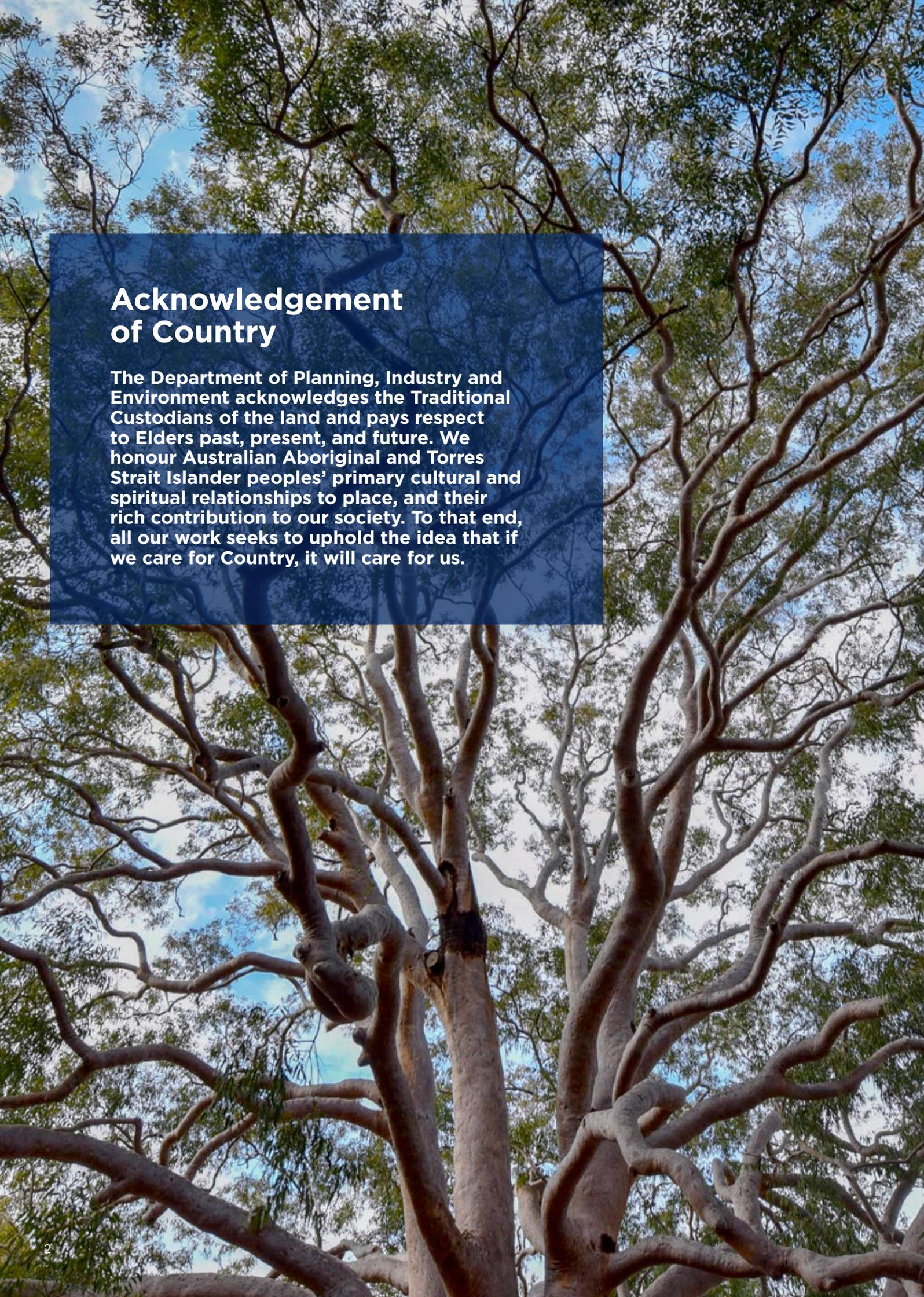


Explanation of  
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# Design and Place SEPP

FEBRUARY 2021



## Acknowledgement of Country

The Department of Planning, Industry and Environment acknowledges the Traditional Custodians of the land and pays respect to Elders past, present, and future. We honour Australian Aboriginal and Torres Strait Islander peoples' primary cultural and spiritual relationships to place, and their rich contribution to our society. To that end, all our work seeks to uphold the idea that if we care for Country, it will care for us.



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Title: EXPLANATION OF INTENDED EFFECT  
FOR A DESIGN AND PLACE SEPP

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# Executive summary

Every new development has the potential to transform our quality of life, enhance the environment and stimulate the economy.

**The proposed Design and Place State Environmental Planning Policy (Design and Place SEPP) is a unique opportunity to positively influence new development and in doing so, enable the design of healthy and prosperous places that support the wellbeing of people, community and Country.**

Well-designed built environments make sound economic sense. They contribute to our health and wellbeing and to successful and thriving places. They respond to the needs and aspirations of people and communities; are made up of attractive buildings and spaces we visit often and feel comfortable in; include quality open spaces, facilities and streets we can easily access and relax in; support good growth and productivity; enhance our comfort through green infrastructure; provide a diversity and mix of neighbourhoods; increase our ability to walk and cycle to local services; and adopt sustainable and resilient practices to minimise our impact on the environment and sustain it for future generations.

The Design and Place SEPP will be a principle-based SEPP, integrating and aligning good design and place considerations into planning policy, and giving effect to a number of objects of the *Environmental Planning and Assessment Act 1979* including good design and amenity of the built environment, sustainable management of built and cultural heritage, and the proper

construction and maintenance of buildings. It will also promote the NSW Premier's Priorities for a Better Environment (Greener Public Spaces and Greening our City).

The Design and Place SEPP is part of the Department of Planning, Industry and Environment's commitment to simplifying and improving the NSW planning system and reducing complexity without reducing rigour. Two existing State environmental planning policies (SEPPs) will be repealed and replaced into Design and Place, with relevant provisions transferred across: SEPP No 65 – Design Quality of Residential Apartment Development and SEPP (Building Sustainability Index: BASIX) 2004.

This explanation of intended effect (EIE) describes the purpose of the Design and Place SEPP; its proposed structure, key components, and the scale and type of development it applies to; proposed amendments to existing SEPPs; and the interface of the Design and Place SEPP with other planning legislation.

