

2023-24 PRE-BUDGET SUBMISSION



AUSTRALIAN GOVERNMENT DEPARTMENT OF THE TREASURY

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Australian
Institute of
Architects

Submission issued January 2023

2023-24 Federal Pre-Budget Submission

INFORMATION ABOUT THE INSTITUTE

- The Australian Institute of Architects (Institute) is the peak body for the architectural profession in Australia. It is an independent, national member organisation with more than 13,000 members across Australia and overseas.
- The Institute's vision is: *Everyone benefits from good architecture.*
- The Institute's purpose is: *To demonstrate the value of architecture and support the profession.*
- At the time of this submission the National President is Shannon Battisson FRAIA and the Acting Chief Executive Officer is Barry Whitmore.

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About the cover photo

The Australian Institute of Architects' 2022 Sir Zelman Cowen Award for Public Architecture Bundanon. Kerstin Thompson Architects. Traditional Land Owners: The Wodi Wodi and the Yuin peoples of the Dharawal country. Photographer: Rory Gardiner.

For further information visit: <https://www.architecture.com.au/awards/2022-awards/2022-act-architecture-awards-winners/the-sir-zelman-cowen-award-for-public-architecture-bundanon>

THE INSTITUTE'S 2023-24 FEDERAL BUDGET RECOMMENDATIONS

AUSTRALIAN NET ZERO BUILDINGS COMMISSION

Recommendation 1: Minister for Industry and Science to establish the Australian Net Zero Buildings Commission (ANZBC) including funding of,

1.1: \$75m for the establishment and 3 years funding of the ANZBC.

1.2: \$5m for a review to be conducted by the ANZBC into Australia's current performance of the built environment under climate change.

1.3: \$5m for a review to be conducted by the ANZBC into technology that can achieve net zero in the built environment.

1.4: \$5m for a review to be conducted by the ANZBC into a pathway for Australia to achieve a net zero built environment.

1.5: \$5m for a review to be conducted by the ANZBC into how Australia can become a world leader in Net Zero Built environment and materials.

1.6: \$500m fund overseen by the ANZBC to:

- Fund PhD research positions into Net Zero Building Materials research
- Assist University and TAFE sector to commercialise their research into Net Zero Building Materials
- Equity funding for Net Zero Building Materials start-ups.

1.7: \$6 million over three years to fund the Australian Building Codes Board to make provisions in the National Construction Code (2025) that require all new residential dwellings or those undergoing major upgrades to operate with net-zero regulated energy.

1.8: Increase funding to \$25 million per annum for the delivery of the Trajectory for Low Energy Buildings. This will enable the Australian Government to bring forward milestones and enable timely delivery of the Trajectory for Low Energy Buildings. Federal responsibility for the Trajectory should be moved to the ANZBC.

1.9: \$50 million to fund the Australian Climate Service to further develop national datasets and detailed maps of natural disaster and climate related events risks across Australia to be freely and publicly available to local governments, designers, planners and developers so that resilience is able to be built into the design and location our buildings using the best available data.

AUSTRALIAN GOVERNMENT ARCHITECT'S OFFICE

Recommendation 2: Establish an Australian

Government Architects' Office including funding of,

2.1: \$16 million over the next four years to establish an Australian Government Architect's office (AGAO) to advise the Australian Government and statutory agencies on best ways to achieve high quality, well designed outcomes from government owned or government funded buildings.

2.2: \$2 million to the AGAO over the next four years to establish the First Nations Architects' Office to ensure design for First Nations housing and community infrastructure is culturally appropriate and partners with local First Nations communities in design.

FIRST NATIONS HOUSING AS A PRIORITY

Recommendation 3: \$4 billion over four years to 2027 to fund a co-designed national housing deal with First Nations communities delivering 8,000 new indigenous social housing dwellings.

ENSURE AUSTRALIA HAS A DIVERSE AND EXPERIENCED ARCHITECT WORKFORCE IN 2030

Recommendation 4: \$80 million over 2 years for an employer wage subsidy so that Australian universities' architecture graduates can gain the required employment in a practice under the supervision of a senior architect in order to attain their registration.

MAKE PUBLIC BUILDINGS ACCESSIBLE FOR PEOPLE WITH DISABILITIES

Recommendation 5: Commit funding of \$150 million over three years for a national upgrade program to retrofit existing public use and community buildings and infrastructure to be accessible by people with disabilities.

5.1: Implement Actions 2b, 2b and 4b of the Premises Standards Review 2021 to update the Australian Human Rights Commission's *Guideline on the application of the Premises Standards*, and develop further guidance to improve access to buildings, assist standards' compliance and consistency of disability standards with the National Construction Code.

DETAILED EXPLANATION OF RECOMMENDATIONS

1. AUSTRALIAN NET ZERO BUILDINGS COMMISSION

Recommendation 1: Minister for Industry and Science to establish the Australian Net Zero Buildings Commission (ANZBC)

Addressing Climate Change is the policy priority of our times and requires action beyond the traditional solutions such as renewable energy. The built environment is a significant contributor to the primary cause of climate change, CO² emissions.

Internationally, the built environment is said to contribute around 40% of all emissions. This is made up of two main components:

- 1) the operational carbon emissions arising from the production of energy needed to heat and cool buildings (27% of the 40%) and
- 2) the embodied carbon resulting from construction (the other 13%)¹.

While reducing the carbon intensity of Australia's energy market will provide a significant contributor to reducing the carbon impact of the built environment, it will not be sufficient on its own to reach our commitment to net zero emissions.

The built environment can further reduce its carbon footprint through two major avenues. The first being adoption of energy efficient designs and building materials. These help to further reduce the emissions from heating and cooling homes. The second is through adoption of low and eventually zero carbon building products such as steel and cement, which will reduce the embodied carbon in new buildings.

