

29 April 2021

Abbie Galvin  
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Department of Planning, Industry and Environment  
PARRAMATTA NSW 2124

Via email [Designandplacessepp@planning.nsw.gov.au](mailto:Designandplacessepp@planning.nsw.gov.au)

Dear Ms Galvin,

### **GBCA RESPONSE TO DESIGN AND PLACE SEPP EIE**

Green Building Council of Australia (GBCA) welcomes the opportunity to provide comments to the Government Architect on the Explanation of Intended Effect of the proposed Design and Place State Environmental Planning Policy (Design and Place SEPP).

GBCA is an industry association for Australia's sustainable development sector, with a mission to drive the creation of more sustainable, liveable cities and communities. Our mission is to create healthy, resilient and positive places for people and the environment, by leading the sustainable transformation of Australia's built environment. GBCA represents 500 plus individual companies with a collective annual turnover of more than \$40 billion. Our membership represents the diversity of Australian business, including major developers, professional services firms, banks, superannuation funds, product manufacturers, retailers, suppliers, as well as government and universities.

GBCA commends the aims of the proposed Design and Place SEPP to provide a single point of reference for design-related consideration that positively influences new developments across NSW. The EIE promotes a vision for the growth and development of NSW, having regard to the design considerations that enable healthy and prosperous places. We strongly support the SEPP's aims to facilitate sustainable development, protect the environment, promote resilient communities, elevate the connection to Country and provide a vehicle for achieving net zero emissions by 2050.

The EIE identifies multiple aspects to the successful implementation and delivery of the SEPP's goals, including 5 key principles, mandatory matters for consideration, processes for design evaluation and review and the development and revision of guidance. Whilst we recognise that the matters for consideration have only been canvassed at a high level in the EIE, we stress that their development should have consideration to the clarity, timeliness and predictability of outcomes for both project applicants and consent authorities.

The inclusion of clear, measurable performance standards as design controls in the SEPP would be helpful for ensuring design quality through the consistent interpretation of the principles and matters for consideration. This consistency is not only important for industry certainty (from the perspective that clear standards make compliance with the standards easier to understand and assess), but also has a strong public interest benefit. GBCA strongly believes that considerations which relate to our communities' health, safety and amenity (such as design matters relating to resilience against climate and non-climate induced shocks and stresses) should be given effect through clear and strong standards which safe-guard against alternative interpretations which can weaken a project's final outcome. We recognise the SEPP is aimed at moving away from a system governed entirely by prescriptive controls, however, the inclusion of performance-based standards is still congruent with this intent.

Related to the development of clear performance standards, a robust framework to guide variation to the proposed mandatory matters for consideration is also important for policy certainty. GBCA is concerned about the use of the modifying language such as 'where possible' in relation to achieving several of the design

outcomes specified by the mandatory matters for consideration. Clarity is needed for understanding where deviations from the proposed outcomes is justified, how project applications can demonstrate that variations are proportional to external constraints and how this will result in improved design outcomes.

GBCA welcomes the creation of an Urban Design Guide to specify criteria for precinct planning and large-scale development. We welcome engagement on its development and would be pleased to share our insights from the implementation of the Green Star – Communities national framework across our network of Green Star communities across Australia. Developed by the GBCA in consultation with industry stakeholders, the national framework is designed to underpin our rating tool for precincts and communities. The framework consists of five principles that define a sustainable community in Australia – governance, liveability, economic prosperity, environment, and innovation – and has been used to guide design and planning outcomes across Australia. Projects that incorporate the principles of the framework into community planning and design can ensure their communities are on a clear path to achieving the following:

- Diverse, affordable, inclusive and healthy places for residents;
- Business diversity and opportunities for economic development and innovation;
- Developments that provide value for money through whole-of-life cost savings;
- A reduced environmental footprint through the protection, maintenance and restoration of local natural environments.

The use of certification can help evidence the delivery of outcomes as sought by the Design and Place EIE. GBCA commends the Green Star Buildings and the Green Star - Communities rating tools as an effective pathway for delivering outcomes sought by SEPP for different scales of development. By mapping the requirements to achieve certification under Green Star against those outcomes sought by the SEPP (see Appendix B), we demonstrate how the principles and mandatory matters for consideration are clearly aligned with credits from the Green Star rating tools, highlighting how the tools drives outcomes that are consistent with the directions, priorities and objectives of the policy. The use of Green Star provides the assurance of third-party verification, with correct use of the rating tool seeing projects independently assessed on the merits of their design and as-built outcomes. This gives consent authorities added assurance that claims made on certified projects are robust and well evidenced, which is critical to driving compliance with the SEPP. The quality of Green Star certification, as a robust rating system and verification method, has been proven through significant and ongoing adoption by government and industry across Australia.

While we continue to support the use of BASIX to drive energy and water efficiency for housing in NSW, GBCA welcomes the ability to make detailed comments on the range of reforms proposed for the tool to achieve improved design and sustainability outcomes. We acknowledge and welcome the work the NSW Government and GANSW is progressing on the basis of feedback given by GBCA and our member, Cundall on a number of technical issues in BASIX. We encourage the NSW Government to continue focusing on these barriers as matters of priority, as the Government develops broader reforms to support improved customer experience in BASIX and recognise emerging technologies.

GBCA recognises the ambitious nature of the Design and Place SEPP and the wide-ranging scope of reforms being proposed. We are pleased to provide the attached table of our detailed response to proposed parts of the SEPP as presented in the EIE (**Appendix A**) and would be pleased to meet to discuss further our comments provided in this submission. I look forward to engaging with your office and the Department of Planning, Industry and Environment further as the draft SEPP is developed alongside the supporting guidance documents.

Should you have any questions regarding the content of this submission, please do not hesitate to contact Sandra Qian, Senior Manager – Policy and Government Relations at [REDACTED]

Yours sincerely,

[REDACTED]

Davina Rooney  
Chief Executive Officer  
Green Building Council of Australia

## Appendix A:

### Detailed comments – GBCA Submission to Design and Place SEPP Explanation of Intended Effect EIE

Section & Page no.	Relevant text	GBCA response
GENERAL 2.3 PRINCIPLES OF THE NEW SEPP	<p>A principle-based planning system is one that is focused around achieving a desirable outcome through a reasoned and considered approach. It is aimed at moving away from a system governed entirely by prescriptive controls. This allows for, and encourages, innovative and creative approaches to achieve an outcome. It is proposed the principles will be given effect through matters for consideration and application requirements.</p>	<p>GBCA supports efforts to encourage innovation and creative approaches to achieve an outcome. However, the risk of a principles-based SEPP is that the intent of the policy can be different to its implementation. A key measure of success will be the extent to which this policy can promote consistent outcomes that reflect the intent of its principles. Targets, objectives, guidance on how to interpret the mandatory considerations at different scales, and how to consider variations from mandatory considerations and application requirements is therefore important. The policy should, as much as possible support outcomes that are tangible, measurable and verified.</p>
	<p>Principle 1. Design places with beauty and character that people feel proud to belong to.</p> <p>Through a considered response to context, character, heritage, culture and Country, well-designed buildings and spaces create places people can engage and connect with. Attractive built environments are attractors, and powerful tools for economic growth.</p>	<p>Suggested amendment to the intended effect of this principle: Support development that demonstrates an appropriate response to the planning, physical and social context and local character to ensure appropriate innovation or change. The development should be suited to a site's unique topography, biodiversity, landscape setting and built environment, and demonstrate sensitivity to Country, heritage, culture and history to ensure appropriate innovation or change.</p> <p>This change incorporates additional physical settings such as biodiversity, and social settings such as heritage and culture.</p>