The **Design and Place SEPP** will establish principles for the design and assessment of places in urban and regional NSW:

PRINCIPLE 1.	PRINCIPLE 2.	PRINCIPLE 3.	PRINCIPLE 4.	PRINCIPLE 5.
<b>Design places with beauty and character</b> <i>that people feel proud to belong to</i>	<b>Design inviting public spaces</b> <i>to support engaged communities</i>	<b>Design productive and connected places</b> <i>to enable thriving communities</i>	<b>Design sustainable and greener places</b> <i>for the wellbeing of people and the environment</i>	<b>Design resilient and diverse places</b> <i>for enduring communities</i>

The **Design and Place SEPP** will also:

- establish matters for consideration and application requirements that collectively respond to each of the principles
- provide a single point of reference for design-related considerations and performance criteria in the planning system
- define scales of development – precincts and significant development, and all other development
- introduce a robust and consistent design process through requirements for design skills, design evaluation and review, and design excellence
- integrate a design-led, place-based approach, which includes embedding the draft *Connecting with Country* Framework
- be supported by existing, revised and new guidance, including a revised Apartment Design Guide (ADG), a new Urban Design Guide (UDG), and revisions to the Building Sustainability Index (BASIX)
- repeal and replace SEPP No 65 – Design Quality of Residential Apartment Development and SEPP (Building Sustainability Index: BASIX) 2004 (BASIX SEPP)
- consolidate design and place requirements in other SEPPs in the future.

**Following public exhibition and engagement on this EIE, the proposed new Design and Place SEPP will be drafted and exhibited in late 2021 for further comment. The draft Design and Place SEPP will include specific considerations and targets that are more broadly proposed in this EIE.**

**The public are invited to comment on all matters in this EIE.**

---

**Incorporating BASIX** into the Design and Place SEPP will:

- improve customer experience and promote innovation through regular tool updates and by recognising emerging technologies
- include updated sustainability targets and provide flexibility in the available assessment pathways
- continue to drive energy and water efficiency, and sustainability commitments for housing in NSW.

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The **revised ADG** will:

- address key areas of industry concern, including solar access, natural ventilation and noise, apartment size and layout, deep soil and landscape design, and car parking
- consolidate, review and improve objectives, criteria and guidance to ensure they enable place-led and performance-based outcomes through guidance that can be flexibly applied
- be restructured to enable alignment of design guidance for other housing typologies, and the development of a unified Housing Design Guide in the future.

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The **new UDG** will:

- establish comprehensive guidance and criteria for the place-based design of high-quality urban environments
- clarify design processes and outcomes for precinct planning and larger scale development proposals
- improve amenity in foundational urban elements, including making meaningful connections to Country and place; creating healthier, more vibrant and prosperous communities; and prioritising greener and higher quality streets and public open spaces.

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The **new Design Review Guide** will:

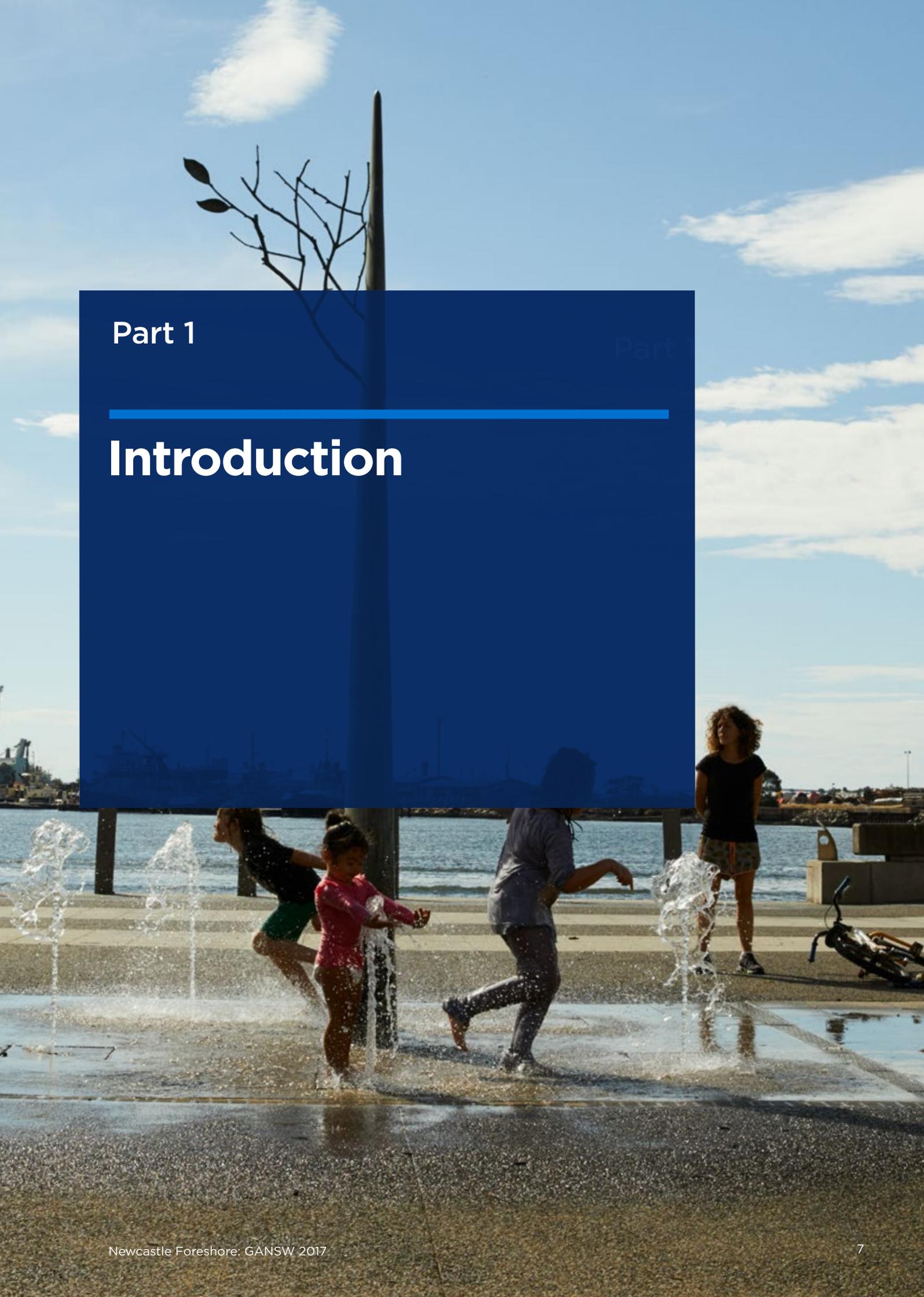
- address key areas of industry concern regarding design review across the State by providing new guidance to establish consistent terms of reference and robust requirements for design review panels and design quality evaluation
- define additional thresholds for design review for State and local government.

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Part 1

# Introduction



# 1.1 Purpose of this document

## 1.1.1 Context

This explanation of intended effect (EIE) is prepared for the purposes of consultation under s3.30 of the *Environmental Planning and Assessment Act 1979* (the EP&A Act) and the Department of Planning, Industry and Environment *Community Participation Plan* (2019).

The purpose of this EIE is to facilitate public consultation on a proposed new Design and Place State Environmental Planning Policy (Design and Place SEPP) for NSW. The proposed new SEPP includes matters that are of State, regional, and local environmental planning significance, and will incorporate statewide principles for the design of places and assessment of development proposals.