Action on these fronts has started, however, it requires a unified approach that is planned and centrally co-ordinated. The Institute proposes that the Minister for Housing establish the Australian Net Zero Buildings Commission (ANZBC) to take on this role.

The Trajectory for Low Energy Buildings² and its Addendum (the Trajectory) were agreed by all Commonwealth, state and territory energy ministers in 2019³ and also referred to the Australian⁴ Building Codes Board by the Building Minister's Forum in February 2019⁵.

The Trajectory is a national plan that aims to achieve zero energy and carbon-ready commercial and residential buildings in Australia. It is a key initiative to address Australia's 40% energy productivity improvement target by 2030 under the National Energy Productivity Plan.

However, the Trajectory only deals with the energy consumption side of the equation.

¹ <https://architecture2030.org/why-the-building-sector/#:~:text=The%20built%20environment%20generates%2040,for%20an%20additional%2013%25%20annually.>

² COAG Energy Council (2018) Trajectory for low energy buildings. December 2018. Commonwealth of Australia. <https://www.energy.gov.au/government-priorities/energy-ministers/energy-ministerspublications/trajectory-low-energy-buildings>

³ <https://www.energy.gov.au/government-priorities/buildings/trajectory-low-energy-buildings>

⁴ Australian Sustainable Built Environment Council (2018) Built to Perform: An Industry Led Pathway to a Zero Carbon Ready Building Code. <https://www.asbec.asn.au/research-items/built-perform/>

⁵ Building Ministers' Forum Communique – 8 February 2019. <https://www.industry.gov.au/sites/default/files/bmf-communicue-8-february-2019.pdf>

The Australian Sustainable Built Environment Council's (ASBEC) Low Carbon, High Performance roadmap⁶ found that actions to reduce emissions from the building sector (including new and existing buildings), could deliver 28 per cent of Australia's 2030 emissions reduction target.

Existing voluntary programs indicate the reductions available. The Better Buildings Partnership—a collaboration of leading property owners and green industry leaders – had by 2020 reduced its 2007 emissions by 61%⁷. However, Australia is unlikely to meet its targets through voluntary measures alone.

According to ASBEC, buildings account for over 50% of electricity use in Australia and almost a quarter of its emissions. The built environment presents some of the lowest cost – and largely untapped – emissions reduction opportunities.⁸

Setting strong energy standards for new buildings between now and 2050 could reduce energy bills by up to \$27 billion, cut energy network costs by up to \$12.6 billion and deliver at least 78 million tonnes of cumulative emissions savings. Improved energy performance of buildings reduces stress on the electricity network, offers bill savings, supports a least-cost pathway to a zero-carbon built environment, and improves health and resilience outcomes for households and businesses.

Of greater complexity will be reducing the embedded carbon in the built environment. Two of the main construction components – cement and steel – require significant energy to produce and in the case of steel, difficult to currently produce using renewable energy alone.

Technological solutions to address the carbon intensity of both products are in development; however, the timeline for progression from research to commercialisation is unclear, as is which of these new technologies proves most effective.

Furthermore, the capacity of Australian industry to pivot towards these technologies and the costs of transitioning are unknown. There has been extensive investment in current technology and ways of undertaking construction by the sector that will likely lead to resistance to change without a clear understanding of the benefits and necessity of undertaking change.

Therefore, to address these issues and to provide the government with the necessary data to make informed decisions, the Institute proposes that the Government, through the proposed ANZBC commission a number of reports into how Australia can transition to a net zero built environment.

The Institute proposes the following research papers be commissioned:

- Research paper into the technologies being developed to reduce and eventually eliminate carbon emissions in the materials necessary for the built environment. It would look at what technologies are out there, their various stages of developments, their pros and cons and when these technologies are likely to become commercially available.
- Utilise the information provided by the prior paper to develop another research paper setting out likely pathway for Australia to adopt net zero building standards. This paper will investigate the most promising policy levers to ensure the pathway and likely obstructions in achieving net zero.

⁶ Australian Sustainable Built Environment Council (2016) Low Carbon, High Performance How buildings can make a major contribution to Australia's emissions and productivity goals <https://www.asbec.asn.au/wordpress/wp-content/uploads/2016/05/160509-ASBEC-Low-CarbonHigh-Performance-Summary-Report.pdf>

⁷ <https://www.betterbuildingspartnership.com.au/2020-bbp-annual-report-celebrating-ten-years-of-leadership/>

⁸ https://www.asbec.asn.au/211025-asbec-five-ways-cop26-advocacy-piece_final-1/

The paper will also set out how to bring industry and the community on board with the necessity of achieving net zero in the built environment.

- Commission a research paper into how the Australian construction industry can become a leader in the net zero built environment. The paper will investigate how local suppliers can become world leaders in net zero construction materials and develop an export sector in products and intellectual property. This paper will also review which policy levers and other support are necessary to rejuvenate Australian manufacturing capacity in construction materials, focusing on low and eventually zero-carbon products.

Concurrently with the above research papers, the ANZBC will commission a research paper into Australia's current built environment and how it is coping with climate change. The paper will identify existing weaknesses and strengths, how our built environment can be made more adaptable to our likely future climatic conditions and develop plans for more climate-resilient infrastructure.

These research papers are a necessary prerequisite before long term policies can be enacted. If this research is not undertaken, policy will be adopted that is not realistic as to achievability, leads to duplication of effort and sets Australia down a technological dead end.

The wider construction industry is seeking guidance on achieving the goals of net zero carbon emissions.⁹ Without guidance from the government and experts, it could delay necessary investments and actions until international best practice has been established elsewhere. While this is understandable from a commercial position, it will not only delay climate action but also likely lead Australia to become a technology laggard, potentially missing the export potentials that arise from being an international leader¹⁰.

