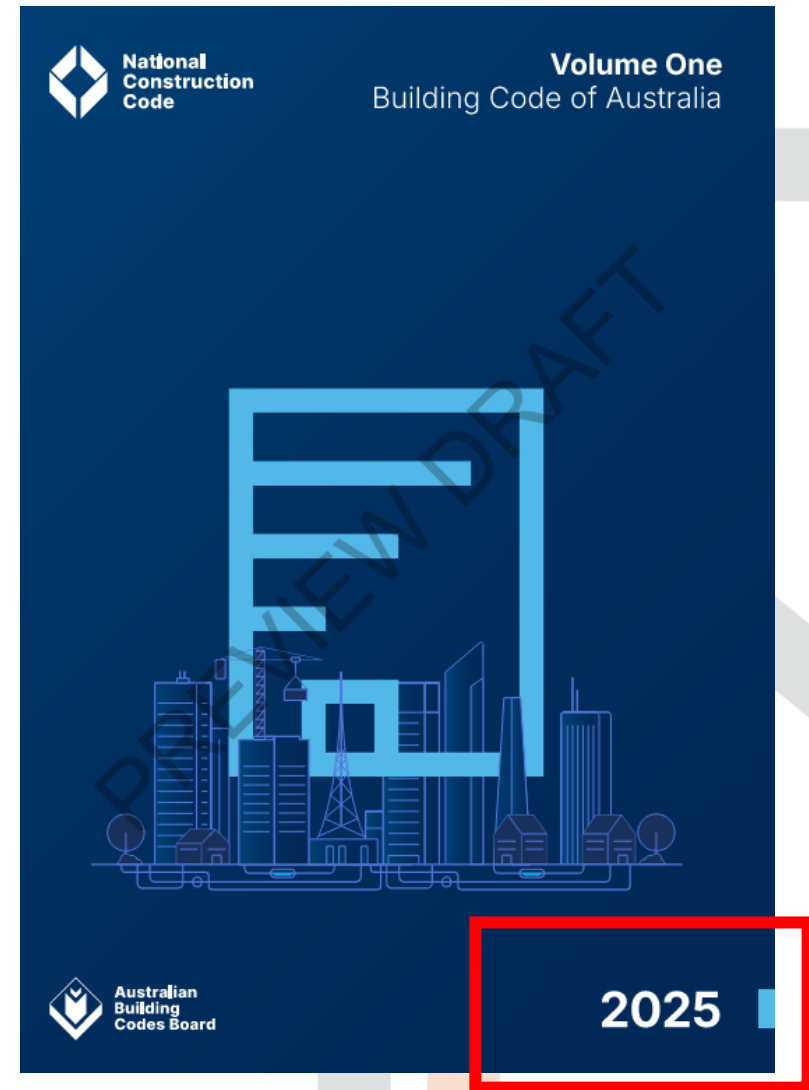
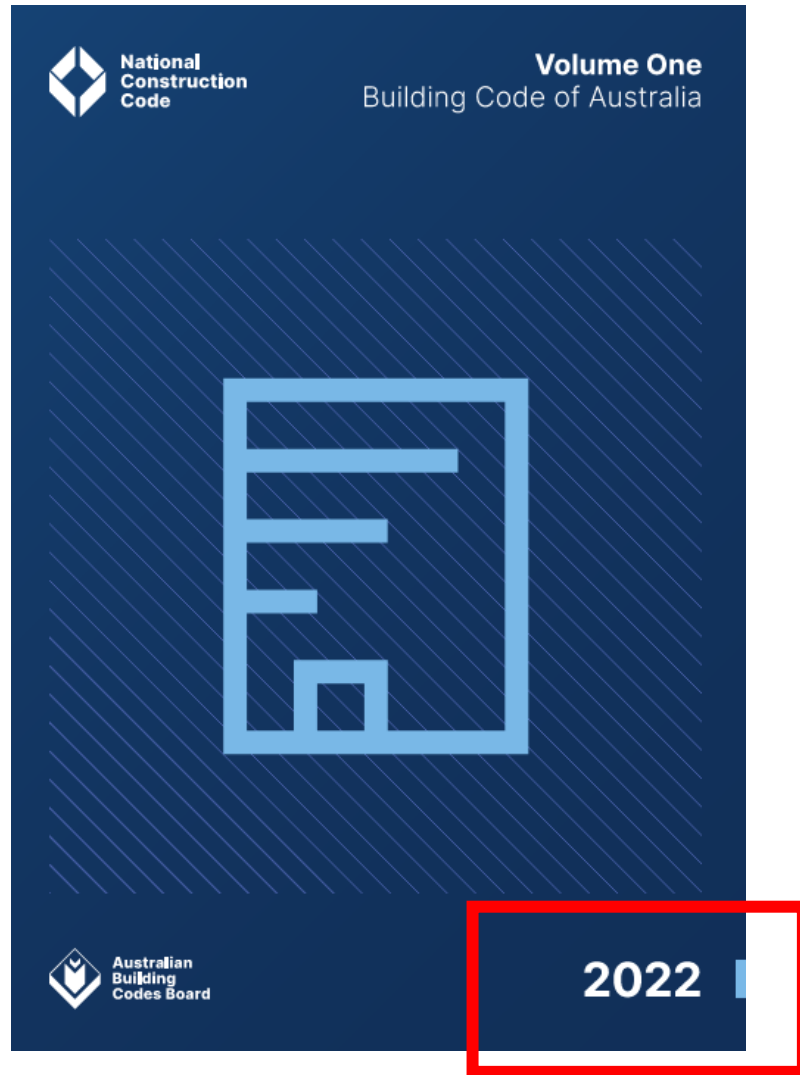
### Interpret Provisions

