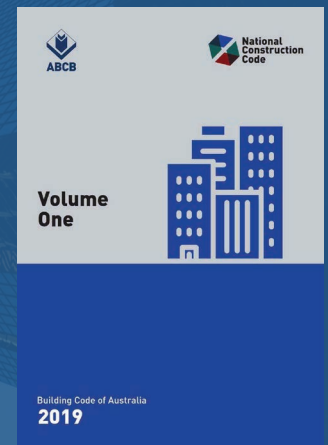


NCC 2019 SECTION J

As of the **1st of May 2020**, the new National Construction Code (NCC) 2019 Section J requirements come into regulatory effect with the end of the twelve-month 'discretionary' transition period.

This revision of Section J introduces a number of enhanced thermal envelope energy efficiency requirements which will influence architectural design. Previously accepted solutions, systems and approaches may no longer be compliant.



SUMMARY

To assist our clients in understanding these changes, specifically the impact on architectural design, Lucid has prepared a series of concise and informative technical notes. These distil the changes down to what specifically relates to your designs.

KEY CHANGES

- 1 | Glazing compliance requirements are now determined holistically for **wall-glazing constructions** to provide an overall total system U-value, accounting for combined façade orientations and levels.
- 2 | The calculation of total system R-value for an envelope wall **must now account for the impact of thermal bridging** within the construction. This will impact insulation solutions, wall details and wall thicknesses.
- 3 | Roof and ceiling system performance requirements are largely the same, however there is now a revised total system R-value calculation method and a **more restrictive limit to roof solar absorptance**. This change to solar absorptance requirements will impact architecture and restrict the palate of roof finishes/colours for DTS compliance.
- 4 | On grade/slab-on-ground concrete floors now require more detailed calculation of thermal performance and **will require slab insulation in some instances**, regardless of the inclusion of floor heating systems. For other floor systems, simplifications have been made with a standardisation of total system R-value requirements for all classes and climate zones (except alpine regions).
- 5 | Performance-based verification methods (e.g. JV3 modelling) **must now account for thermal comfort impacts**. The use of performance methods for design rationalisation and value-engineering will be more restrictive as both energy AND thermal comfort must be considered in determining compliance.
- 6 | NABERS & Green Star "crosswalks" have been introduced **to reduce duplication of compliance/certification** activities and associated costs. NABERS or Green Star modelling can be used to demonstrate compliance with Section J provisions for projects **registered for certification** under these schemes.
- 7 | Enhanced building envelope sealing provisions have been included with a verification method of as-built airtightness testing and **air permeability targets**. However, existing DTS provisions can still be used.

The application of the previous NCC 2016 Section J will no longer be at the discretion of the design team for new projects after the 1st May 2020. Architects and Project Managers should consult their Building Surveyor to confirm which version is applicable given the extent of design completed as at 1st May 2020 for specific projects.

TECHNICAL NOTES

For further information on understanding these changes and the impact on architectural design, please refer to our technical note series:

Tech Note 1:

Glazing

Tech Note 2:

Building
Fabric

Tech Note 3:

Performance
Solutions

Tech Note 4:

Airtightness

Tech Note 5:

Building
Services

LUCID COMMENTS

- The changes within NCC 2019 Section J **represent a step-change** in terms of outcomes and compliance assessment approaches.
- The changes will lead to meaningful benefits of improved **thermal comfort**, increased **energy efficiency** (and reduced **greenhouse gas emissions**), and mitigation of **peak demand** growth on energy networks.
- It can be expected that the initial enforcement of these changes will see some '**teething issues**' requiring collaboration between ESD Consultants, Architects and Building Surveyors to seek pragmatic outcomes. This is in context of **relatively limited guidance** documents provided by the ABCB to support the changes.
- It will **take time** for product suppliers and manufacturers to fully accommodate the changes within their supporting technical literature and documentation. Significant support from manufacturers and suppliers may be limited on the basis of how products are treated and assessed with respect to compliance of overall "systems".
- We believe these are **positive changes for the industry** which will result in long-term benefits to the economy through improved energy productivity from the sector.

FURTHER INFORMATION

If you require assistance on a specific project or have a general query related to NCC Section J 2019, please contact Lucid Consulting at the following address (NCC2019SectionJ@lucidconsulting.com.au) and a member of our Energy and Sustainability team will be in contact to assist you.



Pictured: 1 King William Street, Adelaide