The Institute notes that the transition to a net zero carbon built environment will impact thousands of careers. The construction industry, in particular, will see transitional job pain as the need for certain skills will diminish – and potentially disappear – while new skills will need to be acquired¹¹. Funding will be required to develop new training courses and for retraining the existing workforce impacted by technological change.

The Institute, therefore, recommends that the review into the technological pathway to net zero built environment include an investigation into the skills and jobs that are likely to be impacted and how construction industry workers and professionals should be retrained for the new way of building.

The Institute proposes that the government establish a fund, overseen by the ANZBC, to establish research hubs into net zero building materials, pay PhD students to undertake research into net zero building materials and to assist commercialisation of those research outcomes.

Governments at all levels are already starting to undertake steps to establish low and eventually zero carbon built environments. However, to date, most of those approaches have been piecemeal, uncoordinated between levels of government and are duplicating efforts others are doing. There is a risk that without an overarching body to monitor and lead these efforts, there will not just be wasted money and time, but also different standards and requirements.

⁹ ASBEC Five ways the built environment can help Australia transition to a net zero future
<https://www.asbec.asn.au/research-items/five-ways-the-built-environment-can-help-australia-transition-to-a-net-zero-future/>

¹⁰ CSIRO A Net Zero Australia <https://www.csiro.au/en/about/challenges-missions/towards-net-zero>

¹¹ *People powering the future Skilling Queenslanders for the clean transformation* Deloitte Access Economics
www.climatecouncil.org.au/wp-content/uploads/2022/06/DAE-PeoplePoweringtheFuture-2022.pdf

The proposed ANZBC would act as centralising body that would ensure greater cooperation and reduced duplication between the various levels of government. It would monitor the programs not only of the Federal government but also state, territory and local governments.

It would also act as an interlocutor with industry, helping it to better understand how net zero can be achieved and what support can be provided to assist business to transition to these new products and methods.

Addressing carbon emissions in the built environment is not just about investment in the future; there are urgent existing priorities.

In particular, the Australian Building Codes Board (ABCB) requires additional funding to make provisions in the National Construction Code (2025) that require all residential dwellings to operate with net-zero regulated energy. The Trajectory mentioned above also requires additional funding to bring forward milestones and enable timely delivery of the Trajectory for Low Energy Buildings.

Addressing the carbon intensity of the built environment will require extensive expenditure, both private and public. However, the Institute is cognisant of the financial constraints of the current fiscal settings and is therefore not recommending a big spend in this budget (though it will be necessary in future Budget allocations).

With these constraints in mind the Institute recommends that the Minister for Industry and Science establish the ANZBC and to fund it in the 2023/24 Budget as follows:

Recommendation 1.1: \$75m for the establishment and 3 years funding of the ANZBC.

Recommendation 1.2: \$5m for a review to be conducted by the ANZBC into Australia's current built environment and how it is performing under climate change.

Recommendation 1.3: \$5m for a review to be conducted by the ANZBC into technology that can achieve net zero in build environment.

Recommendation 1.4: \$5m for a review to be conducted by the ANZBC into a pathway for Australia to achieve a net zero built environment.

Recommendation 1.5: \$5m for a review to be conducted by the ANZBC into how Australia can become a world leader in Net Zero Built environment and materials.

Recommendation 1.6: \$500m fund overseen by the ANZBC to:

- Fund PhD research positions into Net Zero Building Materials research
- Assist University and TAFE sector to commercialise their research into Net Zero Building Materials
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Recommendation 1.7: \$6 million over three years to fund the Australian Building Codes Board to make provisions in the National Construction Code (2025) that require all new residential dwellings or those undergoing major upgrades to operate with net-zero regulated energy.

Recommendation 1.8: Increase funding to \$25 million per annum for the delivery of the Trajectory for Low Energy Buildings. This will enable the Australian Government to bring forward milestones and enable timely delivery of the Trajectory for Low Energy Buildings. Federal responsibility for the Trajectory should be moved to the ANZBC.

Understanding risks from natural disasters and events

Australia must also enhance the resilience of our built environment to extreme weather events and predicted climate change impacts. Growth in our urban and rural cities means increasing pressures on our natural environment and the crucial ecosystem services they provide (e.g. clean air, cooler urban areas).

These impacts have a great economic cost. As one conservative measure of direct costs, arising as losses from damaging impacts, the Insurance Council of Australia (ICA) had estimated that up to the end of April 2020, the total insured loss from the 2019–20 Black Summers fires to be over \$2.2 billion^{12,13} including the losses resulting from the destruction of 5,900 buildings of which 2,779 were people's homes.

The ICA has also estimated the cost of rebuilding communities following disasters, between November 2019 and April 2020, arising from over 252,000 insurance claims from natural disasters in Australia to be more than \$4.6 billion.

As an indicator of business losses from the shutdown to economic activity brought about by the fires, the Australian Tourism Industry Council had reported¹⁴ these to be almost \$1.0 billion by mid-January 2020 alone¹⁵.

The 2020 Royal Commission into National Natural Disaster Arrangements had noted key evidence that would save lives and deliver a more resilient built environment that is better equipped to face future challenges.

In March 2020, the Council of Australian Governments (COAG) tasked the Building Ministers Forum to consider *'how to adapt the built environment to future climate and hazard conditions'*.

In late 2021 the Australian Building Codes Board agreed to commence a long-term project to review current provisions of the NCC relating to bushfires, cyclones, flooding and heat stress to determine their fitness for purpose having regard to future climate projections and modelling.

