



6 May 2020

Honourable John Quigley MLA  
Attorney General; Minister for Commerce  
5th Floor, Dumas House  
2 Havelock Street  
WEST PERTH WA 6005

Dear Minister Quigley

### **EXTENSION OF TRANSITIONAL PROVISIONS TO NATIONAL CONSTRUCTION CODE 2019**

We write on behalf of the local Western Australian members of the Australian Sustainable Built Environment Council (ASBEC) – including the Australian Building Sustainability Association (ABSA), Australian Glass and Window Association (AGWA), Insulation Australasia, Property Council of Australia – with the Building Product Industry Council (BPIC), WA Council for Social Service and Shelter WA to jointly express our concern regarding the Western Australian Government’s decision to further extend transitional provisions to the National Construction Code 2019 (NCC2019) for 12 months until 30 April 2021.

Whilst we grapple with the challenges of the COVID-19 pandemic, we agree that there should be appropriate concessions made to accommodate the impacts on construction productivity. As such, a short deferral, as originally requested by the Property Council of Australia, would have been appropriate in relation to the transition to NCC2019.

A delay of 12 months, however, will unnecessarily result in compromised safety and health, lower energy efficiency and higher levels of emissions, and further lock-in of poor building quality and consumer outcomes.

#### **Building quality and public trust**

Building quality issues have drawn nationwide attention, impacting on health, safety, consumer rights and public trust. The Perth Children’s Hospital is one of many [case studies](#) illustrating systemic compliance issues in Western Australia and across the whole country.

Furthermore, a recent Commonwealth pilot study found that Western Australia had the worst building shell rating in the country. WA homes rated little over 1 star out of a possible 5 on the Residential Efficiency Scorecard.<sup>1</sup>

The [Building Confidence](#) report, authored at the request of the Building Ministers' Forum, confirmed that poor compliance and enforcement of the Building Code is an issue across all jurisdictions, and identified a set of recommendations for States and Territories. We are pleased to see these recommendations being advanced by the Australian Building Code Board Compliance Taskforce, with which Western Australia is closely involved.

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<sup>1</sup> COAG Energy Council [Residential Efficiency Scorecard Research Pilot Evaluation Report](#), 2019

NCC2019 includes several measures that address some key gaps in the previous Code, relating to fire safety, health, energy efficiency and compliance. A summary of the key improvements to NCC2016 is attached in [Appendix A](#) (NCC2019 Volume 1) and [Appendix B](#) (NCC2019 Volume 2). A deferral of NCC2019 will leave Western Australia lagging behind the rest of the country in terms of addressing these gaps.

We strongly recommend closer scrutiny of construction practices to ensure compliance with the current Building Code.

Industry groups have expressed strong support of a harmonised Building Code across Australia, delivering efficiencies across the country and a consistent approach to construction practices and building quality.

Since 2016, the ABCB has engaged closely with industry stakeholders, in the development of NCC2019. During this period, all major industry groups were involved in consultation processes, including input via technical committees.

Along with the very long lead time in developing NCC2019, industry was granted a 1-year transition period from the introduction date in May 2019 for the energy efficiency provisions. Western Australia, however, went a step further and delayed the introduction of NCC2019 in its entirety for 12 months and has now elected to extend the transition by another 12 months: a 24-month delay in total.

Given the initial 12-month transition period, there is no valid justification to significantly delay the introduction of NCC2019. The rush to submit DA approvals to councils started in earnest several months before the first case of COVID -19 was reported in Australia, with an aim by some organisations to avoid NCC2019. As a result, some businesses providing consultative services to commercial and multi-unit developments are now reporting underutilised capacity as a result of this rush.

Western Australia is a critical member of the Australian Building Code Board (ABCB), and a contributor to and supporter of the National Construction Code. The last-minute decision to delay the implementation of the Code undermines the entire Code development process and building compliance framework of the State.