Develop the ability to correctly interpret the NCC 2025 changes with confidence across relevant design and compliance scenarios.



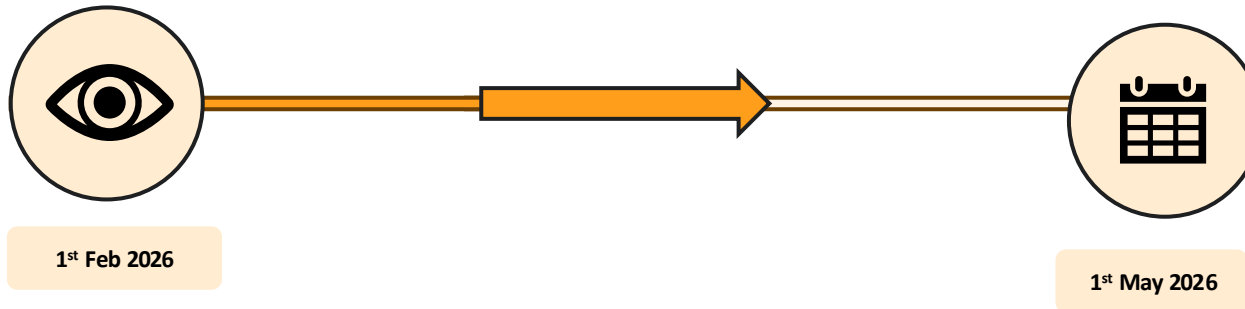
### Understand Practical Impacts

Identify where and how these requirements apply practically ensuring confident application in both DTS and Performance Solution pathways.





# NCC 2025 TIMELINE



NCC 2025 preview released  
for public review and  
industry preparation.

Victoria to adopt NCC 2025

(Note some provisions have a 1 year  
transition period)



# High Level Summary of Changes

Section	Key Focus of Changes
<b>B – Structure</b>	Reliability robustness (B1P1/B1V1), 10-yr deflection, updated wind regions, cyclonic metal roofing
<b>C – Fire Resistance</b>	Accredited lab testing (EW, fire hazard), carpark concessions reduced, fire-protected steel allowed
<b>D – Access &amp; Egress</b>	Wayfinding signage (new PR + DTS), ramp/handrail concessions, lift changes
<b>E – Services &amp; Equipment</b>	Carpark sprinklers tightened (open-deck/multi-class), ventilation/smoke damper clarifications, lift keys/storage, photoluminescent signs
<b>F – Health &amp; Amenity</b>	Major rewrite: Water management consolidated (Part F1), all-gender sanitary facilities, sanitary product disposal/dispensers
<b>G – Ancillary Provisions</b>	Minor updates relating to swimming pools and mechanical air handling systems.
<b>J – Energy Efficiency</b>	Commercial buildings: enhanced measures, onsite solar PV mandatory in many cases