<p>Intended effect: <i>Support development that demonstrates an appropriate response to context and local character, that is suited to a site's unique topography, that is sensitive to Country and history, including the surrounding built environment and landscape setting, to ensure appropriate innovation or change.</i></p>	
<p>Principle 2. Design inviting public spaces to support engaged communities</p> <p>High quality public spaces are inviting, accessible, diverse and comfortable. They encourage a healthy public life for our communities, fostering, active lifestyles and social connections.</p>	Support
<p>Principle 3. Develop productive and connected places to enable thriving communities.</p> <p>Places with sufficient densities, and sustainable and active transport connections to a wider network of jobs, services and attractors, enhance local economies and communities, enabling them to thrive.</p>	<p>Suggest amending principle to: Develop productive and connected places with high levels of amenity to enable thriving communities.</p>
<p>Principle 4. Design sustainable and greener places for the wellbeing of people and the environment.</p>	<p>Design interventions that are beneficial for urban biodiversity include activities that:</p> <ul style="list-style-type: none"> <li>- Retain and enhance habitat (e.g. by increasing vegetation complexity)</li> <li>- Connect biodiversity by improving the urban matrix (by establishing green corridors) and</li> <li>- Create new habitat to support biodiversity and ecosystem services (e.g. by construction artificial wetlands).</li> </ul>

APPLICATION OF THE NEW SEPP	Environmentally sustainable places reduce emissions; adopt water, energy and material efficiency; and integrate green infrastructure, including urban tree canopies, to support the health and wellbeing of present and future communities and natural systems, including habitat for biodiversity.	Whilst the intended outcomes of this principle focuses heavily on the retaining and enhancing habitat, the latter two activities should be promoted and considered.
	Principle 5. Design resilient and diverse places for enduring communities  Resilient places are designed with adaptive capacity to respond to shocks, chronic stresses, and climate change. Diverse, compact neighbourhoods support inclusive, socially resilient communities and ageing in place.	Support.
	The matters for consideration and application requirements proposed by the Design and Place SEPP will apply to three development scales: — precincts — significant development and — all other development.	A review of the mandatory matters for consideration suggests that not every consideration is applicable to all three development scales. We believe further justification is needed for this. For example, considerations such as resilience, local living and cultural and built heritage are equally relevant at the precinct scale as it is at the significant development scale, or for all other developments (particularly as this typology has not been clearly defined in the EIE). As the principles are given effect through the mandatory considerations, we believe that the mandatory matters for consideration should be applied to all scales of development.
	3.1.1 DESIGN SKILLS The proposed Design and Place SEPP will require that developments that are three or more storeys, open space over 1000 m2, and precincts and significant development, are designed by suitably qualified design professionals, particularly where design has a high impact on the environment or	We encourage that the NSW Government engage with relevant industry associations and tertiary institutions to ensure that design professionals are equipped with the relevant skills to deliver good design outcomes outlined by the policy. The same applies for determining the mechanism for design professionals to be registered and deemed qualified designers.

	community due to its scale or future population.	
	A statement to accompany planning and development applications can be used to verify this requirement. For precincts and significant development, it is proposed this statement also describes the collaboration and integration of design professionals with multidisciplinary skill sets (e.g. architecture and landscape architecture, urban design and planning, engineering, etc.) to achieve high-quality design of the built environment.	We support model statements that can provide best practice examples to users on how compliance has been achieved against this requirement, particularly in the case for precincts and significant development.
3.1.3 DESIGN EVALUATION AND REVIEW	<p>The Design and Place SEPP presents an opportunity to define a process for design review and to provide new guidance for State and local government through a Design Review Guide (DRG) to ensure this process is undertaken with robustness and consistency across NSW.</p> <p>The DRG will:</p> <ul style="list-style-type: none"> <li>— address the required expertise on design review panels, clarify the scope of a panel’s advice and the requirements for consistency of panellists across project reviews</li> <li>— address the role and expertise of a panel chair</li> </ul>	<p>GBCA supports additional guidance for a best practice design review process as this should enhance expert and impartial design advice to project teams, local and state planning authorities. When applied well, design review can improve a project by identifying opportunities for improvement at an early stage, provide greater consistency in the quality of design, ensure that design outcomes are aligned with policy objectives, promote community benefits and engagement, enhance transparency and foster collaborative engagement between government and built environment. These objectives should be central to the development of the DRG.</p> <p>The DRG should also address:</p> <ul style="list-style-type: none"> <li>- Key terms of reference when undertaking review of the urban design.</li> <li>- The minimum desirable number of design review meetings held, and proximity to lodgement of the development application with the relevant approval/consent authority.</li> <li>- Expectations for replacement panel members.</li> <li>- Expectations around member independence (i.e. professional involvement in the project to be reviewed).</li> <li>- Disclosure around potential conflicts of interest.</li> </ul>

	<ul style="list-style-type: none"> <li>— clarify the importance of panellist advice being informed by the relevant planning framework</li> <li>— give consideration to review timeframes commensurate with project complexity</li> <li>— clarify the role of the panel as an advisory service to planning assessment teams</li> <li>— provide case studies of exemplar processes and examples.</li> </ul>	<p>The ten principles of design review, established by the former UK Commission for Architecture and the Built Environment (now the Design Council) is a good start to consider how the design review process can provide consistently high standards of panel management and advice<sup>1</sup>.</p> <p>Government should work with relevant industry bodies to ensure that requirements of expertise (such as registration by a relevant professional peak body, commitment to a code of ethics) are supported by up to date schemes. The risk of a shortage of design review panellists should be considered.</p>
	<p>To support the use of design review processes in proportion to the impact of a development proposal, additional thresholds for design review will be determined during development of the Design and Place SEPP and may include consideration of:</p> <ul style="list-style-type: none"> <li>—project locations e.g. projects on prominent sites</li> <li>—project types</li> <li>—capital investment value</li> <li>—development height</li> <li>—site area.</li> </ul>	<p>The inclusion of additional thresholds are also relevant where design has a high impact on the environment or community due to its scale or future population.</p>
<p>3.2.1 APPLICATION REQUIREMENTS</p>	<p>It is proposed the Design and Place SEPP will require applicants to demonstrate through application requirements that the SEPP principles and considerations have been met. Many of these</p>	<p>We support efforts to ensure a more consistent approach to submissions to provide greater certainty for industry and consent authorities. To this end we recommend the development of guidelines, templates and model statements to provide best practice examples of how the documentation requirements can be satisfied for all development scales, and clarifying expectations for the key components in the requirements.</p>

<sup>1</sup>The ten principles of good design review: Independent, accountable, expert, advisory, accessible, proportional, timely, objectives, focus on outcomes for people and focused on improving quality. They can be found here: <https://www.designcouncil.org.uk/resources/guide/10-principles-design-review>