## **Supply chain**

The long lead time in developing NCC2019 provided a policy direction and certainty for industry to invest in the products and services required to meet the updated fire, safety, accessibility and energy efficiency standards.

Heavy investment has been made by Western Australian building product suppliers in upgrading their production and delivery systems to meet the NCC2019 requirements. In doing so they have been running down stocks of pre-NCC 2019 materials, and in some cases disposing of associated production machinery.

For example, the NCC2019 changes required window and glass producers to invest heavily in:

- Product testing for new window and glass systems. In some cases, this has required years of development and testing to ensure the new products meet bushfire, energy and environmental requirements.
- Increased capital equipment to effectively process insulated glass unit (IGU) systems.
- Increase investment in safety capital to manoeuvre and distribute heavier and more complex glazing systems required under the changes.
- Increased investment in machine automation and computer numerical control (CNC) precision manufacturing capital to enable manufacturing of the higher-performing windows system required under NCC2019.

Additional building product suppliers, including insulation and masonry, are similarly affected. For example, NCC2019 referenced an updated Insulation Standard AS/NZS4859.1:2018 that included within it improvements in testing methodology and aging parameters that better represented insulation performance to the benefit of better performing buildings and consumer outcomes.

Australian manufacturers have prepared for the introduction of the new standard a year in advance in time for its introduction within NCC2019. Those Australian manufacturers are now disadvantaged against imported product suppliers that can supply lower performing product into the Western Australian market against the old standard at lower cost.

With impaired demand for these products, the economics of these industries as critical suppliers to the sector is considerably disadvantaged at the expense of economic value and employment. Within the insulation sector alone there is now a demand gap for an estimated 2 million square metres of insulation that would have otherwise been supplied and installed into the Western Australian building and construction segment largely by Australian manufacturers under NCC2019.

Furthermore, the decision to defer NCC2019 in Western Australia could result in product suppliers being required to have two production runs occurring which will mean higher production costs/prices for products destined for the WA market. Such a situation would create an increased incentive to purchase cheaper offshore alternatives, resulting in fewer jobs for WA employees and a poorer outcome for building performance and consumers. In fact, WA could now become a convenient dumping ground for overseas suppliers with pre-NCC 2019 products.

### **Jobs and skills**

Western Australia's construction sector has expressed confidence in their ability to bounce back from the economic shock of COVID-19. The HIA COVID-19 Outlook Report, released last month, states:

*"Western Australia is expected to experience the smallest adverse outcome from this shock - ... the decline in home building and wider economic activity will be relatively smaller and shorter."*<sup>2</sup>

At the same time, the International Energy Agency highlights how more energy efficient buildings can boost job opportunities:

*"The buildings and construction sector – covering everything from houses and apartments to offices, hospitals and factories – represents a key opportunity to rapidly create new jobs and reinvigorate local businesses. ... When homes are upgraded to higher efficiency standards, more than half of the total investment typically goes directly to labour."*<sup>3</sup>

For example, a large volume of Home Energy Rating assessments is currently undertaken offshore. In closing some significant loopholes relating to home energy efficiency, NCC2019 provided an opportunity for local skilled, accredited and qualified Home Energy Rating Assessors to better engage with the industry.

The Australian Building Sustainability Association (ABSA) has coordinated a body of skilled professionals in Western Australia who have been educating builders and working towards NCC2019. The further 12-month delay in implementing NCC2019 will impact on the small businesses that have invested in this area and could result in a loss of critical expertise in the industry which will take years to recover from.

### **Energy efficiency and emissions**

NCC2019 includes long-awaited improvements to minimum standards for commercial building energy efficiency standards and closes significant loopholes for residential building energy efficiency.

Better performing buildings deliver a myriad of benefits such as lowered energy bills for household and business consumers, reduced stress on the electricity network and supports a least cost pathway to decarbonisation.

