Improving waterproofing and water shedding provisions

What are the proposed changes?

We are proposing changes to NCC Volume One to help reduce the incidence of building defects resulting from the ingress of water.

These changes include:

- Merging Part F1 (Surface water management, rising damp and external waterproofing) and Part F3 (Roof and wall cladding) into a single Part F1.
- Consolidating Performance Requirements F3P1 and F1P1 to F1P4 and replacing them with Performance Requirements F1P1 and F1P2.
- Updating the Objectives, Functional Statements, and Performance Requirements of Part F1 to cover the management of surface water and sub-surface water.
- Updating the Deemed-to-Satisfy (DTS) Provisions of Part F1 (Refer to Table 1 for more information).
- Removing existing limitations relating to the application of waterproofing and weatherproofing provisions for storage-type buildings and factory buildings (Class 7 and Class 8), so they align with the performance framework (F1P2).
- Including a new provision for 10-year deflection in design in Part B1 (B1D3).

Why are these changes proposed?

These changes aim to resolve issues stemming from the lack of sub-surface water management in NCC 2022 and clarify the interpretation and application of multiple Performance Requirements.

The changes have been proposed to help reduce the incidence of building defects resulting from the ingress of water. Waterproofing defects can significantly impact homeowners, communities

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and the economy. Impacts can include costs to rectify the defects, increased maintenance costs, increased insurance premiums, and reduced consumer confidence in the building and construction industry.

The proposed changes take a more holistic approach to water management by including provisions to address sub-surface water in addition to the current requirements for surface water.

How were the changes developed?

We established a Technical Reference Group (TRG) that included waterproofing experts and Australian government jurisdictions. The deliberate inclusion of both industry and government representatives served to ensure a balanced perspective between the interests of building and construction practitioners, governments responsible for enforcement, and the Australian community as end users of buildings.

The changes were developed using a regimented approach which included:

- Establishing the scope of the project and clearly identifying the problem.
- Determining the guiding principles that would be the foundation for proposed changes to the NCC.
- Reviewing the current technical provisions of the NCC to identify key areas of change.
- Researching defects in current building stock and producing indicative costs of repairs to inform the benefits of proposed changes.

In addition, the changes were developed and refined in consultation with the Building Codes Committee (BCC). Consultation with the BCC led to a more refined set of proposed changes, enhancing the comprehensiveness of the cost-benefit analysis.

Who has been involved?

In addition to the BCC, the TRG included representatives from:

- Australian Institute of Building Surveyors (AIBS)
- Property Council of Australia (PCA)
- Building Products Industry Council (BPIC)
- Waterproofing Association of Australia
- Building Research Association of New Zealand (BRANZ)

- Artique Homes (Residential building representative)
- Ross Taylor and Associates (Waterproofing expert)
- Engineers Australia (EA)
- Australian Institute of Architects (AIA)
- Queensland Building and Construction Commission (QBCC)
- Master Builders Association (MBA)
- Armont Rectification Builders (Waterproofing expert)
- Housing Industry Association (HIA)
- Warren Smith Consulting (Hydraulic Engineers)

What are the impacts?

We engaged a consultant to prepare a Consultation Regulatory Impact Statement (CRIS) in 2023. The cost benefit analysis of the proposed changes found significant overall benefits by avoiding costly remediation work. It's much cheaper and easier to address potential issues by building better quality buildings in the first place.

The CRIS indicates:

- The proposed changes would deliver a net benefit for Class 2 buildings of $1 billion at a benefit cost ratio (BCR) of 4.3.
- The proposed changes would deliver a net benefit of $2.7 billion for Class 3 to 9 buildings with a BCR of 5.2.

Additionally, it is expected that the enhanced Performance Requirements and new DTS Provisions will give greater flexibility in design and clarity in construction.

More information and relevant links

- Consultation Regulatory Impact Statement (RIS) by ACIL Allen
- Waterproofing and water shedding Impact Analysis placemat

To read the full details of the changes, please review the NCC 2025 Volume One PCD and Section A.

Want to provide feedback?

Responses to the Public Comment Draft are invited until **11:59 PM AEST Monday 1 July 2024**.

In line with the ABCB's process for undertaking public consultation, comment will only be accepted through the ABCB's online Consultation Hub.

To access the Public Comment Draft and response form:

1. Download the NCC volume(s) you wish to view and provide comment. You can also download the *supporting information* PDF for detailed information on the more significant/complex changes.
2. Download the response form.

Once you've reviewed the draft, complete the response form, and include your feedback on the suggested changes to the NCC.

To submit your comments:

1. Enter our Public Comment Draft consultation hub.
2. Start by agreeing to the privacy statement.
3. Let us know if you'd like your submission published publicly.
4. Enter your contact details.
5. Upload your completed form in .doc format (please make sure each file is under 25MB) and submit.

Table 1 Proposed changes to the DTS Provisions of Part F1

NCC 2022 clause reference	PCD clause reference	Proposed change
F1D1	F1D1	• Updates to give effect to the proposals throughout the DTS Provisions
F1D2	F1D2	• Updates to give effect to the proposals throughout the DTS Provisions
F1D3	F1D3	• No change
	F1D4 Provision of drainage and grading to external areas (New)	• A new DTS Provision for drainage and grading to external areas, will establish grades to structural substrates in building elements such as concrete roofs, balconies, podiums, or similar parts. This will require concrete roofs, balconies, podiums, or similar parts to have step-downs from internal areas to external areas. Additionally, these areas would require integral hobs at their perimeters
	F1D5 Substrate materials (New)	• A new DTS Provision for substrate materials to require a structural substrate in a building or part of a building, a roof, balcony, podium, or similar part of a building
F1D4	F1D6	• Updates to clause numbering • Requirements for exposed joints in the drainage surface on a roof, balcony, podium, or similar horizontal surface part of a building
F1D5	F1D7	• Updates to clause numbering • Includes instructions for installing a waterproofing membrane for a roof, podium, or similar horizontal surface part of a building
F1D6	F1D8	• Updates to clause numbering • Removes existing limitations relating to the application of waterproofing and weatherproofing provisions for storage-type buildings and factory buildings (Class 7 and Class 8) buildings
F1D7	F1D9	• Updates to clause numbering
	F1D10 Surface finishes (New)	• A new DTS Provision for surface finishes will have requirements for the construction of different surface finishes
F1D8	F1D11	• Updates to clause numbering

F3D2	F1D12	• Updates to clause numbering
F3D3	F1D13	• Updates to clause numbering
F3D4	F1D14	• Updates to clause numbering • Removes existing limitations relating to the application of waterproofing and weatherproofing provisions for storage-type buildings and factory buildings (Class 7 and Class 8) buildings
F3D5	F1D15	• Updates to clause numbering • Removes existing limitations relating to the application of waterproofing and weatherproofing provisions for storage-type buildings and factory buildings (Class 7 and Class 8) buildings