## 1.1.2 Structure

The structure of this EIE is as follows:

- **Part 1** - purpose of the proposed Design and Place SEPP, timeline and next steps
- **Part 2** - structure of the Design and Place SEPP, aims, design and place principles, development scales and types
- **Part 3** - key components of the Design and Place SEPP including design processes, skills, evaluation and review, matters for consideration and guidance
- **Part 4** - proposed amendments to existing SEPPs
- **Part 5** - relationship of the Design and Place SEPP to other planning legislation
- **Part 6** - interface of the Design and Place SEPP with existing planning pathways
- **Appendices** - proposals for a revised Apartment Design Guide (ADG), a new Urban Design Guide (UDG), and revisions to the Building Sustainability Index (BASIX).

# 1.2 Timeline and next steps

## 1.2.1 Exhibition and engagement

### **Public exhibition**

This EIE is exhibited in accordance with the consultation requirements of s.3.30 of the EP&A Act and the Department's Community Participation Plan (2019).

### **Engagement**

During the public exhibition period, engagement will be targeted to the community, councils, industry and peak bodies, and State agencies to clarify the intentions and implications of the proposed Design and Place SEPP and provide platforms for discussion and feedback on its intended effects.

To register your interest, email [designandplacessepp@planning.nsw.gov.au](mailto:designandplacessepp@planning.nsw.gov.au) or visit the Design and Place SEPP page on the Department's [website](#).

### **Making a submission**

We welcome your feedback on this EIE to help us understand your views and inform the development of the Design and Place SEPP.

Submissions on the EIE can be made by completing the online feedback form at: [www.planningportal.nsw.gov.au/draftplans/on-exhibition](http://www.planningportal.nsw.gov.au/draftplans/on-exhibition).

Submissions may address the issues raised throughout this EIE, provide feedback on specific matters, or provide additional input regarding the proposed Design and Place SEPP. A response to submissions will be published following the close of the exhibition period.

## 1.2.2 Development of the new Design and Place SEPP

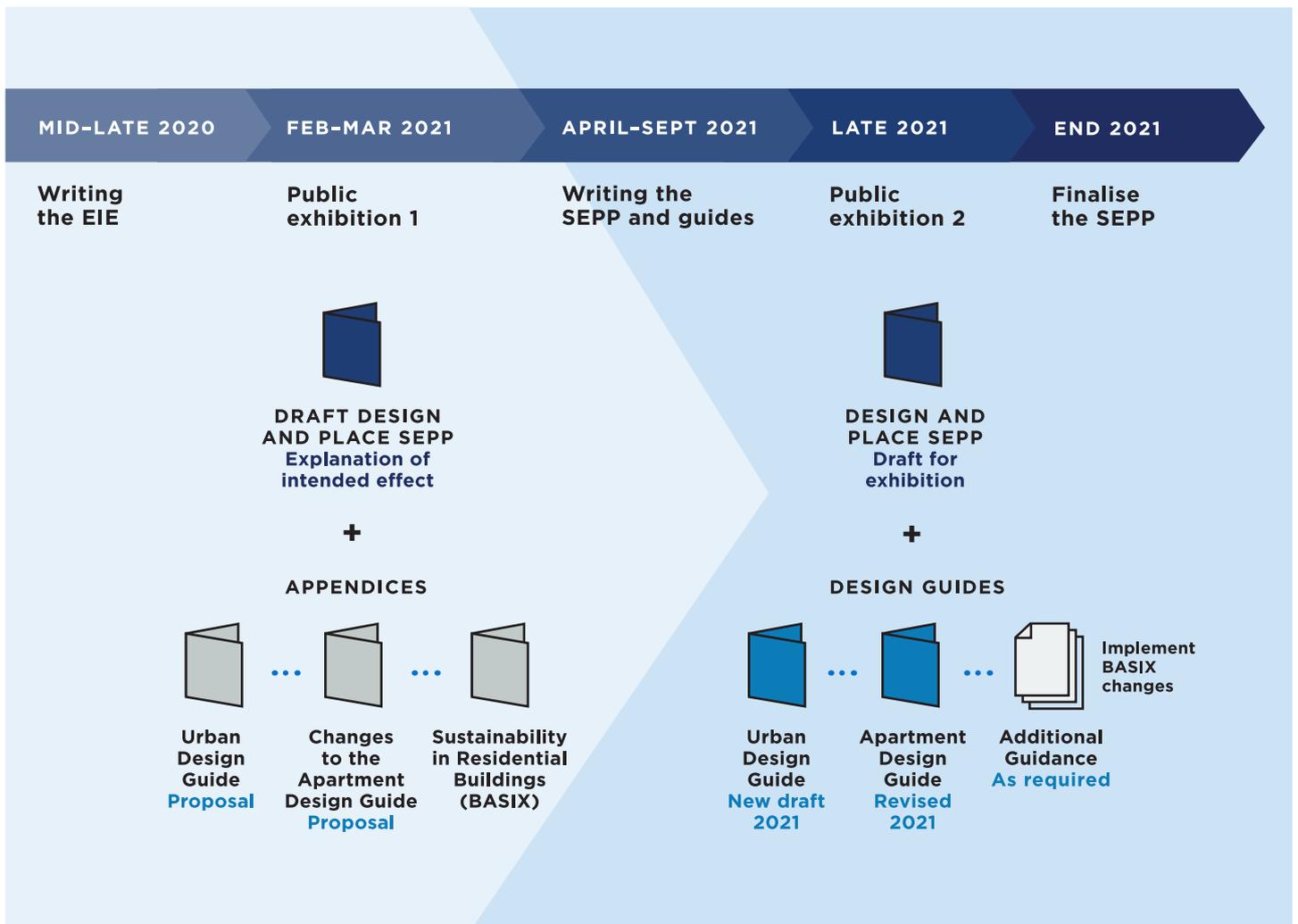
Following public exhibition and engagement, submissions and feedback on this EIE will be reviewed and analysed to refine principles and considerations and inform drafting of the proposed Design and Place SEPP. Further testing and detailed economic analysis will also be undertaken.

Before being made, the Draft Design and Place SEPP will be exhibited mid to late 2021.

Drafting and exhibition of the revised ADG and BASIX, and new UDG (as well as other guidance identified to support the Design and Place SEPP), is also proposed for late 2021.

The proposed timeline of the Design and Place SEPP is set out in Figure 1.

**Figure 1: Public exhibition key dates and documents**



A photograph of a person walking on a paved path next to a tennis court. The person is wearing a light-colored coat and dark pants. The tennis court is enclosed by a high black fence with a chain-link top. The scene is illuminated by the warm, golden light of a sunset or sunrise, with long shadows cast across the grass. A large tree with green leaves is visible in the upper left corner. The background shows a clear sky with some light clouds.