Research by ASBEC and ClimateWorks in 2018<sup>4</sup> showed that strong energy standards for new buildings in Western Australia could, between now and 2050, reduce energy costs by up to \$4 billion, deliver at least 10 million tonnes of cumulative emissions savings and save households up to \$1,000 per year in energy bills.

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<sup>2</sup> HIA COVID-19 Outlook Report April 2020

<sup>3</sup> International Energy Agency, ['Energy efficiency can boost economies quickly, with long-lasting benefits'](#), 2020

<sup>4</sup> ASBEC and ClimateWorks, [Built to Perform: An Industry Led Pathway to a Zero Carbon Ready Building Code](#), 2018

NCC2019 represents the first major overhaul of the commercial provisions since 2010 and delivered a package of measures focused on reducing commercial energy consumption by a potential 35 per cent, representing a step-change around the country.

A major issue in Western Australia is the exploitation of loopholes in NCC2016 relating to residential building energy efficiency<sup>5</sup>. NCC2019 addressed these loopholes and offered the opportunity for better uptake of certification through the National Home Energy Ratings (NatHERS) system. Currently only 20% of new homes in WA are certified through NatHERS. A much higher uptake, delivering better compliance with energy efficiency provisions, could be delivered through NCC2019.

Our organisations are also strongly supportive of the ABCB's efforts to develop improved residential building energy efficiency standards for the 2022 National Construction Code.

## Community impacts

Community and consumer interests are better promoted and protected in NCC2019, which includes essential and life-saving requirements relating to fire safety, including sprinkler systems, verification methods for avoidance of spread of flame.

As noted above, NCC2019 closes significant loopholes for residential building energy efficiency.

Common features of poor quality housing include lack of insulation; energy inefficient or faulty heating, cooling and hot water systems; and structural issues exposing the dwelling to the weather. The resulting indoor exposure to cold weather has been identified as a public health issue<sup>6</sup>.

Households living in poor quality housing with inefficient appliances have limited capacity to reduce their exposure to extreme weather conditions, and older households often underestimate their vulnerability to adverse health outcomes.

Shelter WA has emphasised that housing remains the single largest cost for households in Western Australia. Households on the lowest incomes are disproportionately impacted by the increasing cost of energy, as they spend a much higher percentage of their disposable income on energy bills and have little if any capacity to absorb additional costs.

Mounting unpaid bills and utility disconnections can have a significant impact on people's wellbeing, including the stress of trying to stretch their income as far as possible, and the difficult decisions they have to make as to what to prioritise, such as not eating or not cooling their homes during the heights of summer. These debts can also affect their ability to access affordable credit in future.<sup>7</sup>

Modelling undertaken by Shelter WA indicates that the continued construction of poor energy efficient homes for another year will cost Western Australian households of the newly built homes an additional \$7,428,733.20 in electricity bills for the year 2020/2021.

## Renters and Review of the Residential Tenancies Act (1987) WA

Vulnerable and low-income households depend on the rental market for their homes, health and wellbeing.

The 2016 Bankwest Curtin Economics Centre *Energy Poverty in Western Australia* survey found that:

- Rental households were dramatically less likely to be insulated, meaning that those on low incomes were more likely to be using more power to regulate the temperature in their dwelling.
- While the uptake of residential rooftop solar photovoltaics (PV) in Western Australia has been significant, the ability of different households to access this technology is not equal. Those on lower-incomes or in rental housing have few opportunities to benefit from reduced consumption cost, despite the longer-term cost benefit. As a result, increases in utility costs have disproportionately impacted on these households.

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<sup>5</sup> This is illustrated in [Appendix C](#), which shows how the 'verification using a reference building' (VURB) method has delivered an average star rating of 3.5 stars in a particular WA local council in climate zone 54.

<sup>6</sup> Professor Adrian Barnett, '[Cold weather is a bigger killer than extreme heat – here's why](#)', 2015

<sup>7</sup> WA Council of Social Service, *Cost of Living 2019*

With the WA Residential Tenancy Act currently under review, it is anticipated that the updated Act will include a minimum standard for rental housing

NCC2019 supports the intent of the updated Act by ensuring properties built for the rental market have basic standards and are more affordable for people who rent. It also provides certainty for property developers and landlords who invest in new housing for the rental market.