3.2.2  
MANDATORY  
MATTERS FOR  
CONSIDERATION

<p>requirements currently exist within the planning system, however they are not consistent in their application. The Design and Place SEPP will enable a consistent and regular approach to submissions which will provide greater certainty for applicants and consent authorities. The requirements are summarised as:</p> <ul style="list-style-type: none"> <li>-site analysis for all development</li> <li>-a precinct structure plan for all precincts and significant development</li> <li>-a design statement for all development</li> <li>-precinct planning supporting documents</li> </ul>	
<p>It is proposed the initiatives and guidance outlined in this EIE are mandatory matters for consideration for the purposes of s. 4.15 of the EP&amp;A Act and will be required to be considered as part of the development assessment process.</p>	<p>The matters for mandatory consideration should be framed as outcomes that must be satisfied so that the development can be approved by the consent authority.</p> <p>We recommend avoiding the use of the wording 'where possible', as this is incongruous with the understanding mandatory matters for consideration. Guidance should be provided on the conditions under which variations from the matters for consideration are possible, and what evidence is necessary from the project applicant to demonstrate that the variation is a reasonable and proportional response to the constraint.</p>
<p><u>1. Cultural and built heritage</u> Areas of cultural and built importance are celebrated, conserved and protected, including heritage items or areas at risk, and a corresponding strategy has been developed to ensure community use and enjoyment of these.</p>	<p>Additional to promoting use and enjoyment of areas of cultural and built form importance, a best practice strategy should show that the identity of the project site has been researched and interpreted as part of the master planning process for the precinct. Projects should be encouraged to interpret the culture, heritage and identity of the site in a way that strengthens the cultural and heritage connections with the site and contributes to building a strong local identity.</p> <p>This consideration is also relevant at other development scales, as buildings should also be encouraged to reflect local culture, heritage and identity.</p>
<p><u>3. Connectivity</u></p>	<p>The ability of green infrastructure to enhance connectivity with nature should be recognised. Projects should encourage species connectivity through the site, and to adjacent sites. This can be</p>



<p>Connectivity has been provided where possible between green infrastructure including landscape corridors, recreational walking and cycling networks, and the network of public space.</p>	<p>done through landscaping, or infrastructure through design features such as a canopy bridge, wildlife tunnels, green roofs, amphibian tunnels as well as green infrastructure.</p> <p>This consideration is relevant at other development scales as buildings should connect natural networks by creating link between native and built corridors.</p>
<p><u>4. Local Living</u> All housing in urban areas of new precincts is within: 20 minutes walk of local shops and 5 minutes walk of local public open space Where possible, housing is also within 20 minutes walking distance to primary schools, district open space, public transport, and supermarkets or groceries.</p>	<p>New precincts should ensure that housing is within walkable distance to a diverse number of amenities. The concept of the 20-minute neighbourhood ensures that people are able to meet most of their daily needs. Some other considerations of local living that should be specifically recognised include health facilities and services, post-primary education opportunities and local employment opportunities.</p> <p>The measurement of proximity through a distanced based unit would be more helpful than a time based one to support consistent interpretation.</p> <p>This consideration is relevant at other development scales as a building's design and location must also encourage walking to and from a number of amenities. This means designing roads within the building boundary to prioritise pedestrians and either providing within or being located close to a number of amenities. Green Star specifies that occupants should have access to a diversity of amenities across the below eight categories. There must be at least 10 amenities across five categories within 400m radius of the building, as determined by Google Maps or other mapping services.</p> <ul style="list-style-type: none"> <li>- Grocery: e.g. Convenience stores, supermarkets;</li> <li>- Health and wellbeing – e.g. dentist, doctor, psychologist;</li> <li>- Food and Beverage: e.g. cafes, restaurants, bars;</li> <li>- Retail: e.g clothing, homeware, hardware, book, gift stores;</li> <li>- Bank Services: e.g. banks, credit unions;</li> <li>- Education and Childcare: e.g. Primary, secondary, tertiary or childcare facilities;</li> <li>- Recreation: e.g. movie theatres, fitness centres, swimming pools;</li> <li>- Public facilities: e.g. Libraries, local or state government service centres; and</li> <li>- Outdoor facilities: e.g. Playgrounds, parks</li> </ul>

<p><u>7. Green Infrastructure</u></p> <p>The precinct retains, where possible, and provides additional green infrastructure by:</p> <ul style="list-style-type: none"> <li>-integrating urban development and green infrastructure</li> <li>-contributing to a green grid by establishing an interconnected network of open space, waterways and biodiversity</li> <li>- retaining or enhancing existing significant and moderate tree canopy or replacing any removed moderate or significant trees with at least two trees or precinct DCP/council replacement rate, whichever is higher. In Greater Sydney the tree canopy target specified by council or in the Greener Places Design Guide (if not specified) is to be delivered (whichever is higher) giving preference to locally Indigenous and Australian native plant species</li> </ul>	<p>Other strategies for enhancing green infrastructure that could be recognised in this consideration:</p> <ul style="list-style-type: none"> <li>- Providing a network of well-established parks and recreation areas consistent with the needs of the existing and proposed community and the relevant open space hierarchy.</li> <li>- Encouraging design for multiple uses of open space areas.</li> <li>- Utilising water sensitive urban design practices.</li> <li>- Ensuring that road reserve design provides for appropriate landscape treatments (such as street trees), avoids future infrastructure/landscape conflicts and facilitates active transport modes.</li> <li>- Protecting areas of high quality/important flora and fauna habitat</li> <li>- Utilise high quality design acknowledging future maintenance requirements, such as tree planting that considers the quality and size over quantity to improve the return and speed, or tree placement with a 'right tree, right location' principle and shading being a key criteria which enhances walkability and cycle way use.</li> </ul> <p>This consideration is also relevant at other development scales, as projects should seek to:</p> <ul style="list-style-type: none"> <li>- Limit the development's impact on the natural environment</li> <li>- Specifically focus on creating biodiversity in Australian cities and regions that is indigenous and resilient to climate change</li> <li>- Provide natural corridors for animals to migrate</li> <li>- Allow buildings to claim reward for taking initiatives that restore biodiversity offsite</li> <li>- Protect waterways by reducing harmful pollutants that leave the building site</li> </ul>
<p><u>8. Resilience</u></p> <p>An integrated approach to site-specific risks has been taken, and strategies taken to reduce or avoid occupants' vulnerability to those risks, particularly bushfire, flooding, extreme heat and coastal erosion.</p>	<p>The consideration should note specifically that risk identification should address key project assets and infrastructure, e.g. roads, public open space, electricity and communications infrastructure, hospitals, police, fire and ambulance stations.</p> <p>GBCA recommends that the integrated approach to risk mitigation includes the development of an adaptation plan, or a community resilience plan that addresses preparation, during and post-disaster community, safety and response. This plan must include a timetable for regular review and require updates where necessary.</p>