How Australia builds and uses land needs to be re-appraised and informed by the best quality evidence that has considered the most recent data about our rapidly changing climate conditions and risks such as fuel loads across Australia. Examples include maps resolved to very local geographic areas¹⁶ for whole of Australia (where permanent habitation occurs) that can better inform current or future recommended local specifications for designing buildings to resist cyclones, terrestrial flooding and rain inundation, wind gusts, extreme heat and bushfire attack as well as the specifications and recommended deployment of personal and community bushfire refuges.

The Australian Climate Service was established in 2021 by the Australian Government with partners including:

- The Bureau of Meteorology (the coordinating partner)
- Geoscience Australia

¹² With the caveat that this was likely to be an under-estimate of the total eventual loss.

¹³ Insurance Council of Australia (2020) [Submission to Royal Commission into National Natural Disaster Arrangements. 28 April 2020.](#)

https://www.insurancecouncil.com.au/assets/submission/2020/2020_04_28_SUB_RC_NNDA%20Consolidated.pdf

¹⁴ iv <https://www.reuters.com/article/us-australia-bushfires-idUSKBN1ZF027>

¹⁵ Though this played out over a much longer time notwithstanding that Covid-19 followed closely at heels of the bushfires.

¹⁶ E.g Statistical Area SA1 See: <https://link.fsdf.org.au/dataset/asgs-statistical-area-level-1>

- The Australian Bureau of Statistics
- CSIRO

They provide a service, *to work with customers to provide data and intelligence to support each phase of the natural disaster continuum; Prevention, Preparedness, Response, Recovery, Relief and Resilience*, to, *improve the range and quality of information available to decision-makers, including:*

- *better access to natural hazard, exposure and vulnerability information*
- *geospatial and location data*
- *a wide range of past, present and future weather and climate data*
- *improved impact modelling and information.*¹⁷

It is critical that this information is made available publicly and freely, especially to local governments as well as designers, planners and developers working with all clients so that resilience is able to be built into the design and location our buildings using the best available data.

Recommendation 1.9: \$50 million to fund the Australian Climate Service to further develop national datasets and detailed maps of natural disaster and climate related events risks across Australia to be freely and publicly available to local governments, designers, planners and developers so that resilience is able to be built into the design and location our buildings using the best available data.

2 AUSTRALIAN GOVERNMENT ARCHITECT'S OFFICE

Recommendation 2: Establish an Australian Government Architects' Office.

Australian and international research provides evidence that good design and architecture leads to improved liveability. Almost all Australians (97 per cent) believe that cities and towns are better to live in when public buildings and public spaces are well designed¹⁸.

Governments are a central influence in delivering on community expectations of how the built environment will support Australian society and economy. In part, this is because governments across Australia are a large procurer of buildings accounting for one third of non-residential buildings¹⁹. In turn, well-designed, liveable places become centres of social and economic activity creating sustainable, long-term returns on initial taxpayer funded investments.

Most Australian states and territories (except Tasmania), maintain the position of a "Government Architect" to provide leadership and independent strategic advice to government in relation to architecture and urban design and a range of specific built environment projects.

¹⁷ Australian Climate Service – Services. <https://www.acs.gov.au/pages/services>

¹⁸ The Benefit of Design, prepared for Architects Accreditation Council of Australia, Galaxy Research, June 2015

¹⁹ A total of \$55.2 billion of non-residential building projects were granted building approvals across Australia in the 12 months to November 2021 with public sector works representing 34% of this total. Building Approvals, Australia November 2021. Sourced from: <https://www.abs.gov.au/statistics/industry/building-and-construction/building-approvalsaustralia/latest-release>

Government Architects also publish or endorse guidance to ensure that governments are able to maximise the opportunity and outcome from the procurement of design services.^{20 21 22 23 24}

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State and local governments are also using government architects to advise on the establishment and operation of design review panels.

Immediate benefits for taxpayers

An Australian government architect's office (AGAO) could act as an advisor to the long-standing Parliamentary Standing Committee on Public Works which reports to the Parliament on each public work referred to it²⁶ about the need, purpose and suitability of proposed works, and their cost-effectiveness, value and revenue returns.

The AGAO could provide an advisory role to a range of government entities such as:

- the Department of Infrastructure, Transport Regional Development and Communications and the Arts in relation to Cities Deals, both in respect of master planning and specific building projects.
- the proposed ANZBC.
- Housing Australia and other statutory bodies
- Defence Housing Australia
- Infrastructure Australia

The AGAO office could develop resources, guidelines and policies that maximise built environment returns on broad parameters such as:

- economic investment
- social and cultural benefit
- environmental sustainability
- supply chain certainty

As recent floods and fires across Australia have shown, the built environment, particularly remote infrastructure faces unprecedented threats. It is important for the government to understand what those threats are and what actions can be taken to mitigate them.

The Institute proposes that the AGAO be tasked with the responsibility to look at the future design needs in Australia as to climate adaptability and resilience to what were previously considered “once in a generation” events that appear to be happening with greater frequency²⁷.

²⁰ See: <https://www.ovga.vic.gov.au/about-OVGA>

²¹ See: <https://www.wa.gov.au/organisation/departments-of-planning-lands-and-heritage/office-of-the-government-architect>

²² See: <https://www.odasa.sa.gov.au/>

²³ See: <https://www.governmentarchitect.nsw.gov.au/>

²⁴ See: <https://www.planning.act.gov.au/about-us/act-government-architect>

²⁵ See: <https://www.epw.qld.gov.au/about/departments/business-areas/building-policy-assetmanagement/architect>

²⁶ Works sponsored by Commonwealth departments and major statutory authorities greater than \$15 million must be referred to the Committee and works of \$2 million to \$15 million must be notified to the Committee prior to tenders being called.