## **Conclusion**

Stalling the introduction of better standards for new buildings will significantly delay the benefits to businesses, households, the wider Western Australian economy and it will cost jobs.

We urge the WA Government to reconsider the delay in implementing the NCC2019 to a more reasonable timeframe (e.g. 1 month) and would welcome a further discussion to consider how we might constructively move forward on this issue. Please do not hesitate to contact Michelle Mackenzie, Chief Executive Officer, Shelter WA ([CEO@shelterwa.org.au](mailto:CEO@shelterwa.org.au) / 0419 931 819) or Scott Gibson, Chairman, Insulation Australasia ([Scott.Gibson@kingspan.com](mailto:Scott.Gibson@kingspan.com) / 0419 951 201).

Yours sincerely

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**James Cross, Deputy Chairperson, Australian Building Sustainability Association**

**Clinton Skeoch, CEO, Australian Glass and Window Association**

**Rodger Hills, Executive Officer, Building Product Industry Council**

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Major updates to NCC2019 Volume 1 from NCC2016

NCC 2019 - Volume 1 Reference	Amendment Description	Area of Improvement	Effect of Delaying Introduction
Throughout the NCC	Improved readability, particularly with respect to Governing Requirements and clarity for Performance Solutions and Verification Methods	Readability	This is regarded as an important upgrade in the NCC 2019 and the benefits of this would be now delayed until 2021.
CV4	Introduction of the Fire Safety Verification Method (FSVM) which outlines the requirements for a Fire Safety Design Brief (FSDB)	Fire Safety	This important change provides a clearer path for the preparation of fire safety performance solutions that can be more easily understood and would be more auditable. Delaying this any further deprives building owners of the benefit of this VM for a further year.
C1.9(e)	Exemption of sarking-type materials less than 1.0mm thick from the 'non-combustible' requirement in external walls in high rise buildings.	Condensation, Health and Durability	Not having access to this exemption means the industry is faced with a continuing need for metal 'back pans' in place of vapour permeable membranes, creating a potential condensation issue in high rise walls for another year.
C1.13	Concession for 'fire protected' timber to apply to all building applications.	Versatility and Environmental	This concession will have allowed all other States the environmental benefits of timber construction two years ahead of WA.
EV1.1, EV2.1, EV3.1, EV4.1, EV4.2	New Fire Safety Verification Methods (FSVMs) introduced.	Fire Safety	The benefits of these FSVMs will not be available to the public until May 2021.
Table E1.5	Inclusion of sprinkler protection for Building Classes 2, 3 and 4 parts with a rise of 4 stories or more and not more than 25m, and inclusion of sprinklers in Class 3 Residential Care Homes.	Health and Durability	These safety benefits would not be included until May 2021 at the earliest and the buildings would have this on-going legacy for their lifetime.
Part F6	Introduction of provisions for water vapour and condensation management.	Condensation, Health and Durability	The benefits of these provisions will not be provided until May 2021 at the earliest leaving all buildings constructed in the meantime vulnerable to the health effects of condensation and mould, and potential structural damage from moisture.
JV1	Inclusion of NABERS as a verification method for energy efficiency	Energy Efficiency	Building owners will be deprived of this popular method to determine compliance with the Energy Provisions of the NCC until May 2021.
JV2	Inclusion of Green Star as a verification method for energy efficiency	Energy Efficiency	Building owners will be deprived of this popular GBCA backed method to determine compliance with the Energy Provisions of the NCC until May 2021.