	<p>Importantly, consideration is also relevant for other scales or development to ensure that risks which threaten the short and long-term performance of buildings have been considered. These include ensuring:</p> <ul style="list-style-type: none"> <li>- The building has been built to respond to the direct and indirect impacts of climate change.</li> <li>- The building can respond to acute shocks and chronic stresses that can affect its operation over time.</li> <li>- The building contributes to improving the resilience of the community.</li> <li>- The building reduces its impact on heat island effect.</li> <li>- The building contributes to the functioning of the grid as it transitions to a higher level of renewable energy capacity.</li> </ul>
<p><u>11. Housing diversity</u> The proposal responds to the local housing strategy and provides an equitable distribution of housing type and tenure for the demographics of the local area to enable ageing in place.</p>	<p>Guidance is required around the definition of 'equitable distribution'. Besides ageing in place, other key objectives that should be addressed through this consideration include the facilitation of housing choice and affordability.</p> <p>Other strategies for improving housing diversity include:</p> <ul style="list-style-type: none"> <li>- Providing a diversity of lot sizes, and a mix of densities with increased density near activity centres.</li> <li>- Providing a proportion of housing lots and dwellings to the market at an affordable purchase price for low to moderate income households.</li> <li>- Providing key worker housing</li> <li>- Providing a program for guaranteeing the supply of shared equity and or social housing within the development</li> <li>- Establishing partnerships between organisations to ensure allocation and delivery of affordable housing stock</li> </ul>
<p><u>16. Activation</u> There is non-residential activation on a minimum percentage of frontage of sites facing activity streets, with adequate lighting and passive surveillance (percentage to be</p>	<p>Active frontages can also be articulated by:</p> <ul style="list-style-type: none"> <li>- Providing visual and physical permeability on ground level frontages</li> <li>- Using design, materials, colour and details to break long sections and make the frontage more attractive to pedestrians</li> </ul>

determined during development of the Design and Place SEPP)	<ul style="list-style-type: none"> <li>- Having side-walks around the building to encourage safe walking and cycling activities, as well as provide shading for pedestrians and other activities, particularly with trees</li> <li>- Designing entrances to be welcoming and to contribute to the public realm.</li> </ul>
<p><u>17. Emissions and resource efficiency</u></p> <p>The development meets or exceeds the relevant NABERS targets set by the Design and Place SEPP, for:</p> <ul style="list-style-type: none"> <li>- Offices (base building energy)</li> <li>- Shopping centres (whole building energy)</li> <li>- Hotels (whole building energy)</li> <li>- Apartment buildings including common areas (common property energy)</li> <li>- All buildings being 'ready for net zero' from 2030.</li> </ul> <p>The development meets or exceeds the relevant BASIX targets for</p> <ul style="list-style-type: none"> <li>- All new homes (water, energy, thermal comfort)</li> </ul>	<p>We recommend additional options to demonstrate compliance, for example through targets for Green Star.</p> <p>Green Star certified buildings are on a trajectory of decarbonisation that will see all new buildings and fit outs operating at net zero by 2030 and is well positioned to support commercial and multi-unit residential buildings as they transition to low and zero carbon buildings. Through a series of updates to Green Star, GBCA is cascading the requirement to deliver net zero carbon buildings across our entire suite of Green Star tools, which address the design, construction, operation of buildings. The launch of the Green Star Buildings tool last year saw the introduction of new requirements for highest rated buildings under the tool (6 stars – World Leadership) to be net zero in operations, defined as fossil fuel free, highly efficient, powered by renewables, built with lower upfront emissions, and offset with nature. The GBCA plans to cascade this requirement over time to all rated buildings by 2026.</p> <p>Green Star is an industry-led tool that has sustained wide uptake by the property and construction sector in Australia. NSW is the leading jurisdiction for Green Star adoption. It is used in planning by local governments across Australia to demonstrate achievement of emissions and efficiency outcomes, for example, the energy performance standards and timing developed by the City of Sydney (with industry and government) for commercial and residential developments to transition to net zero energy.</p>
<p><u>18. Tree canopy</u></p> <p>The proposal retains moderate and significant trees and significant vegetation where possible. Any removed moderate or significant trees have been replaced with at least two</p>	<p>There is some crossover between this consideration and Consideration 7: Green Infrastructure, though we note the two considerations each apply to different development scales. Content which falls under Consideration 7 with respect to tree canopy should also be reflected under this consideration.</p>

<p>trees, or the precinct development control plan/council replace rate, whichever is higher.</p> <p>If in Greater Sydney, the proposal delivers the minimum number of trees to give effect to the tree canopy target specified by the local council or, if not specified, set out in the Greener Places Design Guide, whichever is higher.</p> <p>The proposal demonstrates the use of greening alternatives (such as green roofs, walls, softscape, etc.) particularly where tree canopy targets cannot be met.</p>	<p>We strongly recommend that this consideration should actively seek to retain moderate and significant trees and increase tree canopy cover across Sydney (not just Greater Sydney), rather than only contribute additional tree cover when moderate or significant trees are removed.</p> <p>Increasing tree canopy cover helps to mitigate the effects of climate change, and adapt to urban heat by increasing the provision of shade and cooling.</p> <p>The use of greening alternatives in lieu of meeting tree canopy targets has the potential to weaken biodiversity outcomes. In cases where the tree canopy target cannot be met, the amount of greening alternatives used must be commensurate with the benefits provided by the tree canopy.</p>
<p><u>19. Affordable housing</u></p> <p>The proposal provides affordable housing in accordance with affordable housing targets or schemes. Where there are no targets or schemes, the applicant may propose a viable amount of affordable housing for the site, and must provide that amount.</p> <p>Within Greater Sydney, targets generally in the range of 5-10% of new residential floor space are viable and should be delivered in accordance with the Greater Sydney Region Plan.</p>	<p>This consideration must be read together with Consideration 11: Housing diversity, in relation to the need for a range of housing types to support affordability targets.</p> <p>Where there are no targets or schemes for affordable housing, the applicant should follow a process defined by the SEPP to determine the viable amount of affordable housing.</p> <p>Strategies to improve residential housing affordability includes:</p> <ul style="list-style-type: none"> <li>- Providing a proportion of housing lots and dwellings to the market at an affordable purchase price for low to moderate income households.</li> <li>- Providing key worker housing.</li> <li>- Providing a program for guaranteeing the supply of shared equity and or social housing within the development and,</li> <li>- Establishing partnerships between organisations to ensure allocation and delivery affordable housing stock.</li> </ul>
<p>3.3 GUIDANCE</p> <p>It is proposed new guidance will be exhibited concurrently with the proposed Design and Place SEPP.</p>	<p>Additional to our preference for performance standards that help realise the mandatory matters for consideration, GBCA supports the reference to objectives and criteria to support consistent interpretation of the principles and considerations. Relevant targets and criteria should be clearly expressed (not referenced indirectly) where they exist in external documents.</p>

	<p>The guidance is intended to complement the principles and considerations in specialist areas by setting:</p> <ul style="list-style-type: none"> <li>-objectives relating to specific development typologies and outcomes</li> <li>-criteria relating to outcomes, including performance-based criteria where possible</li> <li>-minimum criteria where required and desirable to help assessment.</li> </ul>	
3.3.3 NEW GUIDANCE	<p>Draft Greener Places Design Guide  Draft NSW Public Spaces Charter  Proposed Design Review Guide  Proposed Urban Design Guide  Proposed Resilience Toolkit  Proposed strategic guide to planning for natural hazards</p>	<p>GBCA has extensive experience over the past two decades on these topics from working with industry and governments to apply our rating systems and would be pleased to support GANSW and DPIE with the development of these guides. Relevant work includes our rating systems and frameworks for building and community sustainability (Green Star Buildings and Green Star – Communities) and recent research into decarbonisation, resilience, biodiversity and the circular economy.</p>
4.2 STATE ENVIRONMENTAL PLANNING POLICY (BUILDING SUSTAINABILITY INDEX: BASIX) 2004	<p>4.2.1 A trajectory for new homes is planned to be implemented through cost effective increases to minimum energy performance standards in the National Construction Code (NCC), starting in 2022. However, in NSW residential energy efficiency standards for new homes and alterations and additions are set by BASIX, not the NCC. Implementing the trajectory will align with the NSW Net Zero Plan Stage 1: 2020–2030, which indicates the NSW Government’s commitment to improve</p>	<p>GBCA strongly supports the NSW Government’s commitment to the National Trajectory for Low Energy Buildings, the accompanying Addendum, and the key commitment under the Trajectory to adopt the stringency levels for new commercial and residential buildings through 3 yearly NCC development cycle. A commitment to a nationally consistent approach by state and territory governments and a forward trajectory for energy performance targets through the NCC will give regulatory certainty needed by industry, promoting innovation and allowing the supply chain to invest in new technology, design and construction practices.</p>

