



Australian Institute of
Landscape Architects

Committee on the Environment and Energy
PO Box 6021
Parliament House
Canberra ACT 2600

27 November 2020

Dear Committee Chair

RE: Submission to the House Standing Committee on the Environment and Energy in respect of the Climate Change (National Framework for Adaptation and Mitigation) Bill 2020 and the Climate Change (National Framework for Adaptation and Mitigation) (Consequential and Transitional Provisions) Bill 2020

Thank you for the opportunity to make a submission on the Proposed Climate Change (National Framework for Adaptation and Mitigation) Bill 2020. As CEO of the Australian Institute of Landscape Architects, we see this as an important step aligned to our Paris Agreement obligations. This Bill presents the opportunity to dramatically improve the quality of our built environment through its clear 2050 net zero target, and its strong risk- based assessment approach and inclusion of technology.

About the Australian Institute of Landscape Architects

The Australian Institute of Landscape Architects (AILA) is the peak national body for Landscape Architecture. AILA champions quality design for public open spaces, stronger communities, and greater environmental stewardship. We provide our members with training, recognition, and a community of practice to share knowledge, ideas, and action.

With our members, we anticipate and develop a leading position on issues of concern in landscape architecture. Alongside government and allied professions, we work to improve the design, planning and management of the natural and built environment.

In operation since 1966, AILA currently represents over 3,500 landscape architects and promotes excellence in planning and designing for life outdoors. Committed to designing and creating a better Australia, landscape architects have the skills and expertise to improve the nation's liveability through a unique approach to planning issues via integrated design solutions. In doing so, landscape architects contribute towards better environmental, social and economic outcomes for all Australians.

AILA is currently asking its members to pursue not just a net zero target, but a climate positive target for their projects. This is where our projects sequester more greenhouse gases than they emit over their lifetimes – refer to our [Climate positive design position statement](#).

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AILA fully supports this bill

As one of the 100 organisations that put our name to this Bill, The Australian Institute of Landscape Architects fully supports the introduction of this bill.

We support the Bill's objects and long-term emissions reduction commitment

The landscape architecture community in Australia has overwhelmingly supported AILA's commitment to this Bill. This is demonstrated through AILA'S Climate and Biodiversity Loss Emergency Declaration, Climate Positive Design and Green Infrastructure position statements.

We fully support the objects of the proposed Act as they are in line with the current best scientific advice and our international obligations, including Paris and Kyoto, to which we are signatories.

A target date of 2050 for full net zero is essential for us to limit the worst of what is anticipated for Australia. As we write this response, the Bureau of Meteorology has a three-day forecast for severe and extreme heatwave assessments for large parts of Australia. Australia presently sits at approximately 1.44 degrees above pre-industrial levels [1. *CSIRO state of the Climate*]; so 3 degrees and 5 degrees above will be simply devastating to Australia.

As a member organisation largely made up of small and medium enterprises, landscape architects see this Bill as a business opportunity. AILA members embrace the need to set ambitious emissions reduction targets, to plan for adaptation and ready our community for change.

Why a Net Zero target is essential

AILA members support a legally enforceable net-zero target by 2050. Landscape architects will continue to play an essential role in planning and public space design innovation going forward.

Without the certainty provided by a net-zero target, and one that is consistent with all states and territories, investment signals to the market will continue to evade coordinated investment in the development industry. It is time for Australia to become leaders rather than continue to be laggards in the climate transition toward net zero of the global economy. Without targets, uncertainty will prevail.

We support the regular five yearly budgeted risk assessment and adaptation plans

AILA supports regular, measurable risk assessment and adaptation plans. 2020 has shown that economic shocks will continue to result from unanticipated and unprecedented global emergencies.

Adopting a risk based, adaptive approach to planning and development will allow industry to respond with innovative solutions to what will become ever increasing climate problems.

Five-year budget horizons will give industry sufficient investment certainty and allows for technology we have not yet invented. It allows for future reductions in the cost of solutions not yet anticipated.



Five-year targets mean that climate planning is decoupled from the three year election cycle allowing for business and decision makers to better anticipate and respond to future challenges.

Ensuring that the guiding principles are applied

Climate change is not fair. It does not discriminate, and unfortunately, those likely to be most affected by climate change are the least responsible for it. The guiding principles in the document provide for; efficient and informed decision making, fair employment transition, fairness to Australians social and economic differences, and the need to minimise the economic burden to future generations for not acting now. We would however like to see an additional principle.