NCC 2019 - Volume 1 Reference	Amendment Description	Area of Improvement	Effect of Delaying Introduction
JV3	Provision for the measurement of greenhouse gas emissions, as opposed to energy, in the reference building verification method.	Energy Efficiency	This option would be delayed until at least May 2021 depriving building owners the option of complying via a reduction of GHG emissions.
JV4	Introduction of a VM for determining air leakage of the building fabric via blower door testing.	Energy Efficiency	This practical option would not be available for compliance purposes until May 2021, and leaky building would prevail for another year and would likely remain leaky for the remainder of their lifetime.
J0.2(a)	Max Heat and Cooling loads required for Class 2 Sole Occupancy Units.	Energy Efficiency	Units with excessive heating or cooling loads (but still obtaining the required star rating) would still be acceptable until May 2021 and will be potentially uncomfortable, unhealthy and inefficient for the remainder of their lifetime.
J1.2(e)	Inclusion of reference to AS/NZS 4859.2:2018 for calculation of Total R-Values.	Energy Efficiency	This significant improvement to energy efficiency and building fabric performance would not be considered until May 2021 meaning that buildings built in the next 12 months at least will have reduced energy efficiency and increased risks due to condensation for the remainder of their lifetime. By not adopting the new Standard the 2016 referenced old AS/NZS4859 standard could still be used allowing overstated R-Values to be referenced.
J1.3	Simplified Roof R-values, and increased in some cases.	Energy Efficiency	The benefits of the improved R-values would not be applied until May 2021 affecting building performance for the remainder of its lifetime.
J1.5	Wall-glazing construction. The glazing provisions currently in Part J2 have been incorporated into J1.5. A minimum Total U-Value and SHGC must be achieved for the whole façade instead of separate targets for glazing and walls. Minimum Total R-Values have also been specified for walls.	Energy Efficiency	As a consequence of these changes, in some instances, lower wall Total R-Values than the current NCC provisions may be permissible to meet the total facade U-Values. However, the total façade performance (wall and glazing) will generally be more stringent. The industry would not be required to apply these improvements until May 2021 affecting the buildings energy efficiency for the remainder of its lifetime.

NCC 2019 - Volume 1 Reference	Amendment Description	Area of Improvement	Effect of Delaying Introduction
J1.5	Total min. U-value and SHGC required for whole façade.	Energy Efficiency	The industry would be limited to restrictive individual window and wall values and the benefits of the flexibility and choice provided by this provision would not be available to the industry until May 2021. Building designs would be so affected for the remainder of their lifetime.
J1.6	Improved Total R-values for floors	Energy Efficiency	The industry would not be required to apply these improvements until May 2021 affecting the buildings energy efficiency for the remainder of its lifetime.
J3.3/J3.4	Improved sealing of roof lights and building envelope	Water proofing & Durability	The industry would not be required to apply these important improvements until May 2021 which will affect buildings constructed in the meantime for the remainder of their lifetime.
J5.8	Pipework insulation requirements increased	Energy Efficiency	The industry would not be required to apply these important improvements until May 2021 which will affect buildings constructed in the meantime for the remainder of their lifetime.
J5.9	Increased thermal efficiency for gas water heaters	Energy Efficiency	A delay of 12 months to May 2021 would increase GHG emissions from gas heaters for the life of the appliances (perhaps 15 - 20 years)
J5.10	Air-Conditions required to be more efficient	Energy Efficiency	A delay of 12 months to May 2021 would increase energy use by air conditioning for buildings constructed in the meantime for the life of the air-conditioning (perhaps 15 - 20 years)
J6	Lighting and lifts/escalators to be more efficient	Energy Efficiency	Buildings built in the next 12 months will potentially have less efficient lighting and equipment which will remain for the life of that equipment.
J7	Allowance for heating of pools using geothermal energy and standards set for gas pool heaters	Energy Efficiency & Consumer Protection	These benefits would not be implemented until May 2021 therefore depriving building owners of the operational economies for the life of building or equipment.
Spec. J1.5(b)	Provision for thermal performance of a spandrel panel.	Energy Efficiency	Framed spandrels are a particular problem for energy efficiency and condensation therefore a compliance requirement wouldn't be in place until May 2021, meaning that the industry will continue building spandrels with low energy efficiency and condensation problems for another year, and these problems will persist for the life of the building.