	BASIX as a pathway to deliver cost-effective, low-emission outcomes for residential buildings	
4.2.2 OTHER REFORMS	<p>In addition to the BASIX provisions being transferred to the Design and Place SEPP, broader reforms to help support sustainability in residential buildings are being developed. These are detailed in Appendix C, which outlines the key areas of reform:</p> <ul style="list-style-type: none"> <li>—providing more flexibility in the available assessment pathways to demonstrate a design meets sustainability performance requirements</li> <li>—aligning sustainability performance requirements with the principles of the Design and Place SEPP</li> <li>—measuring and reporting sustainability performance requirements in a consistent way to other jurisdictions</li> <li>—improving customer experience and promoting innovation.</li> </ul> <p>Some of these will form part of the proposed new Design and Place SEPP while others are proposed to be delivered separately to complement the principles such as:</p> <ul style="list-style-type: none"> <li>—improved customer experience in using tools</li> <li>—recognising emerging technologies</li> <li>—biannual tool updates.</li> </ul>	<p>GBCA supports efforts by the Government to review and update BASIX. We have previously provided our recommendations on a number of technical issues with the energy calculation methodology and system options in BASIX, that are leading to sub-optimal outcomes in thermal comfort and low energy building design that is also discouraging the transition towards zero carbon buildings.</p> <p>In summary, BASIX needs to be modified to:</p> <ul style="list-style-type: none"> <li>- Reward a fabric first approach, prioritising building envelope design and performance.</li> <li>- Support, not penalise, the transition away from fossil fuels in buildings.</li> <li>- Recognise the importance of energy efficiency fixed services in buildings that are under the control of the building designers and developers (central plant, lifts, air conditioning systems, ventilation).</li> <li>- Place less emphasis in the energy score due to apartment plug-in equipment and appliances (particularly fridges, and washing machines) that are under the direct control of residents and which are not within the scope of the Building Code of Australia.</li> </ul>



*APPENDIX C:  
SUSTAINABILITY  
IN RESIDENTIAL  
BUILDINGS  
C.2.1.1 AN  
INDEPENDENT,  
MERIT  
ASSESSMENT  
PATHWAY*

<p>To introduce more flexibility for development applicants, we propose to introduce an independent pathway outside BASIX. This would be a merit assessment which would allow the applicant to provide, as part of their development application to the local council or other consent authority, a report and supporting documentation to demonstrate the development's design meets the NSW sustainability performance requirements. The report and documentation would be prepared by a suitably qualified professional such as a member of the Australian Institute of Architects or Engineers Australia, or a Nationwide House Energy Rating Scheme (NatHERS) accredited assessor. This assessment would be done instead of completing a BASIX assessment.</p>	<p>Whilst we recognise and support the intent to provide greater flexibility for applicants, we believe the current proposed approach – a report and documentation prepared by a suitably qualified professional – does not allow for the tracking and verification of performance outcomes. A holistic rating system focused on verifying design and construction outcomes like Green Star would be better suited (in the case of apartment developments) to provide the rigour needed for this merit based assessment pathway given the third-party certification process that is built in to the tool.</p>
<p>Providing other assessment tools that plug in to BASIX</p> <p>We are also considering recognising the following tools under BASIX, which assess both thermal comfort and energy performance:</p> <ul style="list-style-type: none"> <li>-the Green Star Homes Standard currently being developed by the Green Building Council of Australia (GBCA), which may be available in 2021</li> </ul>	<p>The Green Star Homes Standard is scheduled for launch in June/July 2021; GBCA will continue working with the NSW Government to align this standard with BASIX.</p>

<p>C.2.1.3 ALLOWING A TAILORED APPROACH FOR THERMAL COMFORT AND ENERGY PERFORMANCE</p>	<p>Currently in BASIX, there is:</p> <ul style="list-style-type: none"> <li>—a minimum requirement for thermal comfort performance of a home’s building shell</li> <li>—an energy performance requirement, which considers the thermal comfort performance plus the energy efficiency of appliances and systems and the use of solar photovoltaics.</li> </ul> <p>For sites where compliance is challenging, we are considering allowing minor trade-offs. To achieve trade-offs applicants must demonstrate significant sustainability benefits are achieved through alternative means (such as low-emission materials or integrated site solutions).</p>	<p>We strongly oppose trading off thermal comfort for energy performance as this compromises the long term amenity and resilience of the dwelling. BASIX does not currently reward good façade design and permits construction of poorly performing facades compared to the rest of Australia. Previous analysis by Cundall shows that the thermal comfort criteria for an apartment in NSW would fail to pass Section J0.2 requirements in other states. Allowing thermal comfort to be traded off would further exacerbate this shortfall, and lead to the construction of poorly performing buildings that rely on mechanical heating and cooling systems to provide thermal comfort and expose occupants to increasing energy bills. We also note that this issue was presented to stakeholders during Commonwealth coordinated consultation on the 2022 NCC, and widely dismissed by stakeholders as it could lead to the acceptance of poorer performing dwellings and reduced public benefit. GBCA maintains the importance of a high performing thermal envelope as a primary consideration.</p> <p>Instead of enabling a reduction in thermal comfort through BASIX, we recommend changing the thermal comfort criteria in BASIX to be equivalent to an average of 7 stars in NatHERS with a minimum of 6 stars for any individual apartment.</p>
<p>C.2.4.2 PROMOTING INNOVATION AND THE ADOPTION OF NEW TECHNOLOGY</p>	<p>We currently recognise innovation and new technology in residential design by periodically updating the BASIX Tool. We have recently modified the tool to recognise regenerative drive technology for lifts, and efficiency improvements in air conditioning systems that use variable refrigerant flow.</p>	<p>We further suggest that the Government examine the issue of buildings being penalised in BASIX for using heat pump and induction cooking technologies. Due to BASIX’s calculation methodology, a building which uses natural gas for heating and cooking will achieve a higher BASIX Energy score, than the same building which uses induction cooktops and an electric heat pump for domestic hot water. The use of electric heat pump with a gas booster option also increases a building’s BASIX Energy score, despite having higher GHG emissions than a gas boiler. This bias means that buildings are being penalised for using electricity instead of gas for heating and cooking, an outcome that is not aligned with a zero carbon future.</p>
	<p>We will adopt a more structured approach to further updates and enhancements to BASIX over time. This will involve formally seeking suggestions</p>	<p>GBCA supports more frequent updates and enhancements to BASIX over time. Complementing this structure of updates, we believe there is a need to improve the transparency of the governance processes and framework underpinning BASIX.</p>