Part 2

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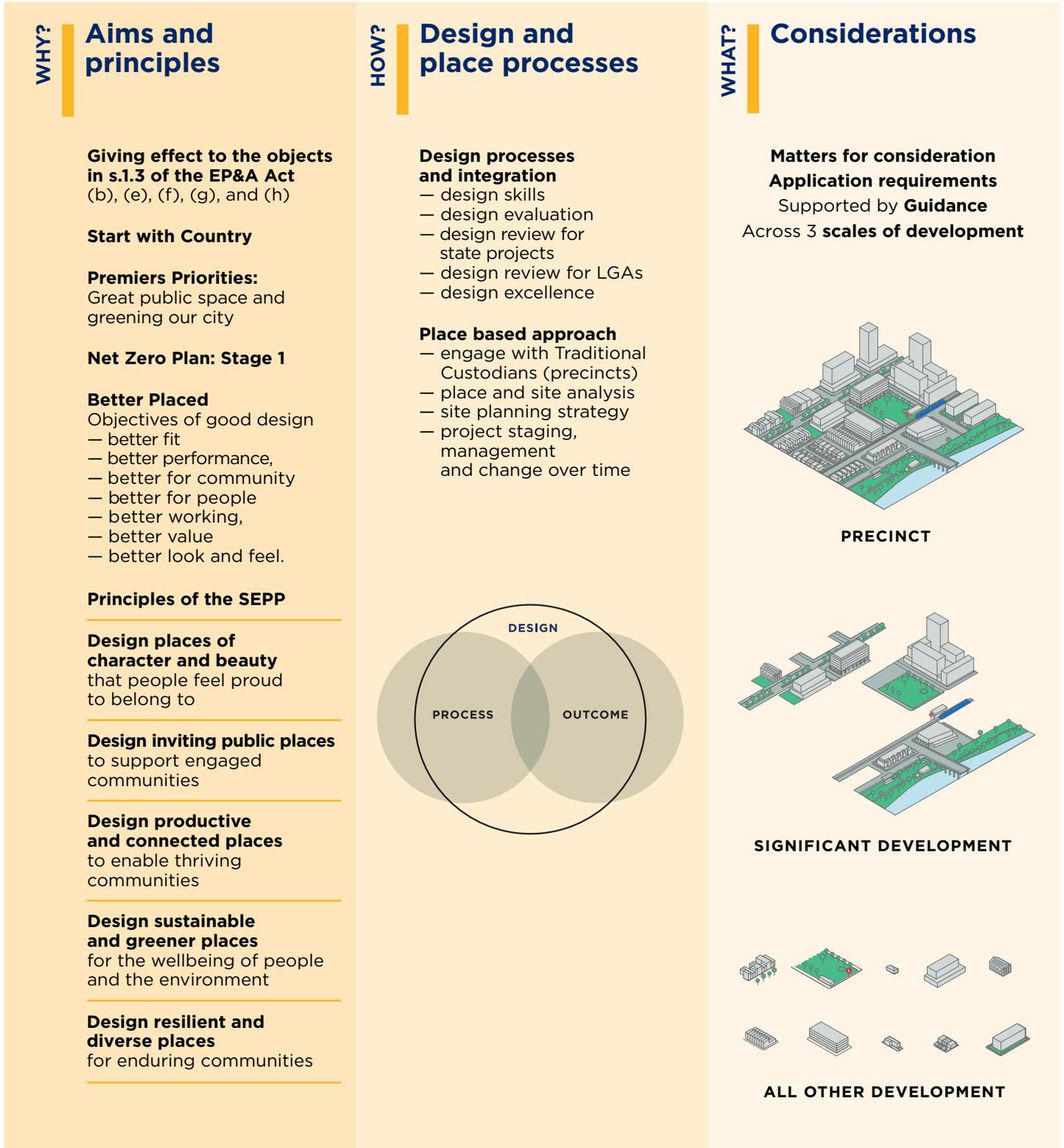
# Proposed State Environmental Planning Policy (Design and Place)

# 2.1 Structure of the new SEPP

The proposed structure of the Design and Place SEPP has three parts as set out in Figure 2.

The Design and Place SEPP will be supported by a revised Apartment Design Guide (Appendix A), a new Urban Design Guide (Appendix B), and revisions to BASIX (Appendix C). Additional guidance will be developed alongside the Design and Place SEPP as required.

Figure 2: Design and Place SEPP proposed structure



## 2.2 Aims of the new SEPP

**The proposed Design and Place SEPP establishes principles, matters for consideration and guidance to encourage innovative design that maximises public benefit. It will provide an integrated instrument to include design and place requirements in other SEPPs.**

It is proposed the Design and Place SEPP will support consolidation and simplification by repealing and replacing SEPP No 65 – Design Quality of Residential Apartment Development (SEPP 65) and SEPP (Building Sustainability Index: BASIX) 2004 (BASIX SEPP).

The Design and Place SEPP aims to:

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**1. Give effect to the objects in s.1.3 of the EP&A Act by responding as follows:**

- b. to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment, through an assessment of sustainability and resilience and contributing to NSW targets for resource use and emissions; contributing to productive local economies and social cohesion through adequate provision of public space*
- e. to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitat through identification, integration and enhancement of green infrastructure*
- f. to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage), through an awareness and response to heritage, character, culture and Country*
- g. to promote good design and amenity of the built environment, through a method for design processes, design evaluation, and design review that is proportionate to the impacts and outcomes that contribute to a well-designed (healthy, responsive, integrated, resilient and equitable) built environment which includes inviting public spaces*
- h. to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants, through consideration of whole-of-life costs of development, and integration of building systems*

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**2. Start with Country as a foundation for place-based design and planning**

as set out in the draft *Connecting with Country* Framework

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**3. Respond to the relevant Government priorities**

**Premier's Priorities for a Better Environment** (Greener Public Spaces and Greening our City)

NSW Government's objective to achieve net zero emissions by 2050 as set out in **Net Zero Plan Stage 1: 2020–2030** (DPIE 2020)

**Better Placed – An integrated design policy for the built environment of NSW** (GANSW 2017) which sets out key considerations for design of the built environment and defines characteristics of a well-designed built environment

---

**4. Deliver healthy and prosperous places that support the wellbeing of people, community and Country through integrating good design process into planning and development to achieve the 5 design and place principles**

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**5. Enable the delivery of quality design, integrated outcomes and innovation for people and places in NSW.**

---

**6. Create a consistent set of principles, considerations and guidance for the design of the NSW built environment.**



Pearl Gibbs Street Art in Dubbo by artist Matt Adnate: Destination NSW 2020

### **2.2.1 Connecting with Country**

Consistent with *Connecting with Country - A draft framework for understanding the value of Aboriginal knowledge in the design and planning of places* (GANSW 2020) we all need to take up the challenge of thinking differently, working differently, and making decisions that prioritise Country.

Connecting with Country is a response to Indigenous concepts of Country, taking a holistic and Country-led approach to the built environment, guided by Aboriginal people. Connecting with Country is fundamental to place-based design and planning and is integral to a well-designed built environment.