NCC 2019 - Volume 1 Reference	Amendment Description	Area of Improvement	Effect of Delaying Introduction
Updated Standards	References to AS/NZS 4200.1:2017; AS 4200.2:2017; AS/NZS 4859.1:2018; AS/NZS 4859.1:2018: AS 3959:2018; AS 5113 - Amdt 1; AS/NZS 5637 - the note has been removed.	Important Australian Standards Updates	These latest versions of material, installation and bushfire standards are just examples of updated standards that will not become effective under the NCC in WA until May 2021. This means that WA will be out of step with the rest of Australia with respect to adoption of these standards. Insulation and sarking materials will also be out of step with WA as they have moved to comply with the standards called up in NCC 2019. Failure to reference the latest version of a test method can lead to product non-conformance.
NCC 2019 - Amdt 1			
A2.2(4)	Introduction for a process for development of Performance Solutions	Tightening up on Non-Conformance / Building Confidence Report Recommendation	Following criticism and lack of confidence in Performance Solutions this process is intended to assist will the integrity, clarity and effectiveness of Performance Solutions and to ensure consultation and understanding amongst all stakeholders. A delay in introducing NCC 2019 would lead continuing non-conformance due to lack of integrity in Performance Solutions which may remain in the building for its lifetime.
A5.7	Inclusion of labelling requirements for Aluminium Composite Panels (ACPs)	Fire Safety/ Building Confidence Report Recommendation	A major risk with the use of ACPs has been the lack of product identification of the product so that they can be checked for compliance with the specifications, especially fire specs. A delay in adopting NCC 2019 means a delay in the requirement for this labelling, which potentially puts fire safety of the facade at risk.
D1.18	Provision for Egress in Early Childhood Centres	Safety	A delay in providing this important safety feature could mean that Early Childcare Centres are built without this feature and this deficiency will remain for the life of the building.

Major updates to NCC2019 Volume 2 from NCC2016

NCC 2019 - Volume 2 Reference	Amendment Description	Area of Improvement	Effect of Delaying Introduction
Throughout	Improved readability, particularly with respect to Governing Requirements and clarity for Performance Solutions and Verification Methods	Readability	This is regarded as an important upgrade in the NCC 2019 and the benefits of this would be now delayed until 2021.
V.2.3.1.1	Verification Method (VM) for avoidance of spread of flame between buildings on the same allotment.	Fire Safety	The benefit of this important fire safety provision would be delayed a year and buildings constructed in the meantime would carry this risk for the buildings lifetime.
V2.3.1.2	VM for avoidance of spread of flame from a allotment boundary.	Fire Safety	The benefit of this important fire safety provision would be delayed a year and buildings constructed in the meantime would carry this risk for the buildings lifetime.
V2.3.1.3	VM for avoidance of spread of flame from a Class 10a building to a Class 2 to 9 building on an adjoining allotment.	Fire Safety	The benefit of this important fire safety provision would be delayed a year and buildings constructed in the meantime would carry this risk for the buildings lifetime.
V2.3.1.4	VM for avoidance of spread of flame from a Class 10a building to a Class 2 to 9 building on the same allotment.	Fire Safety	The benefit of this important fire safety provision would be delayed a year and buildings constructed in the meantime would carry this risk for the buildings lifetime.
P2.4.7	Performance Requirement for Water Vapour and Condensation Management	Health and Durability	This has been recognised as a serious health risk due to the high incidence of mould and mildew forming as a result of poor water vapour control and management. A delay of 1 year in enacting the NCC 2019 would potentially affect every house built in the next 12 months.
V2.6.2.2	Introduces more specific parameters for the reference building method which renders NatHERS rating tools unacceptable.	Energy Efficiency and Tightening up on Non-Conformance	It is widely recognised that reference building method has been used inappropriately and is not always achieving the required building energy efficiency. A delay in introducing these measures in NCC 2019 would potentially allow this inefficiency to continue for the next 12 months and beyond for the life of the buildings affected.