²⁷ Natural disasters and climate risk. T Satherley & Dr D May

https://www.aph.gov.au/About_Parliament/Parliamentary_departments/Parliamentary_Library/pubs/BriefingBook47p/NaturalDisastersClimateRisk#:~:text=Australia%20has%20always%20experienced%20natural.increasing%20as%20climate%20change%20progresses

The Royal Commission into National Natural Disaster Arrangements (RCNNDA) noted that ‘Natural disasters have changed, and ... the nation’s disaster management arrangements must also change’.²⁸

The Royal Commission made a number of recommendations including:

“Recommendation 19.4 National Construction Code

The Australian Building Codes Board, working with other bodies as appropriate, should:

- 1. assess the extent to which AS 3959:2018 Construction of buildings in bushfire-prone areas, and other relevant building standards, are effective in reducing risk from natural hazards to lives and property, and*
- 2. conduct an evaluation as to whether the National Construction Code should be amended to specifically include, as an objective of the code, making buildings more resilient to natural hazards.”*

Infrastructure Australia, in its Advisory Paper 1 – A Pathway to Infrastructure Resilience, noted that there was a need for greater coordination and accountability in building a more resilient infrastructure, noting:

“Achieving infrastructure for resilience requires alignment, coordination and accountability across sectors, agencies and jurisdictions responsible for infrastructure planning, climate management, emergency management, community resilience and land use planning. Currently, actions are often uncoordinated within and across jurisdictions. Aligning and monitoring resilience outcomes will ensure trade-offs and competing interests are better managed, and plans are active and updated as needed to achieve resilience.”²⁹

In effect, Australia needs better designed infrastructure, and the Institute is of the view that the proposed AGAO would be best fit to drive such change at the Federal level, working closely with its State and Territory based counterparts.

The AGAO could also establish the First Nations Architects’ Office (FNAO) within the AGAO to ensure design for First Nations housing and community infrastructure is culturally appropriate and involves local first nations communities in design. The FNAO could also provide a pathway to promote first nations architects. It could also act as an interlocutor between the AGAO and Voice to Parliament once established.

One option for establishing the role or office of an Australian Government Architect is that Housing Australia auspices a government architect at the national level. The Institute has recommended this be given consideration in a recent submission to Treasury on the Housing (Australia) legislative package given that good design and architecture expertise is an important factor for successful social and affordable housing creation. We also noted that a “Head of Architecture” was established in the UK Government in 2019, as an advisor to the Ministry for Housing, Communities and Local Government (MHCLG). From that role, a broader whole of government role remit has developed to provide design advice to other areas of government.

²⁸ *The Royal Commission into National Natural Disaster Arrangements*
<https://naturaldisaster.royalcommission.gov.au/>

²⁹ A Pathway to Infrastructure Resilience <https://www.infrastructureaustralia.gov.au/publications/pathway-infrastructure-resilience-0>

Recommendation 2.1: \$16 million over the next four years to establish an Australian Government Architect's Office to advise the Australian Government and statutory agencies on best ways to achieve high quality, well designed outcomes from government owned or government funded buildings.

Recommendation 2.2: \$2 million in additional funding to the AGAO over the next four years to establish the First Nations Architects' Office to ensure design for First Nations housing and community infrastructure is culturally appropriate and partners with local First Nations communities in design.

3. FIRST NATIONS HOUSING AS A PRIORITY

Recommendation 3: \$4 billion over four years to 2028 to fund a co-designed national housing deal with First Nations communities delivering 8,000 new indigenous social housing dwellings.

Australia is faced with a major housing problem in terms of availability, affordability and accessibility. There is a major shortfall of social housing available for those on low incomes who need housing, especially those who have recently experienced homelessness, family violence or have other special needs. Affordability affects our overall productivity as a nation and the ability of all citizens to participate effectively in the economy.

The Institute appreciates the government's commitment to put \$10bn into the Housing Australia Future Fund (HAFF) to help in addressing housing crisis for vulnerable Australians. However, the Institute see this as a first step rather than the solution to the housing crisis.

The needs of First Nations people are particularly prevalent, and while the HAFF is designed in part to address their needs, the Institute calls on the Government to provide additional financial allocations specifically to address urgent needs within Australia's First Nations communities.

The Australian Institute of Health and Welfare (AIHW)'s Housing assistance in Australia 2021³⁰ report shows that from 2006 to 2020 total social housing dwellings³¹ for indigenous Australians fell from 35,085 to 32,035.

In September 2021 AIHW³², also reported that in 2018-19:

- 1 in 5 (20%) indigenous households were living in dwellings that did not meet an acceptable standard⁴²
- 46% of indigenous households in remote areas and 31% of those in non-remote areas were living in dwellings with at least one major structural problem.
- 9.1% of indigenous households had no access to working facilities for food preparation, 4.5% had no access to working facilities to wash clothes and bedding and 2.8% had no access to working facilities to wash household residents.

The AIHW reported that indigenous Australians living in overcrowded conditions fell from 27% in 2004-05 to 18% in 2018-19. However, the gap has not been closed when compared to the 5% of non-indigenous Australians who live in overcrowded conditions.

Most importantly, a 2022 report by the Australian National Audit Office (ANAO) further noted,

³⁰ Supplementary data tables: Social housing dwellings.

<https://www.aihw.gov.au/reports/housingassistance/housing-assistance-in-australia/data>

³¹ The sum of State Owned and Managed Indigenous Housing and Indigenous Community Housing.

³² Australian Institute of Health and Welfare (2021) Australia's welfare 2021 - Indigenous housing snapshot. Release date 16 Sept 2021. See: <https://www.aihw.gov.au/reports/australiaswelfare/indigenous-housing>

“Overcrowding and poor quality housing are associated with poor health, educational and employment outcomes, and increased family violence. In Australia, the highest levels...occur in remote areas of the Northern Territory (NT)”³³

The 2018 National Housing Survey³⁴ showed that indigenous housing programs are struggling to deliver acceptable housing. The proportion of indigenous households in indigenous social housing programs³⁵ who considered their dwelling to be of an acceptable standard was 70.1% compared to 83.3% for those who resided in non-indigenous social housing programs. The difference was even more marked for those who specifically resided in public housing with only 67% who live in indigenous public housing who considered their dwelling to be of an acceptable standard compared to 82% of indigenous households who residing in non-indigenous public housing.