Connecting with Country first requires making a commitment to developing cultural awareness and valuing Aboriginal cultural knowledge and expression. To develop connections with Country, the Design and Place SEPP seeks to create opportunities to integrate Aboriginal perspectives in built environment projects. Projects will be encouraged to consider Country, and seek to engage with Traditional Custodians

for precinct-scale projects. However, it is critical that Aboriginal people retain control and ownership over their knowledge, its expression and the way it is shared.

The Connecting with Country Draft Framework considers how design and planning processes are related to natural systems and elements including the land, water, air, plants, animals and humans. It outlines opportunities for industry and government to connect and engage respectfully and appropriately with Country through relationships with Aboriginal communities. It also provides practical ways to address the legislative requirements of object (f) of the EP&A Act and is overarchingly a commitment to the health and wellbeing of Country.

The Connecting with Country Draft Framework aims to identify and create opportunities to value Aboriginal wisdom and knowledge in the design, planning and management of our open spaces and built environments.

## 2.3 Principles of the new SEPP

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.

The proposed Design and Place SEPP is framed around five guiding principles. These principles aim to deliver healthy and prosperous places that support the wellbeing of people, communities and Country.



PRINCIPLE

# 1.

**Design places with beauty and character** that people feel proud to belong to



PRINCIPLE

# 2.

**Design inviting public spaces** to support engaged communities



PRINCIPLE

# 3.

**Design productive and connected places** to enable thriving communities



PRINCIPLE

# 4.

**Design sustainable and greener places** for the wellbeing of people and the environment



PRINCIPLE

# 5.

**Design resilient and diverse places** for enduring communities.

The principles have been developed to align with local best practice and the foundational work that has been established by the Department's guidance, including *Better Placed – An integrated design policy for the built environment of NSW* and *Greener Places – An urban green infrastructure design framework for NSW* (GANSW 2020), in addition to many important policy papers from industry and academic groups. This foundational work aims to achieve strong design-focused outcomes and aligns with the Premier's Priorities to increase the proportion of homes in urban areas within 10 minutes' walk of quality green, open and public space by 10 per cent by 2023 (Greener Public Spaces), and to increase the tree canopy and green cover across Greater Sydney by planting 1 million trees by 2022 (Greening Our City).

The principles have also been developed to align with national and international best practice including the United Nations Sustainable Development Goals, the World Health Organization Healthy Cities program and the Resilient Cities Movement.

The principles seek to respond to growing concerns about changing housing needs and affordability, and an environment impacted by climate change. They aim to elevate place attributes and local context in the design and assessment of places, and incorporate end-user needs to create healthy communities.

The principles will be given effect through matters for consideration and application requirements.

**The principles reflect lessons reinforced during the recent global coronavirus pandemic, including the community's need for public space, recreation, and destinations, such as community infrastructure, that are local and walkable from their homes.**

COVID-19 has demonstrated much of the NSW workforce can function remotely when necessary. Over 44 per cent of work is capable of remaining as remote work in the long-term with a 13 per cent average increase in productivity (NSW Remote Working Insights, Treasury 2020).

This shift in work and mobility brings new focus to the liveability and productivity of local neighbourhoods, and the economic and employment opportunities presented to service the needs of increased numbers of residents and workers in local areas.

COVID-19 has highlighted the need for resilient cities with flexible housing that supports working from home, and local amenities when mobility is constrained by lockdowns or reductions in public transport capacity.



## PRINCIPLE 1:

# Design places with beauty and character *that people feel proud to belong to*

**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.**

### **Significance**

The quality of our neighbourhoods, towns and cities has a significant impact on our daily lives.

Visually attractive and physically comfortable places that respond to a community's needs and desired future character feel connected, sensitive and relevant, and make a positive contribution to their context.

Frequent and ongoing use strengthens a community's sense of belonging and contributes to the local character of a place and the ongoing enhancement and sustainability of neighbourhoods. Well-designed buildings and spaces generate interest, attract visitors and residents, and invite business activity, bringing investment and fostering a sense of local pride and identity.

### **Intended effect**

The Design and Place SEPP will:

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elevate the role, importance and value of design to ensure design quality of new neighbourhoods and precincts, public spaces, new architecture, landscape architecture and the environment

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require that a good design process (design skills; design-led, place-based approach; design evaluation and review) is undertaken to achieve design quality, and that development demonstrates the seven objectives of good design, as defined by *Better Placed*

---

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.

These intended effects will be realised through mandatory considerations for cultural and built heritage and attractive form. For further detail see Table 1 and the design processes outlined in Section 3.1.



## PRINCIPLE 2:

# Design inviting public spaces *to support engaged communities*

**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.**

### **Significance**

As NSW plans for future growth and development, equitable access to high-quality public space is becoming increasingly important. Public spaces play a crucial role in ensuring quality of life for communities by providing spaces to share experiences, connect with each other, build healthy activities into everyday life, and get closer to nature.

Public spaces include open spaces, streets, community facilities and venues that are publicly owned or of public use, and can be used by all. Well-designed public spaces are flexible for a variety of intended uses, integrate well with their context, spark new opportunities for local economic development and are adaptable to changes in climate, ecology, demographics and economy. They play a critical role in creating healthy cities by mitigating climate change effects through water-sensitive design and providing the space and conditions for significant tree canopy and vegetation. Public spaces also build our capacity to withstand shocks during times of crisis by providing space for refuge or escape.

### **Intended effect**

The Design and Place SEPP will:

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propose new targets to retain or increase the provision and diversity of public space across NSW, including the protection of existing public space assets

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propose that new dwellings and workplaces are located in close proximity to public space (either existing or newly created) to increase accessibility and create walkable neighbourhoods

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deliver green infrastructure for greater connectivity, including landscape corridors, recreational walking and cycling networks, and fit-for-purpose open space for recreation

---

ensure that buildings near vibrant areas, such as licensed premises or major public space, do not impact the ability for those areas to continue to operate.

These intended effects will be realised through mandatory considerations for public space, connectivity, impacts on public space, impacts on vibrant areas, and activation. For further detail see Table 1.



### PRINCIPLE 3:

## **Develop productive and connected places** *to enable thriving communities*

**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.**

### **Significance**

The NSW Government plays an important role in supporting economic activity and productivity by creating conditions that help businesses invest, compete and innovate. Planning reform that responds to the evolving needs of growing populations and business communities is a key enabler of productivity growth.

Appropriate density is vital to the liveability of both new and existing precincts and neighbourhoods as sufficient population densities can support productive local businesses; high-quality amenity such as community facilities for education, social interaction, cohesion and support; and public transport options for wider access to opportunity.

A well-designed neighbourhood is human-scaled and compact in form. It prioritises walkability and cycling by establishing interconnected and fine-grained street networks that are green, attractive and safe. It enables people to meet their daily needs, supports local business, and reduces car dependency. Increasing walkability increases peoples' physical activity, reducing longer term health impacts and costs. It also capitalises on existing assets and reduces peak demand and congestion costs.

