

NCC 2019 KEY CHANGES

The [National Construction Code \(NCC\)](#) provides the minimum necessary requirements applicable to new buildings throughout Australia.

Performance requirements under the NCC must be satisfied through either:

- Performance Solutions;
- Deemed-To-Satisfy (DTS) Solutions; or
- A combination of the two.

There are numerous ways to achieve compliancy. The most typical conservative ways of achieving DTS solutions are by following:

- Acceptable Construction Practices; or
- Australian Standards referenced within the NCC.

Designers can choose to follow Australian Standards as Performance Solutions over DTS solutions, however this compliance process may require expert judgement and additional verification.

This flyer indicates the important changes to DTS requirements surrounding masonry and differences when compared with relevant industry-approved Australian Standards.

IMPORTANT CHANGES

- For Volume 2, new sections specific to masonry veneer & isolated masonry piers have been added, with numerous additional provisions detailing the construction requirements for the systems.
- Acceptable Construction Manual references for both volumes:
 - ❖ 'Earth Wall Construction' now referencing AS 4678 – Earth Retaining Structures;
 - ❖ AS 3700 (2018) – Masonry Structures; and
 - ❖ AS 4773 series – Masonry in Small Buildings (for Volume 2).

GENERAL

NCC ACCEPTABLE CONSTRUCTION PRACTICE

AUSTRALIAN STANDARD/ INDUSTRY RECOMMENDATION



Fire Rating

All external cladding of Type A and Type B commercial buildings* needs to be deemed non-combustible.

Properties of clay bricks make them non-combustible. Use manufacturer documentation to supersede testing requirements.

VOLUME 1

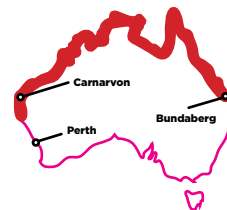


Wind Speed

Acceptable construction practice only applies to wind speeds up to N3 classification.

For designs outside this range, follow AS 3700 or AS 4773.

VOLUME 2



Shaded regions are outside the scope of the NCC.

VOLUME 1+2



Condensation Management

NEW condensation management and modelling methods applies to all masonry walls except single-leaf walls.

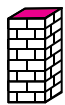
Masonry veneer and cavity walls **automatically incorporate a cavity** to satisfy the new requirements.

*Volume 1 covers class 2-9 buildings which are generally high-rise or commercial buildings while Volume 2 covers class 1 and 10 residential buildings. For more information, visit: [Australian Building Codes Board's Building Classifications](#) and [What Type of Building is it](#).

Image: Day Street Apartments by Tzannes.
High Commendation, Horbury Hunt Commercial Award 2018.
Photographer: Katherine Lu.

NCC ACCEPTABLE CONSTRUCTION PRACTICE

Unconfined Unit Compressive Strength (for Isolated Piers)



Minimum compressive strength has been increased to:

- 6.2MPa for solid or cored units.

AUSTRALIAN STANDARD/ INDUSTRY RECOMMENDATION

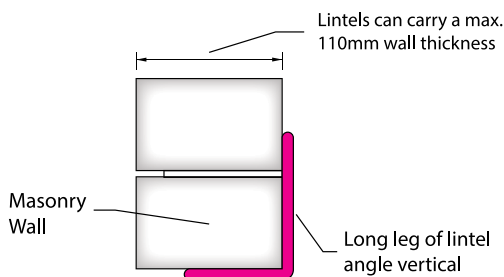
Refer to AS 4773.1 for minimum compressive strength of clay masonry units:

- 3MPa for non-loadbearing masonry
- 5MPa for loadbearing masonry

Lintels

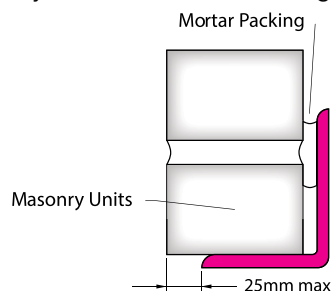
Simplified maximum span limit with less lintel types and design options provided.

Restricts masonry carried on lintels to 110mm thick and 3m in height.



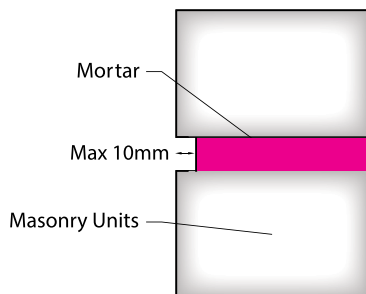
AS 4773.1 provides a detailed list of maximum opening widths for common lintels, under various load types available.

AS 4773.1 also only restricts the overhang of masonry carried to 25mm, allowing for higher

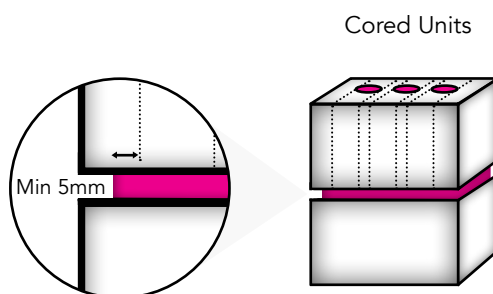


Raking

Raked joints must not be raked deeper than 10mm or used in saline environments or areas subject to heavy industrial air pollution.



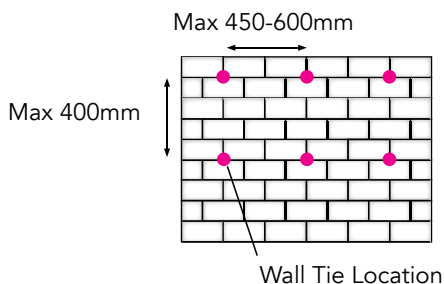
In addition to the NCC acceptable practices, Standards specify raking shall not be closer than 20mm to any hollow in hollow unit masonry, and not used for ungrouted hollow masonry.



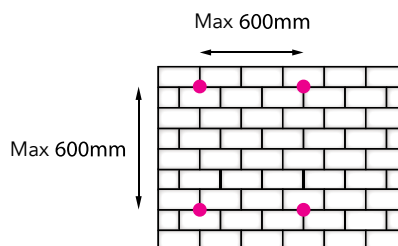
Wall Ties

In wind areas of N2 or above, medium duty ties must be used, with more stringent maximum spacing specifications:

- 400mm vertically
- 450-600mm horizontally.



AS 4773.2 provides guidance for light duty wall ties in cyclonic regions. In general, it allows higher design flexibility while still conservative and hence allows for cost and time savings.



DISCLAIMER: The information given is intended for general guidance and does not replace the services of professional advisers on specific projects.