# Section B – Structure

## B1P1 Structural reliability and B1V1

Clause	Change Type	Key Details
<u>Structural Reliability:</u> B1P1	Amendment (major)	<ul style="list-style-type: none"> <li>B1P1 (2) (Structural reliability) each structural component must withstand all actions with the minimum levels of reliability.</li> <li>Transitional note: NCC 2022 Amendment 2 B1P1 may be used for 1 year after adoption</li> </ul>
<u>Structural Reliability of Components:</u> B1V1	Amendment	<ul style="list-style-type: none"> <li>Account for combination accounts rather than individual actions</li> <li>Transitional note: NCC 2022 Amendment 2 B1V1 acceptable for 1 year after adoption</li> </ul>
2022 Amendment Deleted 2 - B1P2		<ul style="list-style-type: none"> <li>Old 2022 Amendment 2 B1P2 (“Structural resistance”) removed</li> <li>All subsequent Performance Requirements renumbered:               <ul style="list-style-type: none"> <li>Old B1P3 -&gt; New B1P2 (Glass)</li> <li>Old B1P4 -&gt; New B1P3 (Flood)</li> </ul> </li> </ul>





# Section B – Structure

## Substrate Deflection and Wind

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Resistance to Actions:</u> B1D2(b)	Amendment	<ul style="list-style-type: none"> <li>B1D2(b) has been amended to require that design actions allow for 10-year deflection of structural substrates.</li> <li>Structural engineers must now coordinate with waterproofing designers on long-term deflection for balconies, podiums, roofs, etc.</li> </ul>
<u>Determination of Individual Actions:</u> B1D3 and Specification 4 (S4C1(2))	Amendment	<ul style="list-style-type: none"> <li>Revised wind regions in <b>AS/NZS 1170.2 (2021 + Amdt 1 &amp; 2)</b></li> <li>Updated cyclonic area definitions</li> </ul>





# Section B – Structure

## Metal Roofs and Small Lifts

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Metal Roofs</u> B1D4(k) (new subclause)	New	<ul style="list-style-type: none"> <li>Roof construction in cyclonic areas must comply with:               <ul style="list-style-type: none"> <li>AS 1562.1 (Design and installation of sheet roof and wall cladding – Metal)</li> <li>Specification 4</li> </ul> </li> </ul>
<u>Small Lifts:</u> 2022 Amendment 2 - B1D4(m)(i)(C)	Deleted	Removed reference to 'small sized, low speed automatic lifts' (aligns with deletions elsewhere, e.g., in lift provisions).





# Section C – Fire Resistance

## Accredited Testing

**Accredited Testing Laboratory:** One of the following:

- (a) An organisation accredited by the National Association of Testing Authorities Australia (NATA) to undertake the relevant tests.
- (b) An organisation outside Australia accredited to undertake the relevant tests by an authority recognised by NATA through a mutual recognition agreement.
- (c) An organisation recognised as being an Accredited Testing Laboratory under legislation at the time the test was undertaken.

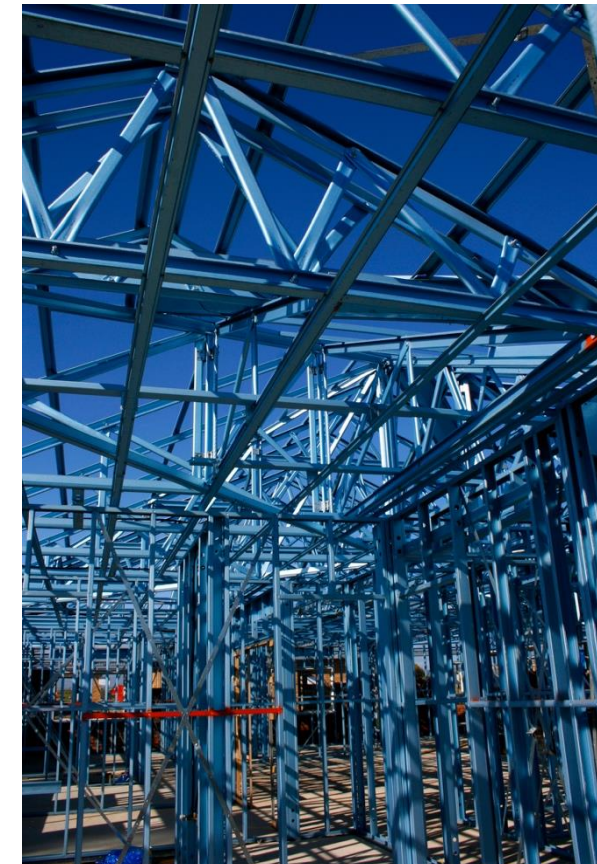
<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Testing Lab Creditability:</u> C1V3	Amendment	<ul style="list-style-type: none"> <li>• External Wall classification testing (AS5113) must now be undertaken by an Accredited Testing Laboratory (ATL).</li> <li>• Transitional note included.</li> </ul>
S7C4	Amendment	<ul style="list-style-type: none"> <li>• Determination of fire hazard properties (e.g., (Group Number, Critical Radiant Flux, Spread-of-Flame Index, Smoke-Developed Index etc.) must be by an Accredited Testing Laboratory. Transitional note included.</li> </ul>