### **Intended effect**

The Design and Place SEPP will:

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propose baseline residential density targets in urban areas (along with a range of housing and tenure types, see Principle 5) to ensure development incorporates a well-designed walkable urban form to support the economic viability of infrastructure and local businesses; to enable efficient servicing; to maximise residential proximity to employment and local services, parks, fresh food and public transport; and to minimise extensive land use

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provide needs-based car parking assessment methods by identifying locations for maximum parking rates, lowering minimum rates, and specifying where adaptive travel plans are to be prepared

---

require increased permeability by setting street intersection density targets, maximum block lengths and increasing the provision of publicly accessible through-site links to create connected and fine-grained street networks that prioritise pedestrians and cyclists

---

encourage the construction of well-designed footpaths, shared paths, and cycleways that promote behaviour change and set new standards of comfort and safety.

These intended effects will be realised through mandatory considerations for local living, street design, fine-grain movement, density, and transport and parking. For further detail see Table 1.



## PRINCIPLE 4:

# Design sustainable and greener places

*for the wellbeing of people and the environment*

**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.**

### Significance

The increasingly evident effects of climate change have necessitated immediate action to ensure today's decisions do not compromise future generations.

Design of the built environment should aim to achieve equilibrium (sustainable design) and contribute to the repair or mitigation of past damage (regenerative design). Sustainability, regeneration and circular economy are fundamental aspects of whole-of-life design, through both the minimisation of energy and water consumption, as well as their production and re-use; the minimisation of emissions, material use and waste; and the contribution to the conservation of environments and ecosystems.

A sustainable environment integrates green infrastructure, delivering multiple benefits for people, communities and natural habitats. Green Infrastructure includes networks of green spaces, including parks and open spaces, that support human and ecological health and improve the connection of bushland and waterways to protect habitat and biodiversity. Trees are an essential part of green infrastructure. They have manifold human benefits including improving air quality, absorbing carbon and rainfall, cooling local environments, supplying shade and shelter, and providing attractive, seasonal variety that creates neighbourhoods where people want to live.

### Intended effect

The Design and Place SEPP will:

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support alignment with the NSW Government's Net Zero Plan by requiring development to contribute to the existing statewide, whole-of-economy target of 35 per cent reduction in construction and operational carbon emissions by 2030 (compared to 2005 levels) and setting future targets to achieve net zero emissions by 2050

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encourage development to be designed within the context of the existing landscape by introducing a requirement to integrate landform, bushland, hydrology and ecology; retain existing green infrastructure (where possible), particularly habitat and significant vegetation; and maintain and enhance the quality of our watercourses

---

require the coordinated planning and design of green infrastructure, including the introduction of tree replacement rates and tree canopy targets as well as encouraging green walls and roofs, cool pavements, and water-sensitive urban design.

These intended effects will be realised through mandatory considerations for water management, green infrastructure, emissions, resource efficiency and tree canopy. For further details see Table 1.



## 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.**

### **Significance**

Communities across NSW are impacted by shocks, stresses and changes as we deal with variable climatic conditions, natural and people-made hazards and risks, and ongoing population change. Climate change will exacerbate many of these conditions, making it difficult to manage landscapes and ecosystems and the human activities that depend on them. Acute stress or extreme shock can disrupt economies and affect lives, especially for the most vulnerable.

The devastating 2019–20 bushfire season was the worst NSW has recorded, with lives lost, widespread destruction of land, national parks and ecosystems, and air quality amongst the worst in the world. In addition, the COVID-19 pandemic has disrupted lives, impacting the way we work, travel, and use our homes, open spaces, and local centres.

Resilient design is the intentional design of built and natural systems that anticipate and enable us to adapt to change and disruption in creative and innovative ways. This approach anticipates how we can build adaptive capacity into a space or building and provide for the safety and wellbeing of future users. Examples of resilience by design include providing natural buffer zones in precincts, making allowance for system redundancy, providing diverse environments, and designing buildings to streamline their future retrofit or sustainable demolition.

Well-designed, adaptive neighbourhoods incorporate mixed uses, housing diversity, and universal design with a range of housing types and tenures. They enable key workers to live close to jobs, households to grow or downsize in their local area, and housing to be offered at different pricepoints. A well-designed built environment optimises safety and security (actual and perceived).

### **Intended effect**

The Design and Place SEPP will:

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establish resilience as a foundation for place-based design to drive more integrated site outcomes by introducing new considerations that support resilience

---

encourage more inclusive communities by requiring development to provide a range of housing and tenure types

---

optimise opportunities to address and reduce the impact of wider economic and social trends, supporting diversity, equity, population change, and resilience in the face of changing needs

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foster social resilience by creating welcoming, inclusive and equitable places respectful of people of all abilities and from all walks of life.

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These intended effects will be realised through mandatory considerations for resilience, housing diversity and affordable housing. For further detail see Table 1.

## 2.4 Application of the new SEPP

It is proposed the Design and Place SEPP will apply to all urban land in NSW, including in urban and regional places, and to planning and development proposals of different scales and typologies where the consent authority is either State or local government.

Application of the SEPP where the consent authority is a local or regional planning panel or the Independent Planning Commission, and for proposals made under Part 5 of the EP&A Act, will be determined during development of the Design and Place SEPP.

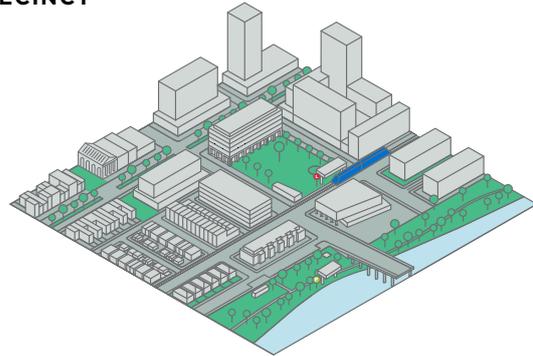
It is proposed the Design and Place SEPP will apply to urban land, and therefore will either define land to which the policy applies, to exclude certain zones (such as rural zones as defined by the Standard Instrument (Local Environmental Plans) Order 2006), or exclude development types (such as items 1 to 10 of Schedule 1 (State significant development – general) of SEPP (State and Regional Development) 2011. These exclusions will be refined during development of the Design and Place SEPP.