A recent report on sustainable indigenous housing in regional and remote Australia, prepared by the Australian Housing and Urban Research Institute (AHURI) found that,

‘...attention to climate change is not yet a feature of indigenous housing and infrastructure agreements, with inadequate funding and attention paid to climate preparedness in new builds, refurbishments and retrofit programs.’³⁶

That same report noted,

‘Quantitative analysis of the resilience of existing housing stock ...reveals the inadequacy of existing policy responses for current and anticipatable climate challenges.’³⁷

Addressing design and quality is critical to addressing fitness for purpose and the broader context of housing outcomes in social and economic terms. Poor quality buildings and housing impact the ability to live, work and learn effectively.

Culturally appropriate housing for indigenous (Aboriginal and/or Torres Strait Islander) communities is also vitally important to create healthier, more stable, secure and socially cohesive communities. The use of co-design process and agreed outcomes should support those communities to build and maintain their own housing, maximising the use of the local workforce in those communities who choose to participate. In this way, these remote communities are not continually reliant on external capacity and skills to develop and maintain their housing.

The need for culturally appropriate housing that involves First Nations people in local communities from the inception of any project or initiative is one of the reasons the Institute is also advocating for the creation of a First Nations Architects’ Office within our proposed Australian Government Architects’ Office

³³ Remote Housing in the Northern Territory – ANAO Feb 2022 (<https://www.anao.gov.au/work/performance-audit/remote-housing-the-northern-territory>)

³⁴ Australian Institute of Health and Welfare (2019) Aboriginal and Torres Strait Islander people: a focus report on housing and homelessness. Web report Last updated: 29 Mar 2019 Supplementary tables. See: <https://www.aihw.gov.au/reports/housing-assistance/indigenous-people-focus-housinghomelessness/contents/at-a-glance>

³⁵ Comprising public housing, state owned and managed indigenous housing and community housing

³⁶ Sustainable Indigenous housing in regional and remote Australia -Final Report – Australian Housing and Urban Research Institute Limited (AHURI) Nov 2021 (<https://www.ahuri.edu.au/research/final-reports/368>)

³⁷ As above

At an estimated cost of \$500,000 per dwelling, \$4.0 billion dollars could fund 8,000 dwellings to increase current numbers by 8,000 or 25% from 32,000 dwellings to 40,000 dwellings.

4. ENSURE AUSTRALIA HAS A DIVERSE AND EXPERIENCED ARCHITECT WORKFORCE IN 2030

Recommendation 4: \$80million over 2 years for an employer wage subsidy so that Australian universities' architecture graduates can gain the required employment in a practice under the supervision of a senior architect in order to attain their registration.

Throughout the Covid-19 pandemic, architecture graduates, not yet eligible for registration, have struggled to gain an opportunity to join the architecture profession as supervised 'graduate' employees across many Australian practice. There is a risk of losing an entire cohort of Australian Architects to the pandemic and economic downturn, as well as the investment made by the Australian taxpayer in their five years of university education.

Australia has fewer than 14,000 architects³⁸ registered to practice with the states and territories' registration boards. This represents approximately 0.5 architects per 1000 persons to design not only homes, but buildings across all typologies including schools, health care, commercial, retail, community, recreational, government facilities and transport infrastructure buildings such as train stations, airports and seaport buildings. The shortages of experienced architects have been reported by members. In our 2022 pre-election survey of Institute members, the number one challenge for practices, identified by almost 1 in 6 respondents, was the shortage of experienced staff³⁹.

As Australia undergoes a government led infrastructure and building boom in areas such as schools, health care, new train routes (and their stations) and social and affordable housing, delivery of these buildings requires investment in the workforce of consultants such as architects, specialist engineers, building surveyors, environment and accessibility consultants.

The previous government's October 2020 federal budget focussed on growing the numbers of tradespersons through major subsidies for employers of apprentices. However, it neglected all of the university-trained consultants required to initially plan and design buildings and oversight their construction to their completion including post-occupancy evaluation.

This includes all regulated processes and relevant detailed construction documentation to ensure that buildings are constructed according to their detailed design and are fully compliant with the National Construction Code to achieve the outcome of safe and fit for purpose buildings.

The quantum of consultancy services required to plan, design and deliver buildings is growing as buildings become more complex. State and territory government's planning and building regulators are raising the bar on planning and design regulation to ensure better environmental and social outcomes.

³⁸ This is an estimate taken from boards' 2021 annual reports or current online lists. The current total of registrations across each of the states and territories' boards for architects at the time of preparing submission who are practising is estimated to be 15,598. However it is common practice for many architects to be registered in more than one state or territory for the purposes of undertaking work in more than one jurisdiction. Until National Mutual Recognition legislation becomes operational in most jurisdictions, it is difficult to separate multiple registrations. We believe the ABS occupational data greatly over-estimate the number of architects. An architect can only legally claim to be so if they are registered with a board.

³⁹ Members were asked, 'What is the biggest challenge you face in your practice currently?' Shortage of experienced staff was identified by 15.6% of the 332 respondents to this question.

Governments also seek to protect consumers and clients by reducing building defects and failures with more stringent documentation and certification requirements. They are increasingly requesting digital twins or electronic models of buildings in their final constructed form for long term asset management purposes.