# Section C – Fire Resistance

## Fire Ratings

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
S5C9	Amendment	<ul style="list-style-type: none"><li>• More clarity when Class 7 parts treated as Class 2/3 for FRL purposes.</li></ul>
S5C11	New	<ul style="list-style-type: none"><li>• <b>Fire protected steel</b> permitted in Type A buildings (limited circumstances).</li><li>• Eg. Load-bearing internal wall/fire wall of Class 2 building, upper storey (of any other classification), fire protected steel can be used (limited applications).</li></ul>

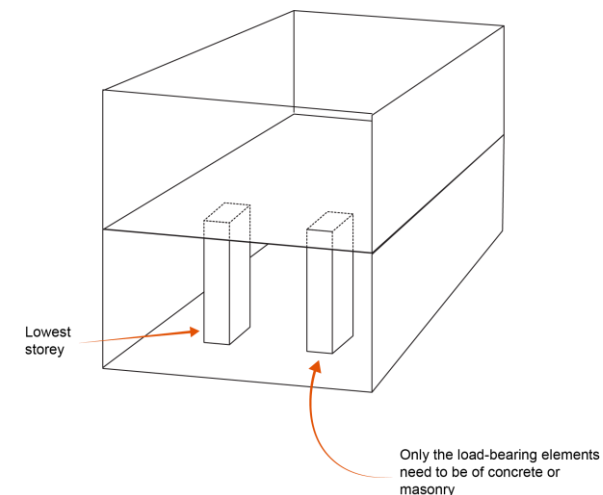




# Section C – Fire Resistance

## Fire Ratings and Carparks

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Carpark Sprinkler Requirements &amp; Concessions:</u> (S5C19(1), S5C22(1), E1D5, E1D6, E1D9, S17C2(c)(ii))	Amendment	<ul style="list-style-type: none"> <li>Open-deck carparks (ODC) in multi-class/mixed-use buildings lose FRL concessions unless sprinklers installed.</li> <li>Sprinklers are now mandatory in more scenarios (e.g., &gt;40 cars in ODC, car stackers, non-stand-alone open-deck).</li> <li>Addresses modern risks (larger vehicles, EVs, stackers, higher fuel loads)</li> </ul>
<u>Requirement Clarified For Concrete / Masonry Elements:</u> S5C20 & S5C23	Amendment	<ul style="list-style-type: none"> <li>Concrete / masonry elements to lowest storey now clarified to be just the load-bearing elements (Class 2/3 timber framing concession).</li> </ul>

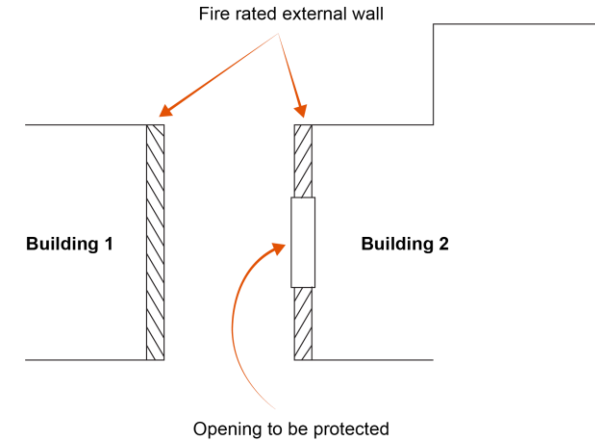




# Section C – Fire Resistance

## Pressurisation, Openings and Smoke Walls

Clause	Change Type	Key Details
<u>Pressurisation &amp; Clarifications:</u> (C3D13(2)(b), C4D10(d), C4D15(2)(b))	Amendment	<ul style="list-style-type: none"> <li>Clarified and updated requirements for exit pressurisation systems, allowances for wiring and sensors, and acceptable opening protection methods aligned with AS 1668.1.</li> </ul>
<u>Openings in External Walls:</u> C4D3(1),	Amendment	<ul style="list-style-type: none"> <li>Clarifies the protection of openings only to the external wall and parts of external wall required to have an FRL.</li> <li>Fire source feature definition has been updated.</li> </ul>
<u>Smoke-proof Walls &amp; Dampers:</u> (S11C2, S11C3, S11C4)	Amendment	<ul style="list-style-type: none"> <li>Smoke dampers now have a referenced standard (AS1682.1).</li> <li>Removed concession from smoke reservoir provision for doors serving zone pressurised fire compartments.</li> </ul>