### 2.4.1 Development scales

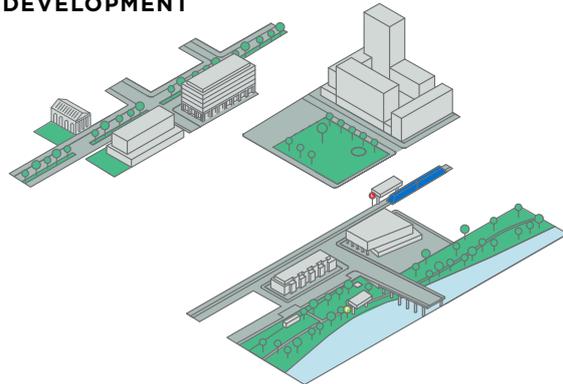
The matters for consideration and application requirements proposed by the Design and Place SEPP will apply to three development scales:

- precincts
- significant development and
- all other development.

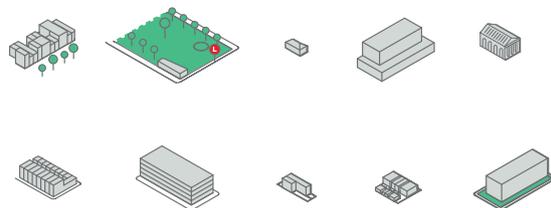
#### PRECINCT



#### SIGNIFICANT DEVELOPMENT



#### ALL OTHER DEVELOPMENT



## Precincts

Precincts (including both new and urban renewal areas) are often defined by physical characteristics, such as the area of land suitable for development, or boundary constraints such as rivers, creeks or bushland. Small precincts may knit into the surrounding neighbourhood, while large precincts may comprise multiple neighbourhoods.

Precincts are generally proposed and delivered by State or local government, but may also be proposed and delivered by the private sector. The planning pathway for a precinct may be a development application or planning proposal and the consent authority is State or local government.

The Design and Place SEPP proposes to create greater consistency in the planning of precincts including a consistent definition and method for defining a precinct and its boundaries, in order to deliver better neighbourhoods for communities to live in.

For the scale of precincts to be sufficient to enable the creation or improvement of neighbourhoods, the Design and Place SEPP proposes the following thresholds to define where these considerations would apply.

### **Precinct considerations would apply:**

- wherever a requirement for 'precinct plan', 'precinct study' or 'master plan' is specified in another instrument
- to any planning proposal under s.3.33 of the EP&A Act greater than 10 ha or 1000 people
- to any community scheme subdivision or subdivision into more than 50 lots
- to areas identified for local strategic planning including amendments to local environmental plans (LEPs) (that are not planning proposals)
- to any other similar plan or spatial arrangement greater than 10 ha or 1000 people.

## Significant development

Significant developments are defined by their size, economic value, or potential impacts the development may have. Some developments are deemed to be of State significance as identified in SEPP (State and Regional Development) 2011 (State and Regional Development SEPP).

Significant development can be proposed and delivered by State government, local government, or the private sector. The planning pathway for significant development may be State significant development, State significant infrastructure or concept development and the consent authority is State or local government.

For the scale of significant development to be sufficient to enable the creation or improvement of neighbourhoods, the Design and Place SEPP proposes the following thresholds to define where these considerations would apply.

### **Significant development considerations would apply to:**

- development on a parcel of land
  - within a precinct or on a site bounded by streets on all sides
  - on a site greater than 4000 m<sup>2</sup> or 500 people
  - on a site greater than 1500 m<sup>2</sup> in a metropolitan centre.
- State significant development (SSD), as declared in the State and Regional Development SEPP, on urban land
- regionally significant development, as declared in the State and Regional Development SEPP, on urban land
- State significant infrastructure (SSI) on or adjacent to urban land.

The proposed Design and Place SEPP will include a method for occupancy calculation (number of people) consistent with standard methods, such as those used to estimate traffic generation.

The proposed Design and Place SEPP will apply to urban land, and exclusions for certain zones, including rural zones, and certain development types will be determined during development of the SEPP.

## All other development

The development of individual buildings and spaces falls within this development scale. All other developments include multiple development typologies and can be proposed and delivered by State government, local government, or the private sector. The planning pathway for all other development may be development applications and the consent authority is State or local government.

Application to complying development will be determined during development of the Design and Place SEPP.

## 2.4.2 Development types

In NSW, considerations of design and place quality are addressed variously in the planning system, including through environmental assessment requirements required by the Secretary of the Department of Planning, Industry and Environment (Secretary's environmental assessment requirements: SEARs), design excellence clauses, and in SEPP 65, which apply to a narrow range of development typologies. The Design and Place SEPP proposes to expand the need for design and place quality to a broader range of development typologies, from individual buildings, to public spaces, to whole neighbourhoods, to improve the delivery of well-designed precincts and the buildings and spaces within them.

The proposed structure of the Design and Place SEPP will allow for new design requirements to be added in response to different scales and types of development as they arise.



Newcastle Foreshore: GANSW 2017



## Part 3

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# Key components of the new State Environmental Planning Policy (Design and Place)

# 3.1

## Design processes

**The proposed Design and Place SEPP will require that good design process is undertaken for planning and development proposals, and that the design processes, as well as the design outcomes, are assessed. Fundamental to good design process is the consideration of place, starting with Country.**

Planning and development in NSW takes place on the land of Traditional Custodians, and affects places of many scales, locations, environments, economies, peoples and cultures. The proposed Design and Place SEPP will establish requirements for considering Country. It will also embed a place-based approach to the design of the built environment, including considerations for the long-term sustainability and resilience of all places in NSW.

The requirements proposed to enable this process are:

- provisions for design skills and expertise in the design and review of planning and development proposals
- provisions for a design-led, place-based approach to planning and development
- provisions for design evaluation and review.

### 3.1.1 Design skills

The proposed Design and Place SEPP will require that developments that are three or more storeys, open space over 1000m<sup>2</sup>, and precincts and significant development, are designed by suitably qualified design professionals, particularly where design has a high impact on the environment or community due to its scale or future population.

Qualified designers are defined by cl.50 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation). The EP&A Regulation identifies the requirement for qualified designers in cl.50(1A) in relation to SEPP 65. The requirement for qualified designers is also identified in SEPP (Educational Establishments and Child Care Facilities) 2017 (Education SEPP). The Design and Place SEPP proposes aligning the existing requirements for qualified designers with the *NSW Design and Building Practitioners Act 2020*.

To ensure places and spaces are designed by suitably qualified design professionals, the Design and Place SEPP proposes that:

- a registered architect (qualified designer, same definition as presently used) will be required for all buildings with three or more storeys, and in the case of multiresidential buildings, four dwellings
- a registered landscape architect (qualified designer, new definition) will be required for all open space greater than 1000m<sup>2</sup>
- a qualified designer, i.e. urban designer, architect with master planning skills or landscape architect, will be required for master planning of all precincts and significant development (qualified designer, new definition).

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.

The mechanism for other design professionals to be registered and deemed qualified designers will be determined during development of the Design and Place SEPP.

### **3.1.2 Place-based approach**

Better Placed defines good design as an outcome of a good design process. To deliver a well-designed built environment, a holistic understanding of the place that development will impact and shape is critical. This understanding can inform the design process so it delivers successful outcomes and achieves broad public benefit.