As stewards of the landscape we would ask that an additional guiding principle be applied, namely:

Protection of the environment and the precautionary principle.

We see this as being essential to the long-term health of our environment for the right to clean air, access to clean water, and the protection of our biodiversity. From the bees that pollinate our food crops, to the trees that provide fresh oxygen, to the reefs that provide essential lifecycle habitat for our commercial fish stock, biodiversity and a healthy environment, all are interlinked to our well-being as human beings. It is essential that the guiding principles of the Climate Change Act, will support, recover and enhance the state of our environment and not destroy it in the process.

Landscape architects primarily design and develop public spaces; to be shared by all citizens. By its very nature landscape architecture is concerned with principles of justice and equity. Actions taken by the government to achieve net zero emissions must be equitable in order to be truly efficient and fiscally responsible. Policy decisions must be guided by international as well as national agendas.

AILA is a leader in the Asia Pacific Region in terms of green infrastructure innovation and climate responsive design practice. As an industry body, AILA is calling on the Australian Government to demonstrate the same leadership in helping nations more vulnerable than ours.

The importance of Risk and adaptation assessments for the built environment

As landscape architects working in the built environment we are already seeing the effects of global warming on the liveability of our cities. On the 7th of January 2018, Penrith in Sydney's Western Suburbs was the hottest city on the planet – at 47.3 degrees [2]. We had a similar temperature January 2019. This is projected to get much worse, as conditions throughout Australia this week attest.

Adopting a risk reduction framework for decision-making can significantly reduce vulnerability, improve adaptability, and in doing so, enhance the resilience of communities. Some of the risks faced by communities are slow moving but lead to chronic and irreversible changes to the quality of life in our cities and regions.

Green infrastructure planning, urban forest audits and tree canopy targets are cost effective long-

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term solutions that can be deployed and funded with the right policy signals and resourcing. Such projects require a collaborative spirit and a holistic understanding of the nature of the challenge. Landscape Architecture is best placed to implement effective, equitable and cost efficient environmental and socially just solutions.

By way of example landscape architects across Australia are working with local councils to ensure the damaging consequences of urban heat island effect are mitigated. We see the urgent need to mitigate the health risks of rising temperatures now and into the next thirty years so the adverse effects are not borne disproportionately by vulnerable communities who are least able to adapt.

Urban tree cover is an essential part of this, but trees take time to grow and urban trees are far more complicated and costly to install than a tree in a park. Where we are retrofitting new urban trees, we must manage services, and provide engineered structural solutions to support friable soil under pedestrian and road pavements. We need drainage to ensure the tree pits don't become waterlogged. All of this can get quite expensive and a clear national policy would provide the right driver to enable these trees to be planted properly now so they are effective by 2050 and onwards.

Many of our members are working at the interface of our urban cities. Other than Canberra all of our major urban cities are built adjacent the tidal edge of our oceans and major tidal rivers, including the Yarra, Swan and Parramatta Rivers.

Huge extents of land in our cities are vulnerable to sea level rise and our members are having to plan for these eventualities. Hard edged urban environments are going to be difficult to reconfigure and risk assessment and planning is essential now, given the long timeframe and likely cost to lift or protect crucial areas from rising sea levels.

Some areas are already being impacted by the highest astronomical tides. In some cases, like a river front sports field, we can lift the fields relatively simply, but where there are existing tree and other infrastructure the task becomes considerably more complex and expensive.

Planting new trees to provide urban shade must take into consideration risk assessments. A Moreton Bay Fig tree that will mature in 100 years needs to be planted in a location now that ensures its root zone won't be effected by rising salt water table and it will be killed prematurely.

AILA support this bill because the opportunities for productivity improvement, jobs and wider economic benefits are critical to Australia's post COVID19 recovery.

The importance of technology readiness assessment of the built environment

AILA supports the input of technology in the Bill. While the current technology investment roadmap has soil carbon as a component, it has not really addressed the built environment in any real way. The land sector and built environment offer large opportunities to reduced greenhouse gas (GHG) emissions. It is estimated that cities account for up to 60-70% of GHG emissions [3] and concrete for 5-7% GHG emissions [4]. We are anticipating that the technology investment roadmap will be



progressively updated and include more of the built environment.

We see lots of opportunities for investment and job creation in technology not just to understand our changing climate but to manage and plan our urban landscapes to reduce the embodied emissions they contribute with new materials and technology.