*C.4 BASIX POLICY  
INITIATIVES*

<p>for changes and making upgrades twice each year, in April and August.</p> <p>To recognise higher performing design, we are also considering introducing 'BASIX Plus' certification where the design exceeds the performance requirements by a specific amount. This would give the applicant an opportunity to promote the sustainability credentials of their development</p>	<p>Since BASIX is a regulatory tool for the design and construction of buildings, we encourage the NSW Government to focus on raising minimum requirements within BASIX over time whilst leaving the recognition and incentivisation of higher performing design to voluntary schemes.</p>
<p>Energy-efficiency targets will be aligned, where possible, with National Construction Code Reform 2022, and NatHERS thermal comfort calculation.</p>	<p>Remove reference to 'where possible'.</p> <p>GBCA strongly supports that the NSW Government abide by their support of the national Trajectory for Low Energy Buildings, a key component of which is a commitment from all governments to cost-effective increases to the energy efficiency provisions in the NCC over time. We support the NSW Government's commitment to align stringency targets in BASIX for new developments with the NCC development cycle. Commitment to a nationally consistent approach by state and territory governments and a forward trajectory for energy performance targets through the NCC every three years will provide the regulatory certainty needed by industry.</p>
<p>Allowing thermal comfort to be traded off by increasing energy performance (more energy efficient appliances or more solar PV)</p>	<p>As noted above, GBCA strongly opposes this proposal. BASIX currently places too much reliance on appliances to achieve compliance (appliances and small power account for between 40-55% of the energy score) which leads to highly efficient white goods being installed to compensate for poorly performing facades. Enabling this proposed trade off would further exacerbate this problem.</p> <p>We submit that emphasis should be placed on updating BASIX to ensure high performing facades (a 'fabric first' approach) and reducing the influence of plug in loads. A façade is a fixed and long-term component of the building, whilst appliances and solar PV systems can be replaced far more easily and quickly by comparison.</p>

## Appendix B: Green Star and the Design and Place SEPP

The Design and Places SEPP sets an ambitious vision of creating healthy and prosperous places that support the wellbeing of people, community and Country. Vital to the success of the policy will be the implementation and verification of the outcomes outlined in the EIE. GBCA's Green Star rating system provides a means of delivering, measuring and evaluating these objectives, with the assurance of third party verification. The rating system is comprised of four distinct, holistic sustainability rating tools, each relevant to different phases of the built environment:

- Green Star Buildings: a holistic tool for the design and construction of new buildings and major refurbishments
- Green Star – Interiors: a holistic tool for the design and construction of new interior fitouts
- Green Star – Performance: a rating tool for sustainable building operations
- Green Star – Communities: a rating tool for communities and precincts

The tools combine both a set of best-practice criteria and a certification process to verify a project's achievements against this set of criteria. The criteria are developed in consultation with expert representatives from across the building sector, to represent a balanced view on best practice when designing and constructing a new building, fitout, or community. For the three development scales proposed by the Design and Place SEPP, the relevant tools would be Green Star Buildings (for significant developments and other development types) and Green Star – Communities (for precincts).

Green Star tools are designed to take a holistic approach, addressing issues across a number of impact areas. Green Star Buildings features eight categories:

**Responsible:** Recognises activities that ensure the building is designed, procured, built and handed over in a responsible manner.

**Healthy:** Promotes actions and solutions that improve the physical and mental health of occupants.

**Resilient:** Encourages solutions that address the capacity of the building to bounce back from short-term shocks and long-term stresses

**Positive:** Encourages a positive contribution to key environmental issues of carbon, water and the impact of materials.

**Places:** Supports the creation of safe, enjoyable, integrated and comfortable places.

**People:** Encourages solutions that address the social health of the community.

**Nature:** Encourages active connections between people and nature and rewards creating biodiverse green spaces in cities.

**Leadership:** Recognises projects that set a strategic direction, build a vision for industry or enhance the industry's capacity to innovate.

The Green Star – Communities addresses 5 categories:

**Governance:** To encourage and recognise the developers and projects that demonstrate leadership within the sector, by the establishment and maintenance of strong governance practices. The category promotes engagement, transparency as well as community and industry capacity building. It also seeks to ensure that community projects are resilient to a changing climate.

**Liveability:** To encourage and recognise developments that deliver safe, accessible and culturally rich communities. The category encourages the development of healthy and active lifestyles and rewards communities that have a high level of amenity, activity and inclusiveness.

**Economic Prosperity:** To encourage and recognise projects that promote prosperity and productivity. The category encourages affordable living and housing, investment in education and skills development and the facilitation of community capacity building. It also promotes greater productivity via emerging opportunities in the digital economy.

**Environment:** To reduce the impact of urban development on ecosystems. It encourages resource management and efficiency by promoting infrastructure, transport and buildings, with reduced ecological footprints. It also seeks to reduce the impacts of projects on land, water and the atmosphere.

**Innovation** To acknowledge efforts which demonstrate sustainable development principles have been incorporated not only for the community for which the Green Star criteria apply, but also in a broader sense. Projects are awarded for providing open access information share to enable innovation or recognising and rewarding leadership in innovation and excellence.

Within the tools, credits address an initiative that improves or has the potential to improve a project's performance. Each credit defines a clear outcome that a project must meet. Where the outcome is verified to have been met, a project will be rewarded with the relevant available points. Once all credits are assessed, the total number of points achieved is compared against the available points in the rating tool, and a certified rating is awarded.

Projects can be awarded a 4 Star rating ('Best Practice'), a 5 Star rating ('Australian Excellence') or a 6 Star rating ('World Leadership').

The table below aligns specific credits from the Green Star – Communities and Green Star Buildings rating tool with the principles and mandatory matters for consideration outlined in the EIE.

## Precinct scale developments

Principle and mandatory matters for consideration	Green Star – Communities Credits
<p><b>Principle 1 – Design places with beauty and character</b></p> <p><b>Matter for consideration</b>  <b>Cultural and built heritage</b>            Areas of cultural and built importance are celebrated, conserved and protected, including heritage items or areas at risk, and a corresponding strategy has been developed to ensure community use and enjoyment of these.</p>	<p><b>Culture, Heritage, and Identity</b>            Encourages and recognises projects that celebrate and incorporate the heritage, culture and historical context of the project site, supporting communities and places with the development of a sense of place and identity. Points are awarded for projects where:</p> <ul style="list-style-type: none"> <li>- The culture, heritage and identity of the project site has been researched and interpreted as part of the master planning process.</li> <li>- The interpretation of the culture, heritage and identity of the project site informs the design of the project in a way that strengthens cultural and heritage connections and contributions to building a strong local identity.</li> </ul>
<b>Principle 2 – Design inviting public spaces</b>	

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**Matter for consideration****Public space**

Equitable distribution of accessible, well-designed public space has been provided on land fit for purpose with no net loss of public space.

**Connectivity**

Connectivity has been provided where possible between green infrastructure including landscape corridors, recreational walking and cycling networks, and the network of public space

**Healthy and Active Living**

Encourages and recognises projects that promote healthy and active living. Points are awarded for projects where:

- All habitable buildings have easy access to both a local park and at least one publicly accessible sports facility.

**Design Review**

Encourages and recognises projects that undertake a design review process to facilitate sustainable urbanism. The Terms of Reference for Urban Design provides the following considerations for 'Connected':

- Ensuring there are connections to surrounding areas
- Promoting the location and orientation of places
- Providing a range of transport options, including public transport, walking and cycling infrastructure;
- Connecting jobs, schools, shops, facilities and services
- Providing opportunities to connect with the natural environment

**3. Design productive and connected places****Matter for consideration****Local Living**

All housing in urban areas of new precincts is within:

20 minutes walk of local shops, and  
5 minutes walk of local public open space  
Where possible, housing is also within 20 minutes walking distance to primary schools, district open space, public transport, and supermarkets for groceries.