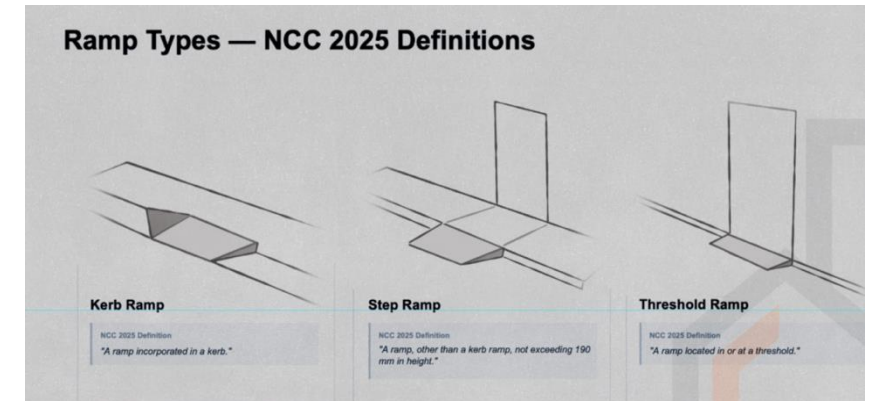




# Section D – Access and Egress

## Wayfinding Signage and Ramps

<u>Clauses Involved</u>	<u>Change Status</u>	<u>Key Consolidated Detail</u>
<p><u>Safe Movement Using Ramps:</u> Amendment D1P2 (limitation) D3D11(3) D3D22 (new)</p>	Amendment (Clarification)	<ul style="list-style-type: none"> <li>Handrails not required to kerb, step and threshold ramps.</li> <li>Features like slip resistance and handrails no longer required for threshold ramps</li> </ul>
<p><u>Wayfinding Signages:</u> D1P10 (new PR) D3D31 (new DTS)</p>	New	<ul style="list-style-type: none"> <li>New requirement for wayfinding signage               <ul style="list-style-type: none"> <li>Must identify stairs, floors &amp; units</li> <li>Use tactile, Braille, high-contrast &amp; directional signs of SOU room numbers from the Fire Isolated stairs and emergency lifts or lifts with stretcher facilities</li> </ul> </li> </ul>





# Section D – Access and Egress

## Egress Provisions

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Width of Exits:</u> D2D8	Amendment	<ul style="list-style-type: none"> <li>• Considers fire compartments served by horizontal exits (previously just storey/mezzanine/open spectator stand)</li> </ul>
<u>Re-entry:</u> D3D27	Amendment	<ul style="list-style-type: none"> <li>• Re-entry provisions now require across all Class 9 buildings, and extended to Class 2, 3, 6 &amp; 7a buildings. (previously Class 9 buildings and buildings &gt;25 m effective height)</li> <li>• Similar concession is conditional to other building classifications, including additional signage requirements</li> </ul>
<u>Thresholds:</u> D3D16	Deletion	<ul style="list-style-type: none"> <li>• Specific references to Class 9a (health-care) &amp; 9c (residential care) have been removed.</li> </ul>



# Section E – Services and Equipment

## Fire Services and Ventilation

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Open Deck Carpark and Fire Services:</u> E1D5, E1D6, E1D9, S17C2(c)(ii), E1D2(2) (AS 2118.6 ref), E1D2(3) (pipe materials) E1D3(1) (new exemption),	Multiple amendments	<ul style="list-style-type: none"> <li>• Open-deck carparks</li> <li>• Clarification that Above-ground pipes must meet material requirements (non-plastic)</li> <li>• Reference to AS 2118.6 added for combined sprinkler/hydrant systems</li> <li>• FPAA101H is also now referred to as an acceptable hydrant system (as applicable)</li> <li>• Small fire-separated areas (&lt;100 m<sup>2</sup>) exempt from fire hose reel requirements</li> </ul>
<u>Ventilation &amp; Smoke Damper Clarifications:</u> E2D3, E2D11, E2D12, E2D19(2)(a/b), E2D20(2), S19C10(1)(b), S19C11(1)(b)(i), S21C7(2/5/7)	Multiple amendments	<ul style="list-style-type: none"> <li>• Terminology updated to “ventilation systems” (aligns with AS 1668.1)</li> <li>• Smoke damper specs clarified to AS1682.1</li> <li>• Carpark ventilation requirements clarified</li> <li>• Floor area thresholds for Class 9b parts clarified.</li> </ul>