We need to ensure that there are enough architects for our future needs, especially architects who attain their primary registration requirements in Australia and are thoroughly trained to deliver safe, robust and energy efficient buildings to Australian standards and codes requirements.

In broad terms, a person in Australia seeking to become a registered architect is required to complete a three-year architecture undergraduate bachelor's degree and undertake a further two-year architecture Masters degree.

Moving from university graduate to registered architect involves demonstrating application of knowledge and skills in architectural practice as specified in the National Standard of Competency for Architects (NSCA)⁴⁰ which are governed by the Architects Accreditation Council of Australia. Part of this process requires the completion of a minimum of 2 years supervised practice experience (giving rise to 3,300 log-book recorded hours) across a range of architectural practice areas while working for an architect practice.

After this, the graduate is also required to sit oral and written exams conducted by the Architects Registration Board of the relevant state or territory.

This model, which combines learning, on the job and formal education, is analogous to apprenticeship or traineeship programs in other areas of the construction industry, where formal learning and practice are both prerequisite for practitioner registration or licensing.

Supporting first year employment of higher education trained building practitioners

A practical measure announced in the 2020 Federal Budget was the Boosting Apprenticeship Commencements wage subsidies expansion to support employers and Group Training Organisations to take on new apprentices and trainees. The measure delivered a wages subsidy to employers, of up to \$28,000 per annum, as an important economic stimulus measure to help get young people into jobs and keep them as JobKeeper payments were gradually wound back.

A similar program could assist young Australian architecture graduates leaving university, after five years of education, to also get a job and attain registration. It could also similarly be made available to other university-trained consultants such as engineers and surveyors who are required to be employed as graduates in supervised practice prior to attaining full occupational registration, licensing with a government body or full recognition as a member of a relevant professional body.

The award wages of architecture graduates in this supervised paid employment are similar to their construction trades counterparts, indicating the feasibility of using a similar level of subsidy to the Boosting Apprenticeship Commencements wage subsidies.

⁴⁰ See: <https://www.aaca.org.au/the-national-standard-of-competency-for-architects/>

The Australian Institute of Architects has developed a detailed proposal⁴¹ for a subsidy to be paid to the employer of new graduates. The Institute has developed a full proposal with financial modelling. The maximum outlay for one year would be \$40 million⁴² if the initiative were to be taken up at the scale of 1,300⁴³ masters' graduates from the annual graduating cohort seeking immediate employment in a practice.

Our modelling demonstrates that this outlay would generate a return on investment, by the end of the first full fiscal year, of 132%⁴⁴ not including imputed savings to government from the avoidance of unemployment.

Strengthening Women's Participation

Representation of women in the construction sector, at 12%,⁴⁵ is poor despite efforts to improve the situation. By comparison, in the architecture profession, substantially more than 50% of graduates are female⁴⁶. As such, targeted subsidy assistance to employ graduates additionally creates an opportunity to promote women's participation in the combined design and construction sectors.

The Australian Institute of Architect's proposal provides an opportunity to strengthen the active participation of women in the profession and in the building and construction industry.

The National Centre for Vocational Education Research (NCVER) VOCSTATS database shows that females, overall, represent 2.8% of enrolments and 4.4% of course completions for VET Courses for the Construction Trades Workers in the period 2015-19⁴⁷

The AACA annual report on 2020 Accredited Architecture Programs in Australia⁴⁸ provides some comparable statistics. The report notes that in 2020 that 47.98% of 3257 enrolments in the architecture masters' programs and 56.84% of the 1,586 graduates from the masters' programs across the 19 Australian universities were female

Data published by Matthewson⁴⁹ also shows that in 2016-17 women represented:

- 41% of the 2017 admissions to the registers of the states' and territories' Architect Registration Boards (*as per the AACA data quoted above*)

⁴¹ Australian Institute of Architects (2020) Wages Subsidisation for Architect Registration Candidates - Programme Proposal and Background Briefing Australian Government Department of Education, Skills And Employment. See: https://www.architecture.com.au/wp-content/uploads/Institute_briefing_-to-DESE_on_graduate_employment-subsidy_FINAL_20201120.pdf

⁴² The original proposal calculated in November 2020 noted to be \$36.4m

⁴³ There were 1,586 graduates in 2020 of which 49.75% were international students. Many international students remain to complete the Architect Practice Exam and gain their registration in an Australian jurisdiction.

⁴⁴ This is based on the employer outlay for wages at award rates and the combined income tax and Medicare levy paid by the employed graduates.

⁴⁵ TIME TO ATTRACT WOMEN TO CONSTRUCT Australian Construction Association

<https://www.constructors.com.au/time-to-attract-women-to-construct/#:~:text=Just%2012%20per%20cent%20of,to%20deliver%20Australia's%20project%20pipeline>.

⁴⁶ According to the Annual Report on 2020 Accredited Architecture Programs in Australia. Architects Accreditation Council of Australia, 56.84% of graduates from the Masters programs in 2020 were female. See:

<https://aaca.org.au/wp-content/uploads/Annual-Report-on-2020-Accredited-Architecture-Programs.pdf>

⁴⁷ Data sourced from: <https://www.ncver.edu.au/research-and-statistics/data/databuilder#total-vet-students-courses> on 12-11-20

⁴⁸ December 2019. Sourced from <https://www.aaca.org.au/wp-content/uploads/Annual-Report-on-2018-Accredited-Architecture-Programs.pdf>

⁴⁹ Parlour Census Report published October 23rd, 2018 revised 5 November 2018 See: <https://archiparlour.org/> Parlour is a research-based advocacy organisation working to improve gender equity in architecture and the built environment professions

- 26.2% of 11,688 registered architects⁵⁰ (in 2016) in Australia were women.