NCC 2019 - Volume 2 Reference	Amendment Description	Area of Improvement	Effect of Delaying Introduction
V2.6.2.3	Introduces a building sealing verification method by means of blower door testing.	Energy Efficiency	Air leakage through the building fabric is recognised as a major fault in Australian houses, but it is unquantifiable without appropriate testing. This VM provides for testing with an acceptable parameter established which will become more stringent over time. A failure to introduce this VM until 2021 would leave WA out of step with the rest of Australia and make it difficult to catch up as the NCC 2022 Vol. 2 is likely to become more stringent for Energy Efficiency.
V2.7.1	Introduction of a VM for robustness of combustion appliances	Fire Safety	This important safety provision would not become effective for a further 12 months if the NCC 2019 is not adopted until May 2021.
V2.7.2	Introduction of a VM for construction in bushfire prone areas	Fire Safety	This important safety provision would not become effective for a further 12 months if the NCC 2019 is not adopted until May 2021.
Part 3.7 - Fire Safety	Several minor but important changes to clauses in this part.	Fire Safety	These important amendments to the Fire Safety provisions would not become effective for a further 12 months if the NCC 2019 is not adopted until May 2021.
3.8.7	New part in the Health and Amenity section dealing with Condensation Management	Health and Durability	Condensation Management has become more important as buildings become more air tight and the level of insulation improved such that vapour is retained within the building and potential for condensation to occur increases. Delaying the introduction of the NCC 2019 until may 2021 deprives the building owner of the ability to have a building with reduced potential for harmful condensation to form within the building. being a building fabric issue this problem is likely to persist for the life of the house.
3.10.6	Introduction of requirements for 'Attachment of decks and balconies to external walls of buildings'.	Engineering Safety	This important structural and safety provision has been included following several balcony collapses in recent years. Delaying the application of the NCC 2019 would deny building owners of this protection from the NCC for at least 12 months and potentially for the life of the building.

NCC 2019 - Volume 2 Reference	Amendment Description	Area of Improvement	Effect of Delaying Introduction
3.12 - Energy efficiency	Readability has been improved	Readability	Comprehension of the NCC is important and with improved readability there is less likelihood of misinterpretation which is important when dealing with a permanent element such as the building fabric. Delaying the application of NCC 2019 denies the industry of this improved readability.
3.12.0.1(a)	Introduction of heating and cooling limits in star ratings	Fire Safety	The heating and cooling limits are designed to prevent houses with a large heating or cooling load to still be deemed compliant by having a compliant star rating. Such a house would be very uncomfortable in either winter or summer and therefore the occupants would run additional heating and cooling to compensate. By delaying the application of NCC 2019 till May 2021 many houses built in the next 12 months would potentially be either too hot in summer or too cold in winter making them potentially unhealthy and causing an excess demand on the power grid.
3.12.3.3	Requirement for sealing of doors between Class 1 buildings and unconditioned Class 10a.	Energy Efficiency	Air tightness is an important factor in energy efficiency of houses so this point should not be ignored any longer.
3.12.3.5	Clarifications made regarding the building sealing requirements	Energy Efficiency	Air tightness is an important factor in energy efficiency of houses so this point should not be ignored any longer.
<b>NCC 2019 Vol.2 - Amdt. 1</b>			
A2.2(4)	Introduction for a process for development of Performance Solutions	Tightening up on Non-Conformance Improving Consumer Protection	Following criticism and lack of confidence in Performance Solutions this process is intended to assist will the integrity, clarity and effectiveness of Performance Solutions and to ensure consultation and understanding amongst all stakeholders. A delay in introducing NCC 2019 would lead continuing non-conformance due to lack of integrity in Performance Solutions which may remain in the building for its lifetime.

