

Industry Engagement Team
Infrastructure NSW

Via email: industry@infrastructure.nsw.gov.au

Monday 28 November 2022

Dear Industry Engagement Team

Re: Decarbonising infrastructure delivery discussion paper

Green Building Council of Australia (GBCA) congratulates Infrastructure NSW (INSW) on the release of the discussion paper, *Decarbonising infrastructure delivery*. We commend and support the key principles detailed within the paper and appreciate the opportunity to provide comment.

GBCA's purpose is to lead the sustainable transformation of the built environment. We do this primarily through our core functions:

- We rate the sustainability of buildings, fitouts and communities through Australia's largest national, voluntary, holistic rating system – Green Star.
- We educate industry, government practitioners and decision-makers, and promote green building programs, technologies, design practices and operations.
- We advocate policies and programs that support our vision and purpose.
- We collaborate with our members and other stakeholders to achieve our mission and strategic objectives.

Green Star is Australia's most widely used sustainability rating system for the design, construction and performance of buildings – including social infrastructure – fitouts and communities. Green Star aims to transform the built environment by:

- reducing the impact of climate change
- enhancing our health and quality of life
- restoring and protecting our planet's biodiversity and ecosystems
- driving resilient outcomes for buildings, fitouts, and communities
- contributing to market transformation and a sustainable economy.

The proposed actions within the discussion paper demonstrate inspiring leadership by INSW and the NSW Government. As the paper identifies, there are already a number of policies and initiatives in place or in development within NSW Government to support emissions reductions. INSW has an opportunity to harmonise these and lead a more consistent approach to project planning, procurement and delivery that will result in better outcomes across government and industry. GBCA applauds this work and welcomes the opportunity to support these outcomes wherever possible.

We also note that GBCA is currently working with Infrastructure WA and the Queensland government as they work on similar considerations regarding embodied carbon in infrastructure planning, procurement and delivery. We are encouraged to see growing momentum for reducing embodied carbon in our built environment and urge all jurisdictions to seize opportunities for alignment and coordination.

Should you require any further information, or to arrange further consultation, please do not hesitate to contact Katy Dean, Policy Adviser, via email at katy.dean@gbca.org.au.

Yours sincerely

A handwritten signature in black ink that reads "D. Rooney". The signature is written in a cursive style with a large, looped initial "D".

Davina Rooney
Chief Executive
Green Building Council of Australia

GBCA offers feedback on the following principles detailed in the *Decarbonising infrastructure delivery* discussion paper:

1. Use consistent methods and data

GBCA agrees with INSW that developing a consistent approach to measuring embodied emissions will be critical in making progress on emissions reduction.

We commend INSW on its commitment to work with infrastructure agencies to agree a whole-of-government approach to the use of embodied carbon calculators. This approach should ensure consistency, maximise opportunities for harmonising useful resources and work underway, and allow flexibility for emerging innovation. Any approach should also reference the Infrastructure Sustainability (IS) and Green Star rating systems wherever appropriate. These rating tools are developed for industry, by industry, and make use of and/or develop best practice benchmarks that are regularly reviewed and updated. Use of these rating systems for appropriate projects will encourage consistency and continue to build on existing industry capacity.

The discussion paper notes the NABERS-led project currently underway to develop an embodied emissions framework for buildings. GBCA is working with NABERS and other key stakeholders on the development of this framework. We welcome the opportunity to provide input to other processes and initiatives identified as part of INSW's focus on measuring embodied emissions.

2. Reduce embodied carbon from options analysis and early design stages

GBCA supports the actions identified within the discussion paper to reduce embodied carbon from the very earliest stages of project planning and design. These are:

- consider options for non-build solutions or augmentation of existing assets
- establish a business-as-usual (BAU) carbon baseline and setting a minimum target for emissions reduction from the earliest design phase
- engage with industry as early as possible on low emission designs and approaches
- maximise use of recycled and low emissions building materials where possible and regularly reviewing whether standards are constraints.

GBCA agrees that these are all critical steps in reducing and/or avoiding embodied carbon in infrastructure delivery. While Green Star is primarily focused on rating buildings, there are many aspects of the rating tools that may be useful references for larger infrastructure delivery. We invite INSW to consider Green Star-certified projects as examples of ways in which these actions can be embedded in project planning and delivery.

Green Star has always recognised and rewarded projects which consider reuse of existing structure, façade and materials, and the use of responsible/recycled materials. In 2021, GBCA updated [A climate positive roadmap for the built environment](#), which sets a trajectory for Green Star to ensure that all buildings and communities certified with the rating tool will ultimately become climate positive. The targets for embodied carbon in new buildings are a 40% reduction in embodied carbon by 2030, and zero embodied carbon by 2050. Green Star Buildings was the first Green Star rating tool to be updated and redesigned in line with the roadmap, but new versions of all Green Star rating tools will be released over the next several years.