**Street design**

The precinct:

- contains safe, direct, accessible and comfortable walking and cycling routes including continuous paths, crossings on key desire lines, and locations for end-of-trip facilities
- meets a minimum street intersection density (to be determined during development of the Design and Place SEPP)
- does not exceed a maximum block length between intersections (to be

**Walkable access to amenities**

Encourages and recognise projects that have walkable access to a diverse number of amenities that reflect the predicted demographic of the project's community. Points are awarded where all habitable buildings on the project site have walkable access to a diverse number of amenities.

**Healthy and Active Living**

Encourages and recognises projects that promote healthy and active living. Points are awarded for projects where:

- The project site has been designed and built to promote an active lifestyle, through well-designed walking paths and cyclist facilities.
- Requirements for active lifestyle and recreational facilities are both met, and the development has been designed and built in line with holistic active and healthy living principles (including:

determined during development of the Design and Place SEPP)

- a) Walkability through attractive streetscapes, traffic control, connected street network and comfort to walkers
- b) Physical transport activity where cyclist facilities are complemented with good planning of location, transport plans, public transport corridors and end of trip facilities)

#### **Design Review**

To encourage and recognise projects that undertake a design review process to facilitate sustainable urbanism. The design review ToR for Site Planning and Layout includes the following consideration of 'Public transport':

- Development of a street network and block lengths that are safe and efficient and encourage walking to public transport.

#### **Fine-grain movement**

Proposed walking and cycle links connect to designated walking and cycling networks at the site boundary, and provide publicly accessible through-site links for walking and cycling so that no street frontage between paths is greater than the maximum block length set out in Consideration 5: Street design.

#### **Design Review**

To encourage and recognise projects that undertake a design review process to facilitate sustainable urbanism. The design review ToR for Site Planning and Layout includes the following consideration of 'Urban Form':

- A movement network has been provided based on a highly interconnected street network that has logical hierarchy, maximises safety and promotes walking and cycling, and public transport.

#### **Density**

The massing (height and floor space ratio) and zoning of precincts and significant development on urban-capable land, is capable of achieving the target gross residential densities in R1 to R4 zones (general, low, medium and high density residential zones). Density ranges will be determined during development of the Design and Place SEPP, based on a development's location and transport access, with a minimum density capacity of 15 dwellings per hectare. This consideration must be read together with Consideration 10: Housing diversity, in relation to the need for a range of housing types and tenures within residential areas.

The design review TOR for Site Planning and Layout defines 'Density' as:

- Identifying a target density that supports the planned facilities and activities including the provision, extension or enhancement of public transport infrastructure.
- Providing a mix of housing types and styles to facilitate housing choice, affordability and ageing in place, and which addresses local housing needs.
- Increases residential densities in suitable location proximate to activity centres and high frequency public transport stations and stops.



### **Transport and parking**

The proposal minimises car parking using the lowest of: — the rates specified in the Guide to Traffic Generating Developments (RTA 2002 (or when revised and retitled, the Guide to Traffic Impact Assessment), — any maximum parking rates or lower minimum rates specified by local controls, maps or guidance, and — any further reductions due to site-specific strategies including unbundling, or the preparation of adaptive travel plans.

### **Sustainable Transport and Movement**

Encourages and recognises integrated responses to transport and movement that encourage a people-focused hierarchy. Points are awarded for projects which:

- Reduce the dependence on single vehicle transport by promoting active movement within the community and use of public transport
- Create efficient pedestrian, bicycle and vehicles internally and to surrounding urban development
- Reduce distances from buildings to public transport nodes.
- Considers transport capacity to ensure there is sufficient provision and flexibility for changes to the transport regime overtime
- Adopts shared, pooled or common use parking
- Ensures existing or planned public transport within the calculated catchment is frequent and accessible

## **4. Design sustainable and greener places**

### **Matter for consideration**

#### **Water management**

The precinct contributes to water security, urban cooling and local irrigation by providing water systems that minimise potable water for non-potable uses, maximise water re-use, and preference natural methods for stormwater control and run off. Precinct-scale water detention and re-use strategies have been integrated such as through integrated water management framework where required

#### **Integrated Water Cycle**

Encourages and recognises best practice sustainable urban water management. Points are available where:

- Minimum requirements for stormwater is met and potable water consumption is reduced, through the application of the principles of WSUD, when compared against a reference project.
- It is demonstrated that the project applies best practice water management practices for alternative water sources and stormwater.

#### **Green infrastructure**

The precinct retains, where possible, and provides additional green infrastructure by: — integrating urban development and green infrastructure — contributing to a green grid by establishing an interconnected network of open space, waterways and biodiversity — retaining or enhancing existing significant and moderate

#### **Heat Island Effect**

Encourages and recognises projects that implement measures to reduce heat island effect. Points are awarded if at least 50 per cent of the total project site areas in plan view comprises building or landscaping elements that reduce the impact of heat island effect.

tree canopy or replacing any removed moderate or significant trees with at least two trees or precinct DCP/council replacement rate, whichever is higher. In Greater Sydney the tree canopy target specified by council or in the Greener Places Design Guide (if not specified) is to be delivered (whichever is higher) — giving preference to locally Indigenous and Australian native plant species

### **Ecological value**

Encourages and recognises projects that enhance the ecological value or biodiversity of the project site. Points are awarded when:

- Enhance ecological value – land types include hard surfaces, exotic vegetation, nonimproved pastures, planted native vegetation, regenerating native habitat, remnant native vegetation, natural water bodies, artificial water bodies
- Enhance biodiversity

## **5. Design resilient and diverse places**

### **Matter for consideration**

#### **Resilience**

An integrated approach to site-specific risks has been taken, and strategies taken to reduce or avoid occupants' vulnerability to those risks, particularly bushfire, flooding, extreme heat and coastal erosion

### **Adaptation and Resilience**

Encourages and recognises projects that are resilient to the impacts of a changing climate and natural disasters. Points are available where:

- A project specific Climate Adaptation Plan has been developed.
- Prior to the occupation of any habitable building on the project site, a project specific Community Resilience Plan has been developed that addresses preparation, during and post-disaster communication, safety and response.

#### **Housing diversity**

The proposal responds to the local housing strategy and provides an equitable distribution of housing type and tenure for the demographics of the local area to enable ageing in place.

### **Design Review**

Encourages and recognises projects that undertake a design review process to facilitate sustainable urbanism. The design review ToR for Site Planning and Layout defines 'Density' as:

Providing a mix of housing types and styles to facilitate housing choice, affordability and ageing in place and which address local housing needs.

## Significant development & All other development

### **Principles and mandatory matters for consideration**

### **Green Star Buildings Credits**

#### **1.Design places with beauty and character**

### **Matter for consideration**

#### **Attractive form**

The development has, on balance, positive design qualities, and supports beautiful places (including contributing to the local character, where described), as

### **Contribution to Place**

The building's design makes a positive contribution to the quality of the public environment. Points are awarded where the building's design contributes to the liveability of the wider urban context and enhances the

determined against a number of specific aspects of design, including:

- massing
- articulation
- diversity and mix
- scale, views and vistas
- 3D expression
- entries and setbacks to public space
- details and materials
- wayfinding, paths and common areas

public realm. Compliance with this credit can be demonstrated through an urban context analysis that outlines the context of the development and the design responses, or an independent design review, held at key points in the development of the design.

## **2. Design inviting public space**

### **Matters for consideration**

#### **Impacts on public space**

There is no encroachment on existing public open space, and adverse impacts from adjoining built development, with no net loss of public space.