# Section E – Services and Equipment

## Lifts and Exit Signs

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Lifts &amp; Emergency Lifts:</u> E3D7(1)(e) (deleted), E3D11(1/9/10), E3D12(7)	Deletion + New requirements	<ul style="list-style-type: none"> <li>• Small/low-speed automatic lifts no longer permitted</li> <li>• Multiple fire service recall switches prevented</li> <li>• New on-site storage requirements for fire service lift keys</li> </ul>
<u>Photoluminescent Exit Signs:</u> E4D8(a), Specification 25	Amendment	<ul style="list-style-type: none"> <li>• Hybrid photoluminescent exit signs now referenced (SA TS 5367)</li> <li>• Specification 25 updated to include wording 'passive'</li> </ul>
<u>Lift Distribution and Contrast Lettering</u> E3D5 (lift distribution), E4D8	Amendment + New subclause	<ul style="list-style-type: none"> <li>• Lift distribution clarified (no increase in required number)</li> <li>• Lettering contrast required on signs</li> </ul>





# Section F – Health and Amenity

## Part F1 – Water Management

### Part F1 Objectives and Functional Statements

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
Part F1 title, F1O1, F1F1, F1F2	Renamed, Amendment Revised	<ul style="list-style-type: none"><li>• Part F1 has been re-named as a result of Section F restructuring.</li><li>• A new definition 'water' has been introduced.</li><li>• Objectives and Functional Statements have been amended to incorporate the new defined term 'water'.</li><li>• Seeking to address all water impacts, including sub-surface water and moisture.</li></ul>



# Section F – Health and Amenity

## Part F1 – Water Management

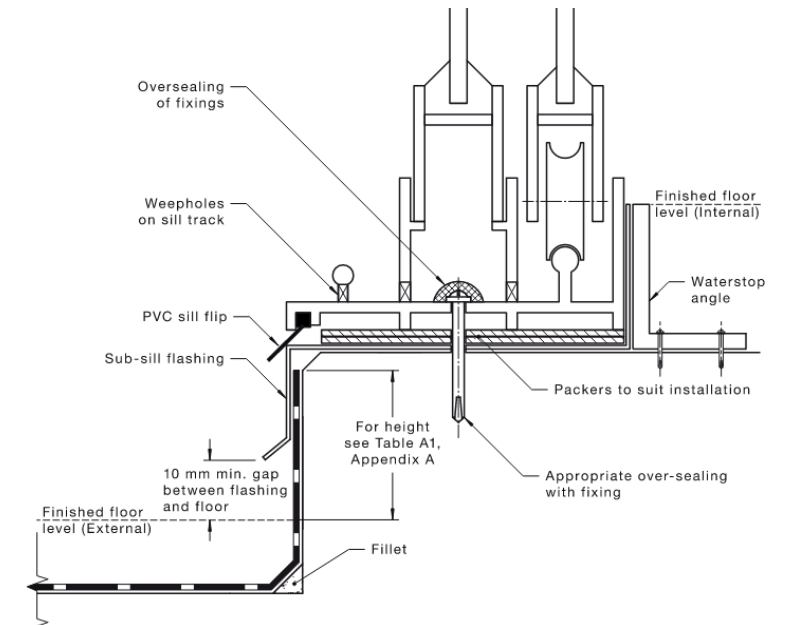
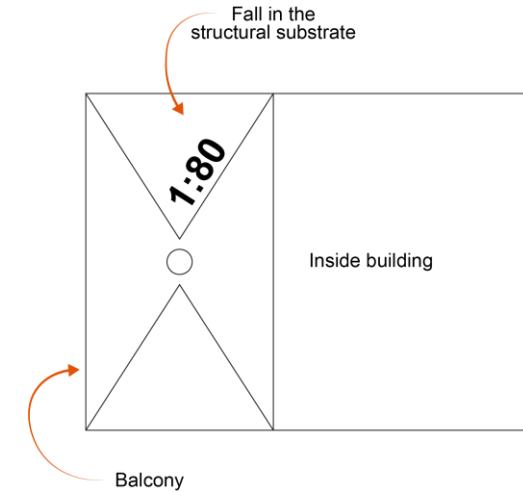
<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Performance Requirements and Verification Methods:</u> F1P1	Re-written, Relocated	<ul style="list-style-type: none"> <li>• Re-written following ABCB project work.</li> <li>• Previous Part F3 (Roof and Wall Cladding) is merged into Part F1.</li> <li>• F1P1 now incorporates all performance requirements to improve water management provisions.</li> <li>• Limitation of previous NCC 2022 Amendment 2 F1P2 and F1P4 for Class 7 and Class 8 is now removed.</li> <li>• Exemption of garage weatherproofing and damp rising requirements are clarified and limited to defined private garages</li> </ul>
F1V1	Relocated	<ul style="list-style-type: none"> <li>• F3V1 of NCC 2022 Amendment 2 has been relocated to F1V1, resulted from the merge of previous Part F3 into Part F1.</li> </ul>