However, Matthewson also noted that,

“More women than men are not converting their degrees into architecture careers and are leaving the profession very soon after graduating.” (ibid)

This comparative data highlights that architecture is an important profession to focus attention as an opportunity to promote economic inclusion for women. Wages subsidies that enable women who graduate with an architecture master's degree and gain employment in practice will increase the probability that these women progress to registration and onto a professional career in the design and construction sector.

5. MAKE PUBLIC BUILDINGS ACCESSIBLE FOR PEOPLE WITH DISABILITIES

Recommendation 5: Commit funding of \$150 million over three years for a national upgrade program to retrofit existing public use and community buildings and infrastructure to be accessible by people with disabilities.

There are government schemes to subsidise the retrofitting of measures to improve energy and water efficiency (and production/ harvesting) for Australian homes and businesses. However there does not appear to be a similar subsidy scheme for retrofitting improvements to the accessibility of buildings, in particular, non-residential buildings, and non-government buildings, consistent with a universal design approach. A nationally led subsidy scheme to retrofit buildings is needed to ensure access to all publicly buildings for all Australians.

Australia needs to ensure that new and upgraded buildings and infrastructure such as train stations, transport hubs and airports are easy to access and adaptable. This measure enhances quality of life for occupants of homes and social and economic inclusion for users of all commercial, public and infrastructure buildings.

One important lever to do this is the powerful effect of embodying design and construction requirements in the National Construction Code (NCC) to improve building accessibility.

The NCC is being strengthened through provisions such as livable housing design provisions⁵¹, and *new buildings* will be better placed to deliver the inclusivity and accessibility outcomes that had been envisaged by the National Disability Strategy.

At the same time, Specialist Disability Accommodation (SDA) funding is now paid to eligible National Disability Insurance Scheme (NDIS) participants through their NDIS funding plan. SDA funding is paid if a participant has extreme functional impairment and/or very high support needs and therefore requires specialist housing solutions for construction and/or modifications. The NDIS has published a set of SDA Design Standards and rules requiring the use of SDA assessors to confirm that the design and or final-as-built dwelling is compliant with the SDA Design Standard⁵².

⁵⁰ Adjusted down to remove duplication of those architects registered in more than one jurisdiction.

⁵¹ Part H8 – Livable housing design of National Construction Code 2022 Vol 2. See:

<https://ncc.abcb.gov.au/editions/ncc-2022/preview/volume-two/preface/introduction-ncc-volume-two>

⁵² <https://www.ndis.gov.au/providers/housing-and-living-supports-and-services/specialist-disability-accommodation/sda-design-standard>

However, neither of these improvements addresses the issues of other *existing non-residential dwelling* buildings in the community that people with disabilities may need to access regularly for work, study, recreation, civic participation, shopping, business or transportation. The National Disability Strategy, while identifying the need to create accessible housing, also sought to apply the principle of a Universal Design approach.,

“Taking a universal design approach to programs, services and facilities is an effective way to remove barriers that exclude people with disability. Universal design allows everyone, to the greatest extent possible, and regardless of age or disability, to use buildings, transport, products and services without the need for specialised or adapted features.”
(p30, *ibid*)

In policy terms, this is of national significance. In 2010, all States and Territories in Australia, together with the Federal Government, were signatories to the National Disability Strategy 2010–20. This Strategy has seen the creation of the NDIS.

The National Disability Strategy has six outcomes' areas. Outcome 1, *“Inclusive and accessible community”* brought about the creation of the Disability (Access to Premises – Buildings) Standards 2010 as subordinate legislation to the Disability Discrimination Act 1992.

The guiding principles of the ‘Premises Standards’ are the objects of the Disability Discrimination Act 1992 (Cth) (DDA). A complaint can be made to the Australian Human Rights Commission (AHRC) against a party under the DDA in relation to those matters covered by the Premises Standards⁵³.

We note that the Australian Government Department of Industry, Science, Energy and Resources undertook a review of the Disability (Access to Premises – Buildings) Standards 2010 (Premises Standards) in 2021. The Institute made a detailed submission⁵⁴ to this review.

The review identified ‘consistency and clarity’ of the standards among a number of the key themes of its findings⁵⁵, noting that,

“Due to differences in amendment timing, the potential for misalignment between the Premises Standards and the NCC is a concern. This misalignment could cause inconsistency in provisions and confusion for building professionals and government officials. This could make it difficult for people to comply with their obligations under the Disability Discrimination Act.” (*ibid*)

The Institute notes the AHRC’s *Guideline on the Application of the Premises Standards Version 2 February 2013* is now a decade old.

The Premises Standards Review 2021 has identified among its “opportunities for action”, regulatory reform including,

“Action 2a

Update the Australian Human Rights Commission (AHRC) Guideline on the application of the Premises Standards to ensure people understand their rights and responsibilities under the Premises Standards

⁵³ Guidelines on the Application of the Premises Standards Version 2 February 2013 from

<https://humanrights.gov.au/our-work/disability-rights/guidelines-application-premises-standards>)

⁵⁴ https://www.architecture.com.au/wp-content/uploads/Australian-Institute-of-Architects-Submission-to-DISER-on-DDA-Access-to-Premises_May_2021_FINAL.pdf

⁵⁵ <https://www.industry.gov.au/publications/premises-standards-review-2021/key-themes-emerging-review>

Action 2b

Develop guidance to address new and emerging issues identified by stakeholders during the review, which impact their access to buildings or ability to comply with the Premises Standards.

Action 4b

Implement a process to more quickly align disability standards and the National Construction Code.” (ibid).

Recommendation 5.1: Implement Actions 2b, 2b and 4b of the Premises Standards Review 2021 to update the Australian Human Rights Commission’s Guideline on the application of the Premises Standards, and develop further guidance to improve access to buildings, assist standards’ compliance and consistency of disability standards with the National Construction Code.

