

# 4 Steps Towards a Greener Future

**A Carbon Warrior  
Policy Proposal 2022**

**PREPARED BY  
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## Policy Proposal

Australia needs to do more in the fight against climate change. We cannot continue to lag at the back of the pack of OECD countries on climate action.

Together, building operations and construction account for nearly 40% of global energy related CO2 emissions.

We need urgent climate action within the built environment if the world is to slow down the effects of climate change and reach the targets set out in the Paris Agreement.

By taking simple steps, such as using more renewable materials like wood, the built environment can significantly help reduce carbon emissions and help tackle climate change.

Australians deserve better and we call on all levels of Government to act now, by introducing policies which will help minimise the negative impacts of the built environment, whilst working towards a greener future for all.





# 4 Steps Towards a Greener Future

## 1. Implement Mandatory Life Cycle Carbon Calculation and Reporting

Require all new building projects to calculate and record their life-cycle carbon emissions using a standardised method that distinguishes between embodied and operational carbon.

Having a calculation and reporting requirement develops familiarity with the methodology and establishes the path for future regulatory restrictions, like Step 2 of this Carbon Warrior policy. It also collects data that can be used to set the future regulatory limits.

## 2. Set Embodied Carbon Targets

Set targets for overall embodied carbon of new building projects.

Specific targets should be imposed for material efficiency, energy efficiency of production, and decarbonisation technologies, with a focus on the primary materials used in construction, such as cement and steel, while supporting low-carbon and nature-based solutions, like wood.

Having clear embodied carbon targets as requirements for new builds ensure that developers and investors include those targets in their design briefs to designers. As a result, designers will begin to work towards those targets early in the design, avoiding high carbon solutions and recognising carbon reduction opportunities as a part of the overall design process.

### 3. Invest in Renewable Materials

Investing in renewable materials ensures that the built environment can have a sustainable and positive future.

Renewable materials including wood products and other bio-based materials like bamboo and hemp provide possibilities for capturing and storing carbon sequestered during growth – known as biogenic carbon. Responsible and managed harvesting – ensuring trees are replanted – has the potential to make a significant contribution to decarbonisation efforts, as well as the potential to increase soil carbon sequestration and mitigate human rights concerns and biodiversity loss. In addition to the carbon sequestration abilities of bio-based materials, the related embodied carbon is much less than other more carbon-intensive materials like concrete and steel.

Australia's total plantation area has decreased since 2008. As the built environment attempts to minimise the negative impacts of the sector, the demand for renewable materials has increased. The demand will only grow in the future as more switch to renewable building materials. Without a significant renewable material supply, the built environment will not be able to sufficiently decarbonise buildings and help tackle climate change.



### 4. Set Requirements for Bio-Based Materials

Introduce regulations requiring that new buildings are built predominately with wood or other bio-based materials.

This could be done by requiring a minimum amount of renewable materials in a new building, for example at least 50% of all new public buildings must be wood or other bio-based materials. Alternatively, regulations could require that the primary structural frame of a building must be built with wood or other biomaterials.

Setting specific requirements for use of wood or bio-sourced materials leads to increasing carbon storage. Furthermore, regulations ensuring sustainable sources for wood, leads to reduced embodied carbon emissions.





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# Let's Create a Greener Future

In the latest Climate Change Performance Index, Australia ranked last on climate policy and was the only country to receive a zero in that category. Unlike Australia, many of the leading countries have sustainable construction policies in place requiring the use of renewable materials.

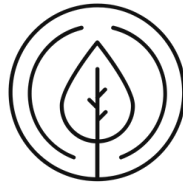
- Last year, Denmark agreed on a national strategy for sustainable construction, introducing CO2 requirements for new building projects and was the top-performing country in the 2021 Climate Change Performance Index.
- France, a leader in climate action, introduced a sustainability law that will require all new public buildings to be constructed with at least 50% wood or other natural materials.
- Recently, the City of Amsterdam signed the Green Deal Timber Construction, which mandates that 20% of all new housing projects in the Dutch capital must be constructed with wood or other bio-based materials from 2025. This decision comes as the city aims to achieve climate neutrality by 2050.
- The City of Helsinki in Finland has material requirements in several district zoning projects. The district zone of Honkasuo is a new community that utilises wood to the fullest as all local buildings are made of wood – now and in the future. Other zoning regulations in Honkasuo, require buildings to have a primarily wooden structure and to apply the principles of low-energy construction.

It is time to learn from these leading countries and introduce sustainable construction policies now.

The four steps of this policy recognise the importance of renewable materials like wood in the fight against climate change and help the built environment reduce carbon emissions. Furthermore, by investing in a greener future, you are investing in green jobs.

Urgent climate action is needed now, and these four steps should be adopted as we work towards a greener future. Australia's future depends on it.

**Be a Carbon Warrior today and help create a greener future.**



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## References

In addition to several other individual publications, the following resources in particular have been used extensively in the preparation of this policy proposal.

Carbon Neutral Cities Alliance, One Click LCA Ltd (2021): City Policy Framework for Dramatically Reducing Embodied Carbon.

Dr. Renée Kerkvliet-Hermans (2020): Wood in construction, a policy and data summary.

GlobalABC, IEA, UNEP (Global Alliance for Buildings and Construction, International Energy Agency, and the United Nations Environment Programme) (2020): GlobalABC Roadmap for Buildings and Construction: Towards a zero-emission, efficient and resilient buildings and construction sector, IEA, Paris.

World Green Building Council (2019): Bringing embodied carbon upfront: Coordinated action for the building and construction sector to tackle embodied carbon.

## About Carbon Warrior

Carbon Warrior is a project by the Frame & Truss Manufacturer's Association of Australia aiming to create a greener future by minimising the negative impacts the building and construction sector has on climate change.

## Contact Us

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