# Section F – Health and Amenity

## Part F1 – Water Management

### Part F1 Deemed-to-Satisfy Provisions

Clause	Change Type	Key Details
<u>Application of Part F1:</u> F1D2	Amendment	<ul style="list-style-type: none"> <li>Amended following ABCB project work that improved water management provisions.</li> </ul>
<u>Drainage &amp; Grading:</u> F1D4 (new)	New	<ul style="list-style-type: none"> <li>Grading of structural substrate and drainage for concrete roofs, balconies, podiums and the like.</li> </ul>
<u>Substrate:</u> F1D5 (new)	New	<ul style="list-style-type: none"> <li>Substrate preparation requirements</li> </ul>
<u>Exposed Joints and Membranes:</u> F1D6, F1D7	Relocated and Amendment	<ul style="list-style-type: none"> <li>Amended with control / expansion joints in high point of structural substrate</li> <li>Membrane must be installed directly on a of structural substrate</li> </ul>
<u>Surface Finishes:</u> F1D10 (new)	New	<ul style="list-style-type: none"> <li>A new clause to specify surface finish requirements.</li> </ul>





# Section F – Health and Amenity

## Part F1 – Water Management (continued, previously NCC 2022 Amendment 2 Part F3)

### Part F1 Deemed-to-Satisfy Provisions

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Roofs and External Walls:</u> F1D12, F1D13, F1D14	Relocated	<ul style="list-style-type: none"> <li>Were in previous NCC Part F3 and now relocated</li> <li>NCC 2025 F1D14 is amended to remove concession for certain Class 7 and 8 buildings and replace 'garage' with the defined term 'private garage'.</li> </ul>
F1D15	Relocated and Amendment	<ul style="list-style-type: none"> <li>Was in previous NCC Part F3 and now relocated.</li> <li>Amended to remove concession for certain Class 7 and 8 buildings and replace 'garage' with the defined term 'private garage'.</li> </ul>
NCC 2022 Amendment 2 Part F3	Relocated	<ul style="list-style-type: none"> <li>Merged into NCC 2025 Part F1</li> </ul>



# Section F – Health and Amenity

## Part F4 – Sanitary and Other Facilities

### Part F4 Deemed-to-Satisfy Provisions



# Toilets

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Dispensing and Disposing Sanitary Products:</u> F4D4(6)	Amended	<ul style="list-style-type: none"> <li>Extended the requirement for a means of disposal of sanitary products to all sanitary facilities.</li> <li>Now requires a dispenser for sanitary products in facilities for use by females.</li> <li>Required in mixed (separate male or female) or inclusive setups (all gendered).</li> <li>Improves gender equity.</li> </ul>
<u>All-gender Sanitary Facilities:</u> F4D4(12), (13) & (14) F4D8(1)(a)	New & Amendment	<ul style="list-style-type: none"> <li>The DTS now allows the provision of all-gender sanitary facilities in lieu of separate facilities for males and females.</li> <li>Greater flexibility in design and easier compliance for inclusive buildings</li> <li>Streamlined design standards for all-gender facilities</li> <li>Construction expectation for all gender facilities specified</li> </ul>
<u>Gender Equity:</u> Table F4D4i	Amendment	<ul style="list-style-type: none"> <li>Require additional closet pans for female patrons.</li> <li>Improved gender equity and reduce queuing times.</li> </ul>



# Section F – Health and Amenity

## Part F6 – Light and Ventilation

### Part F6 Deemed-to-Satisfy Provisions

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>General Ventilation:</u> F6D6	Amendment	<ul style="list-style-type: none"> <li>• Ventilation of rooms, applies to any occupied room/space</li> <li>• Amended to clarify application and to include reference to AS 1668.4 as an optional specification for natural ventilation provision.</li> </ul>
<u>Kitchen Ventilation:</u> F6D12	Amendment	<ul style="list-style-type: none"> <li>• The word ‘commercial’ has been deleted so that all kitchens meeting the equipment power threshold require exhaust hood systems.</li> </ul>