NCC 2019 - Volume 2 Reference	Amendment Description	Area of Improvement	Effect of Delaying Introduction
A5.7	Inclusion of labelling requirements for Aluminium Composite Panels (ACPs)	Fire Safety	A major risk with the use of ACPs has been the lack of product identification of the product so that they can be checked for compliance with the specifications, especially fire specs. A delay in adopting NCC 2019 means a delay in the requirement for this labelling , which potentially puts fire safety of the facade at risk.



VURB equivalent star ratings for WA Local Council in Climate Zone 54

Ref Heating Load	Ref Cooling Load	Ref Combined load	Prop Heating Load	Prop Cooling Load	Prop Combined load	Ref build reduced by	Star equivalent
286.2		3.3	289.5	216.5	2.9	215.4	1.5
351.6	63	414.6	211.2	53.7	264.9	149.7	1.5
181.2	31.4	212.6	164.3	29.8	194.1	18.5	2
207.7	34.5	242.2	166.5	14.2	180.7	61.5	2
322.8	2.1	324.9	190	1.7	191.7	133.2	2
121.4	56.6	178	113.9	49.6	163.5	14.5	2.5
167	38.9	205.9	127.5	27.2	154.7	51.2	2.5
118.7	13.1	131.8	117.8	9.4	127.2	4.6	3
132.6	13.7	146.3	123.2	13	136.2	10.1	3
133	13.9	146.9	114	11.8	125.8	21.1	3
158.9	16.1	175	126.3	12.5	138.8	36.2	3
153.9	13	166.9	117.5	10.3	127.8	39.1	3
155.7	18.7	174.4	117.5	11.9	129.4	45	3
172.4	9	181.4	123	6.1	129.1	52.3	3
166.9	26	192.9	104	21.8	125.8	67.1	3
178.8	28.5	207.3	108.5	26.4	134.9	72.4	3
103.4	14.5	117.9	102.6	13.6	116.2	1.7	3
102.2	22.3	124.5	99.2	18.7	117.9	6.6	3.5
106	21.8	127.8	100.6	20.5	121.1	6.7	3.5
72.5	52.6	125.1	69.6	41.3	110.9	14.2	3.5
128	13.4	141.4	104.4	10.1	114.5	26.9	3.5
130.6	19.5	150.1	96.1	18.9	115	35.1	3.5
113.4	34.8	148.2	88.2	19.1	107.3	40.9	3.5
141.5	18.4	159.9	102.7	15.4	118.1	41.8	3.5
125.3	48.4	173.7	91.3	27.1	118.4	55.3	3.5
139.4	31.2	170.6	85.2	29.9	115.1	55.5	3.5
		172.6			109.1	63.5	3.5
158.4	34.8	193.2	82.5	29	111.5	81.7	3.5
168.1	42.2	210.3	78.5	29.9	108.4	101.9	3.5
85.4	14.1	99.5	80.9	12.3	93.2	6.3	3.5
81.6	67.4	149	72.4	30.2	102.6	46.4	3.5
154.3	26.2	180.5	86.3	14.4	100.7	79.8	3.5
97.6	10.6	108.2	78.3	9	87.3	20.9	3.5
72.1	56.1	128.2	51	37.9	88.9	39.3	4
63.4	17.1	80.5	57.6	15.5	73.1	7.4	4
67.7	15.2	82.9	61.1	12.6	73.7	9.2	4
47.8	32.8	80.6	44.7	26.1	70.8	9.8	4.5
50.4	34.5	84.9	48.3	18.8	67.1	17.8	4.5
70.8	38.3	109.1	34.6	35.2	69.8	39.3	4.5
94	8.6	102.6	55.3	5.9	61.2	41.4	5
							5
							5.5
							5.5
							5.5
							6

Mean 3.5

Data is anonymised (with builder, assessor and software removed). Average star rating for VURB in climate zone 54 is 3.5 stars.