Green Star Buildings rewards reduced embodied carbon through several credits. The *Reducing upfront carbon emissions* credit has been introduced as a minimum requirement. The *Life cycle impacts* credit rewards projects that consider the resource impacts over the whole lifespan of a building.

The Green Star Buildings submission guidelines also provides guidance on the stage of the project when credits should be considered – for example, strategy, brief, concept, design, tender and construction – to encourage project teams to consider and embed decision-making for considerations such as embodied carbon as early as possible.

Over the past 20 years, Green Star has played an instrumental role in driving the demand and supply of sustainable building products in Australia. We are committed to doing even more to help transform the supply chain so that it delivers transparent, healthy, low-impact, and net zero carbon products that are part of a circular economy. GBCA is currently enhancing its Responsible Products Framework that outlines criteria for scoring how 'responsible' a product is, and to support the built environment industry in adapting to and driving this change.

Credits within Green Star include *Responsible procurement*, *Responsible structure*, *Responsible envelope*, *Responsible systems*, and *Responsible finishes* and Leadership Challenges within Green Star that focus on circular economy and responsible products reward projects that go above and beyond current Green Star benchmarks.

We encourage INSW and the NSW Government to consider the full range of circular economy principles and benefits in the development of the proposed actions and outcomes. GBCA is committed to working with government and industry stakeholders to progress circular economy outcomes and consideration of embodied carbon such as NABERS, Circular Australia, Materials and Embodied Carbon Leaders Alliance (MECLA) and Property Council of Australia. We note a project we are currently leading on behalf of the South Australian government to identify opportunities and barriers for advancing a circular economy in the built environment. A [discussion paper](#) was released in October and an Action Plan will be released in early 2023. We encourage collaboration with these stakeholders and others wherever possible to advance progress in this area.

3. Account for embodied emissions in business cases

As identified in the discussion paper, a fundamental barrier to reducing embodied carbon is its lack of value in the business case for any project. Many within industry and government have been calling for consistent cost benefit- analysis and business case processes to better consider carbon and mitigation efforts. GBCA commends INSW in its commitment to work with NSW Treasury and other agencies to develop a consistent approach to valuing carbon and including carbon reduction and management plans in the business case for infrastructure projects, as well as exploring how carbon reporting can be embedded in relevant regulations and policies.

4. Establish minimum requirements for reducing embodied emissions in tenders

GBCA commends INSW's commitment to setting minimum requirements for reducing embodied emissions and updating standard contracts to enforce carbon reductions.

Government procurement is a powerful tool for positive change in the supply chain. An agreed, consistent approach to valuing embodied carbon reduction in infrastructure delivery sends a clear message to industry and creates certainty for the supply chain. This will in turn, lead to increased investment in supply of low emissions products and materials.

GBCA notes Transport for NSW's (TfNSW) plans to make its Sustainability Management Plans weighted, non-price criteria in the tender assessment process, and for final plans to be incorporated into the contract. This sends a clear signal to the market and will encourage sustainability considerations to be integrated from the earliest stages of project planning. Plans to require regular reporting against these requirements will keep all parties accountable and should help to identify any challenges and barriers as early as possible.

5. Evaluate tenderer performance on embodied emissions reduction

GBCA commends INSW's proposed actions to assess embodied emissions performance reduction measures as part of tender criteria and as part of Contractor Performance Reporting. As noted above, TfNSW plans to require regular reporting against key sustainability requirements to keep all parties accountable and to help identify any challenges and barriers.

6. Improve education and capability on carbon reduction across the asset lifecycle

GBCA agrees with INSW that professional development, training and other resources will be critical to ensuring agencies can address gaps in capability as well as other barriers to decarbonising infrastructure delivery. Over the past 20 years, GBCA has played an important role in educating industry on

innumerable aspects of sustainability. Last year, in partnership with thinkstep-anz, GBCA released [Embodied carbon and embodied energy in Australia's buildings](#). We have delivered a range of education and training opportunities related to understanding and reducing embodied carbon. We currently offer an Embodied Carbon Masterclass and would welcome the opportunity to work with INSW to provide training opportunities for INSW staff and others within NSW Government, as well as industry.

GBCA commends INSW's commitment to ongoing collaboration between key government agencies and industry to build skills and capacity. We welcome the opportunity to play a role in bringing together stakeholders and in sharing experience and knowledge to raise the collective capacity of the whole industry.