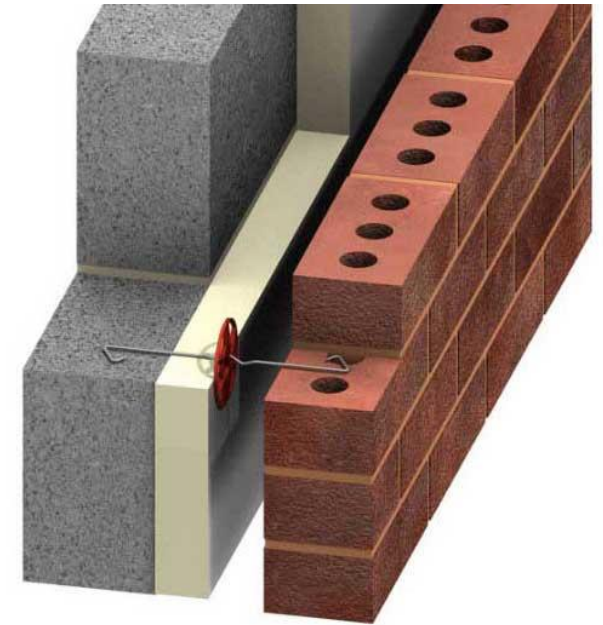


# Section F – Health and Amenity

## Part F8 – Condensation Management

### Part F8 Deemed-to-Satisfy Provisions

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>External Walls:</u> F8D3	Amendment	<ul style="list-style-type: none"> <li>Amended to provide further membrane vapour permeance specifications, dependent on wall construction, and further details for cavity construction.</li> <li>Requirement of a drained &amp; vented cavity (direct fixed walls are no longer permitted in Climate Zones 6,7,8 which applies to most of Victoria); Control layer/barrier must have at least AS 4200.1 Class 4 vapour permeance</li> </ul>
<u>Roofs:</u> F8D5 F8D6	Amendment	<ul style="list-style-type: none"> <li>In NCC 2022 Amendment 2, F8D5 applied to all roof spaces. In NCC 2025, F8D5 is amended and applies to roof spaces where the primary insulation layer is not parallel to the roof plane.</li> <li>Added to specify requirements for roof spaces where the primary insulation layer is parallel to the roof plane.</li> </ul>





# Section G – Ancillary Provisions

## Part G1 – Minor Structures and Components

### Part G1 Deemed-to-Satisfy Provisions

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
<u>Non-climbable Zones:</u> G1D2(1)	Amendment	<ul style="list-style-type: none"><li>Amended such that clause 2.3.1 of AS 1926.1 applies to boundary barriers.</li></ul>
<u>Drainage &amp; Discharge:</u> G1D5	New	<ul style="list-style-type: none"><li>New provision included to provide a Deemed-to-Satisfy Solution for discharge of swimming pool drainage.</li></ul>



## Section G – Ancillary Provisions

### Specification 31 – Fire and Smoke Control Systems in Buildings Containing Atriums

<u>Clause</u>	<u>Change Type</u>	<u>Key Details</u>
S31C7	Amendment	<ul style="list-style-type: none"><li>Amended to clarify the application of AS 1668.1.</li></ul>



# Section J – Energy Efficiency

## Enhanced DtS Provisions and On-site Solar PV Systems

<u>Key Clauses / Provisions</u>	<u>Change Status</u>	<u>Key Consolidated Detail (Slide-Friendly)</u>
J1 Introduction J1P1 & J1P4, J1V1–J1V4 (VM amended), Enhanced Deemed-to-Satisfy Provisions across J3, J4, J5, J6, J8 and J9	Multiple amendments	<ul style="list-style-type: none"> <li>For Class 2 buildings, NCC 2025 Section J is replaced with NCC 2022 Amendment 2 Section J</li> <li>Tighter DTS for envelopes, glazing, HVAC, lighting, power &amp; hot water</li> <li>Lower energy targets</li> <li>Better insulation, glazing U/SHGC, HVAC efficiency, lighting power density</li> </ul>
Specifications 33, 34, 40	Amended	<ul style="list-style-type: none"> <li>PV mandatory for most Class 2 common areas, Class 3, 5–9</li> </ul>
Specifications 46, 47, 48	New	<ul style="list-style-type: none"> <li>Minimum kW based on roof area/climate zone/table values</li> </ul>
Specification 45	Delete	<ul style="list-style-type: none"> <li>Installed &amp; connected</li> </ul>



# Office of the State **Building** Surveyor