### **Contribution to Place**

The building's design makes a positive contribution to the quality of the public environment. Points are awarded where the building's design contributes to the liveability of the wider urban context and enhances the public realm. Compliance with this credit can be demonstrated through an urban context analysis, which must include a design response demonstrating that public space is not negatively impacted by the proposed design.

### **Enjoyable Places**

The building provides places that are enjoyable and inclusive.

Points are awarded where the building delivers memorable, beautiful, vibrant communal or public places where people want to gather and participate in the community. The spaces are inclusive, safe, flexible and enjoyable.

### **Impacts on vibrant areas**

If in or near 'vibrant areas' (including night-time economy areas, major public space and licensed premises) the proposal demonstrates:

- siting, massing and acoustic design of residential buildings and mechanisms that safeguard future operation of the area
- ground floor uses adjacent to vibrant areas enhance the prevailing uses, and
- natural light access to major public space is safeguarded and shade provided to activity streets.

### **Contribution to Place**

The building's design makes a positive contribution to the quality of the public environment. Points are awarded where the building's design contributes to the liveability of the wider urban context and enhances the public realm. This credit can be achieved through an urban context report, that outlines the urban context of the development and the design responses.

The building can contribute positively to its context by providing well designed active frontages. The building's frontages can be articulated by:

- Providing visual and physical permeability on ground level frontages

### **Activation**

There is non-residential activation on a minimum percentage of frontage of sites facing activity streets, with adequate lighting and passive surveillance (percentage to be

determined during development of the Design and Place SEPP).

- Using designs, materials, colour, and details to break long sections to make it attractive to walking
- Having sidewalks around the building to encourage safe walking and cycling activities, as well as provide shading for pedestrians and other activities, particularly with trees
- Designing entrances to be welcoming and to contribute to the public realm.

### 3. Design productive and connected places

#### Matters for consideration

Fine-grain movement

Proposed walking and cycle links connect to designated walking and cycling networks at the site boundary, and provide publicly accessible through-site links for walking and cycling so that no street frontage between paths is greater than the maximum block length set out in Consideration 5: Street design

#### Density

The massing (height and floor space ratio) and zoning of precincts and significant development on urban-capable land, is capable of achieving the target gross residential densities in R1 to R4 zones (general, low, medium and high density residential zones). Density ranges will be determined during development of the Design and Place SEPP, based on a development's location and transport access, with a minimum density capacity of 15 dwellings per hectare. This consideration must be read together with Consideration 10: Housing diversity, in relation to the need for a range of housing types and tenures within residential areas.

#### Transport and parking

The proposal minimises car parking using the lowest of: — the rates specified in the Guide to Traffic Generating Developments (RTA 2002 (or when revised and retitled, the Guide to Traffic Impact Assessment), — any maximum parking rates or lower minimum rates specified by local controls, maps or guidance, and — any further reductions due to site-specific strategies

#### Movement and Place

The building's design and location encourages occupants and visitors to use active, low carbon, and mass transport options instead of private vehicles. Points can be awarded for projects that prioritise walking, cycling, and transport options that reduce the need for private fossil fuel powered vehicles, through introducing cyclist facilities, developing a sustainable transport plan, reducing private vehicle use and encouraging walkability.

N/A

#### Movement and Place

See above. A sustainable transport plan, which must be developed to demonstrate compliance with this credit should include:

- A target mode share for the development that prioritises active and mass transport modes, and recommendations on how to achieve them

including unbundling, or the preparation of adaptive travel plans.

- Outline of how other modes of transport (carpooling, electric vehicles, and drop-off points) will be encouraged over private vehicle use

### **3. Design sustainable and greener places**

The development meets or exceeds the relevant National Australian Built Environment Rating System (NABERS) targets set by the Design and Place SEPP, for: — offices (base building energy) — shopping centres (whole building energy) — hotels (whole building energy) — apartment buildings including common areas (common property energy) — all buildings being 'ready for net zero' from 2030

The development meets or exceeds the relevant BASIX targets for: — all new homes (water, energy, thermal comfort)

Green Star Buildings aims to drive all buildings to be net zero carbon in operations by considering both operational and embodied carbon emissions. Its goal is to ensure that Australia can deliver all new buildings to be net zero carbon in operations from 2030 onwards. Currently, all 6 star rated buildings must be designed to be fossil fuel free, highly efficient, powered by renewables and built with low carbon materials as per the Net Zero Carbon in Operations path. This path is contained within four credits:

#### **Energy Use**

#### **Energy Source**

#### **Upfront Carbon Emissions**

#### **Other Carbon Emissions**

Buildings seeking to get a 6 Star Green Star rating must comply with the Net Zero Carbon in Operations path;

- Buildings that register from 1 January 2023 and are seeking a 5 Star Green Star rating must comply with the Net Zero Carbon in Operations path
- Any building that registers from 1 January 2026 must comply with the Net Zero Carbon in Operations path
- In addition, any building that achieves certification after 1 January 2030 (regardless of when submission occurs) must comply with the Net Zero Carbon in Operations path.

#### **Tree Canopy**

The proposal retains moderate and significant trees and significant vegetation where possible. Any removed moderate or significant trees have been replaced with at least two trees, or the precinct development control plan/council replacement rate, whichever is higher.

If in Greater Sydney, the proposal delivers the minimum number of trees to give effect to the tree canopy target specified by the local council or, if not specified, set out in the Greener Places Design Guide, whichever is higher. The proposal demonstrates the use of greening alternatives (such as green roofs, walls,

#### **Biodiversity enhancement**

The building's landscape enhances the biodiversity of the site. Points are awarded where the building's site includes an appropriate landscape area, a diversity of species and prioritises the use of climate resilient and indigenous plants, and the applicant develops a site specific biodiversity management plan and provides it to the building owner or building owner representative.

#### **Nature connectivity**

softscape etc) particularly where tree canopy targets cannot be met.

Wildlife movement is facilitated within and adjacent to the site. The site must be built to encourage species connectivity through the site, and to adjacent sites. If the project sits within a blue or green grid strategy it must contribute to the goals of the strategy.

#### **Nature stewardship**

The building owner, as part of the project's development, undertakes activities that protects or restores biodiversity at scale beyond the development's boundary.

### **5. Design resilient and diverse places**

#### **Matter for consideration**

##### **Housing diversity**

The proposal responds to the local housing strategy and provides an equitable distribution of housing type and tenure for the demographics of the local area to enable ageing in place.

##### **Affordable Housing**

The proposal provides affordable housing in accordance with affordable housing targets or schemes. Where there are no targets or schemes, the applicant may propose a viable amount of affordable housing for the site, and must provide that amount. Within Greater Sydney, targets generally in the range of 5–10% of new residential floor space are viable and should be delivered (Greater Sydney Region Plan Objective 11).

N/A

Rather than housing diversity and affordable housing, the resilient category in Green Star Buildings contains five credits which respond to an extensive research of a number of resilience frameworks such as the Taskforce for Climate Related Disclosures, Global Real Estate Sustainability Benchmark and the UN SDG, as well as the 100 Resilient Cities program.

These credits:

- Enable the building owner to fully understand and address potential climate risks that may impact the building's ability to function optimally over the long-term
- Understand how the building will withstand other shocks and stresses, such as health pandemics and infrastructure failure
- Build the resilience of the community that interact with the building
- Reduce the building's contribution to the heat island effect
- Support the functioning of the grid as it transitions to a higher level of renewable energy capacity

These outcomes are contained within the 5 credits:

**Climate change resilience**

**Operations resilience**

**Community resilience**

**Heat resilience**

**Grid resilience**

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