AILA is asking our members to be climate positive with their projects. Climate Positive Design sequesters more greenhouse gasses than it emits. The biggest emissions from landscape architects designed projects are from embodied CO₂ in concrete, steel and aluminium in their construction. The built environment sector urgently needs low embodied materials for construction.

AILA is currently partnering with the World Wildlife Fund and Lendlease in developing a buyers' market for low carbon products. This is aimed at driving technology and supply change in these high carbon product areas. We are very keen to support manufacturers who develop ultra-low carbon concrete and make green steel and green aluminium in Australia. All require substantial technological investment. This bill would provide certainty and direction for the market to invest in these products.

As landscape architects we regularly deal in large scale planning and mapping. Aerial mapping, 3D photogrammetry, and LIDAR mapping are all proving very useful technologies for assessing our work. For example many councils are starting to consider setting minimum tree canopy cover targets [5]. GIS based mapping and technology are vital to the efficient flow of this work. Automated change assessment is transforming the way we can understand what is happening in the real world. This technology allows us to focus upon decision making, guidelines and outcomes.

We already rely on large spatially accurate data sets and the technology to collect this, automate this mapping is going to be vital to our ability as land managers to plan for the future.

As stewards of the landscape we see huge opportunities for Indigenous cultural land management and fire management knowledge benefit to Australia to manage our land. We see significant job creation opportunities with this type of technology transfer, as well as physically being on country to manage it properly. This is a complex area that takes a great deal of skill and time.

We are concerned that Australia will be left behind in the low carbon technology race and AILA fully supports the wider inclusion of technology assessments and the future expansion of the technology investment roadmap as part of the proposed Climate Change Bill.

Independent climate change commission and skills needed on the commission.

We completely support a National Climate Change Commission that is fully independent of Government. We see the importance of an independent climate change commission as being able to carry out the following:



- Provide independent expert advice for the purposes of evidence-based decision-making on relevant project assessments, strategic assessments and adaptive plans required including evaluating, compliance and enforcement activities under the Climate Act;
- Undertaking and reporting on performance audits, to assess the level of compliance with the Act by particular industry sectors or by region;
- Preparing other reports and providing other advice to the Minister when requested, and
- Manage the provision of data and information and reporting on relevant information pertaining to achieving zero-emissions by 2050.

AILA is asking that the Commission Chair must:

- Be independent of the Government
- Not able to have their determinations overruled by a Minister
- Be able to hold a 5-year tenure as this provides rotation of expertise and it decouples the commission chair from the electoral cycle
- Preferably have strong environmental credentials and understanding of climate issues
- Be supported by a CEO and staff who are able to demonstrate that they do not have links to the fossil fuel industry or are or have been a lobbyist for the fossil fuel industry.

This needs to be a conscience vote by MP's

We ask that MP's be allowed to fully represent their electorate by allowing a conscience vote on this Bill. The issue of climate change is not Liberal, labour, Green, or Independent - but Australian. We are concerned about our collective future.

Attending the inquiry

The Australian Institute of Landscape Architects would be happy to make a representation to the committee. We could address issues facing the built environment and the opportunities this bill presents to improve the liveability of the public realm of our Australian Cities and towns. I would be supported by the chair of our Climate Positive Design working group.

Thank you again for the opportunity to submit and if you have any questions or queries about our submission, feel free to call me to discuss.

Yours Faithfully

A handwritten signature in black ink, appearing to read 'BSA', followed by a horizontal line.

Ben Stockwin

Chief Executive Officer

Martin O'Dea

Climate Positive Design Working Group Chair



REFERENCES

[1] CSIRO. State of the Climate 2020.

<https://www.csiro.au/en/Showcase/state-of-the-climate>

[2] McInnes, W. 2018. Sydney clocks the hottest place on Earth as hot weather continues. Sydney Morning Herald. 8 January 2018.

<https://www.smh.com.au/environment/weather/sydney-clocks-the-hottest-place-on-earth-as-hot-weather-continues-20180108-h0etl6.html> accessed 29/07/2018

[3] United Nations. Cities and Climate Change: Global Report on Human Settlements 2011.

http://mirror.unhabitat.org/downloads/docs/E_Hot_Cities.pdf

[4] New Scientist - CO2 emissions from Cement.

<https://www.newscientist.com/article/2185217-the-future-with-lower-carbon-concrete/>

[5] Technology assisting landscape architects with decision making around tree canopy assessment. See: <https://aerometrex.com.au/resources/blog/urban-tree-canopy-management-and-lidar/>



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