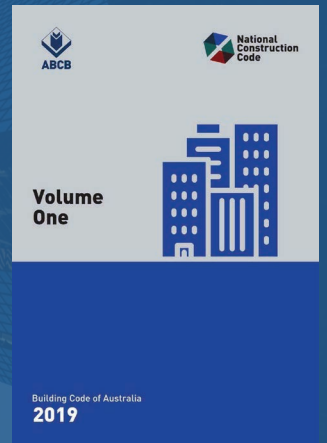


NCC 2019 SECTION J



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.



TECH NOTE 4 - AIRTIGHTNESS

This technical note provides concise information on the new consideration of **airtightness** within the NCC and what the implications are for projects. Please note that the following information is generic to building class and climate zone. Some building classes or climate zones may have specific requirements.

AIRTIGHTNESS



Image credit: iATS

NCC 2019 Section J includes a new verification method (JV4) for demonstration of compliance with the performance objective of sealing of the building envelope against air leakage. This verification method is based on testing of "air permeability" (the rate of air leakage per unit of facade area; $m^3/hr.m^2$) per **Method 1 of AS/NZS ISO 9972** and is applicable to most building classes and climate zones. However, the JV4 verification method is noted as only "**one way of achieving**" compliance with the performance objective and that the DTS provisions of Section J Part J3 Building Sealing can also be applied. NCC 2019 Section J Part J3 contains only minor adjustments from legacy versions such that it is likely to remain the default approach to building sealing provisions, with no measurable impact of architecture or design.

It is **highly likely** that the inclusion of JV4 and the specific reference to physical airtightness testing of as-constructed buildings is a **precursor to more substantive requirements** for airtightness verification in future NCC versions. **Watch this space in 2022.**

LUCID COMMENTS

- Airtightness is likely the **most overlooked aspect** of energy efficiency within the Australian construction industry. Poor airtightness undermines all other thermal envelope initiatives to improve energy efficiency.
- Addressing airtightness is challenging (but not impossible) within a regulatory framework. It is not necessarily possible **to design to a specific level of airtightness** based on a simplified schedule of initiatives (“it’s all or nothing”). Nor is it possible to measurably verify performance at the design or permit stage; performance verification is really only viable late within the construction phase.
- The exciting teaser of air permeability metrics in NCC 2019 Section J (JV4) is a signal to the industry of the ABCB’s intent **to introduce further more robust airtightness measures in later NCC versions (likely 2022)**. It shouldn’t be a surprise in the near future that mandatory airtightness testing is required.
- NCC 2019 Section J has a **disappointing easy-out** through the non-mandatory requirements of JV4 and continued permitted use of the old **(and practically useless)** DTS provisions of Section J3 Building Sealing.
- Airtightness should be viewed as **a proxy for construction quality**.

FURTHER INFORMATION

Please refer to the full series of Lucid NCC Section J 2019 technical notes for further discussion of the changes. 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: University of Melbourne Student Accommodation - 303 Royal Parade, Carlton.