A place-based design approach considers the environment beyond the immediate site or precinct boundaries to understand the unique qualities of the place including its environmental, social, cultural, and economic attributes. This can improve design quality by increasing the opportunity for development to respond to the needs of local conditions and wider urban and natural systems that operate across site and precinct boundaries.

The proposed Design and Place SEPP will strengthen the correlation between place and site analysis and the design outcome by requiring a clear demonstration of how the information is synthesised and interpreted to inform the site planning strategy, overall design response, and contribution to place through considering Country and addressing the identified principles.

### **3.1.3 Design evaluation and review**

In NSW, design evaluation is based on the Better Placed seven design objectives (better fit, better performance, better for community, better for people, better working, better value, and better look and feel) and is often undertaken through design review processes.

Design review is a widely accepted form of:

- improving the design quality of projects to add value to the places where they are built
- giving applicants timely and constructive advice to assist time, quality and certainty of approvals
- providing consent authorities greater assurance and support in their assessment of proposals.

Design review is currently conducted as part of the assessment process for State and local government planning and development proposals. This includes the NSW State Design Review Panel (SDRP) for State significant projects, precincts and infrastructure; project-specific and agency-specific design review panels; and local council design review panels and design excellence clauses. Design review

panels have a key aim of improving design quality outcomes. However, industry feedback has indicated the approach taken to achieve this aim can vary, including the scope of the review, who sits on the panel, the consistency of panel members, and how advice is provided.

The NSW Government acknowledges the effectiveness of design review depends on consistent implementation at State and local levels. 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.

The DRG will:

- 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
- address the role and expertise of a panel chair
- clarify the importance of panellist advice being informed by the relevant planning framework
- give consideration to review timeframes commensurate with project complexity
- clarify the role of the panel as an advisory service to planning assessment teams
- provide case studies of exemplar processes and examples.

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:

- project locations e.g. projects on prominent sites
- project types
- capital investment value
- development height
- site area.

Thresholds may vary for projects in urban and regional areas and may be set by:

- the Design and Place SEPP (providing consistency across NSW), or
- individual councils (depending on their circumstances and urban condition), or
- a combination of both.

## 3.2 Design and place considerations

**The proposed Design and Place SEPP will comprise a set of considerations that collectively respond to each of the principles which will be refined during development of the SEPP. Where further detail is needed to explain the considerations, new guidance is proposed to be provided.**

The proposed Design and Place SEPP will require applicants to demonstrate through application requirements that the SEPP principles and considerations have been met. It will also inform matters for consideration by the consent authority.

### **3.2.1 Application requirements**

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 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. Those requirements are summarised as:

- 1. site analysis** for all development – including site analysis drawings, site planning strategy, phasing or staging plans (where applicable)
- 2. a precinct structure plan** for all precincts and significant development – including a green infrastructure map, public spaces map, heritage map, movement and place map and local character area map, and design documentation and phasing or staging plans (where applicable)
- 3. a design statement** for all development – including consideration of site analysis, Country, local character, design and place principles, Better Placed objectives; resilience strategy; embodied energy; dwelling adaptability; safety by design; site planning strategy; in conjunction with plans, sections and elevations of design, 3D representation (image and digital 3D model)
- 4. precinct planning supporting documents** for all precincts and significant development – including a design statement, draft planning controls, local character statement, travel plan, needs assessment of public space and green infrastructure, sustainability plan, and a resilience risk assessment and implementation plan.

### 3.2.2 Mandatory matters for consideration

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&A Act and will be required to be considered as part of the development assessment process.

Similar to the operation of SEPP 65, requirements to refer applications to design review panels and consider their advice,

minimum design skills, and the use of certain guides will be set out in the Design and Place SEPP and associated instruments.

The highest priority matters for consideration identified to give effect to the principles are set out in Table 1 below and will be refined during development of the Design and Place SEPP.

Wording of the considerations set out in Table 1 is subject to change during the SEPP drafting process.

**Table 1 Proposed design and place considerations**

PROPOSED CONSIDERATION	BENEFIT	APPLIES TO
<p><b>1. 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>Elevates a wider consideration of heritage to include Aboriginal and non-Aboriginal heritage, celebrating cultural landscapes and the relationship of items to their landscape, or heritage in its place.</p>	<p><b>Precinct</b> <b>1. Design places with beauty and character</b></p>
<p><b>2. Public Space</b> Equitable distribution of accessible, well-designed public space has been provided on land fit for purpose with no net loss of public space.</p>	<p>Supports continued access to and availability of public space. Directs the creation of new public space to areas of greater need.</p>	<p><b>Precinct</b> <b>2. Design inviting public space</b></p>
<p><b>3. Connectivity</b> 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>Enables landscape corridors to be provided across urban areas. Facilitates recreational walking and cycling for physical and mental health.</p>	<p><b>Precinct</b> <b>2. Design inviting public space</b></p>
<p><b>4. Local living</b> All housing in urban areas of new precincts is within:</p> <ul style="list-style-type: none"> <li>— 20 <u>minutes walk</u> of local shops, and</li> <li>— 5 <u>minutes walk</u> of local public open space.</li> <li>— Where possible, housing is also within 20 minutes walking distance to primary schools, district open space, public transport, and supermarkets or groceries.</li> </ul>	<p>Reduces car reliance and its unintended effects, such as congestion, by provision of local services and open space for daily needs. Supports walkable neighbourhoods by providing housing near a range of everyday goods and services including local shops. Supports mental and physical wellbeing by providing opportunities for exercise, play and social gathering. Enables future development to be designed to maximise access to opportunities by considering other components of walkable neighbourhoods and understanding recommended walking distances.</p>	<p><b>Precinct</b> <b>3. Design productive and connected places</b></p>

PROPOSED CONSIDERATION	BENEFIT	APPLIES TO
<p><b>5. Street design</b> The precinct:</p> <ul style="list-style-type: none"> <li>– 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</li> <li>– meets a minimum street intersection density (to be determined during development of the Design and Place SEPP)</li> <li>– does not exceed a maximum block length between intersections (to be determined during development of the Design and Place SEPP).</li> </ul>	<p>Enables greater walkability and encourages alternative modes of travel by design of streets that are walkable and cyclable i.e. routes that are safe and comfortable.</p> <p>Facilitates a direct route of travel through route choice (measured by street intersection density, a key National Liveability Study indicator (Mavoa et al, University of Melbourne, 2016), and by limiting block length to minimise disruptions to the street grid.</p>	<p><b>Precinct</b></p> <p><b>3. Design productive and connected places</b></p>
<p><b>6. Water management</b> 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.</p> <p>Precinct-scale water detention and re-use strategies have been integrated such as through integrated water management framework where required.</p>	<p>Safeguards potable water by reducing its use, particularly where rain and stormwater re-use is a viable alternative.</p> <p>Elevates consideration of large-scale detention and re-use in lieu of local detention within precincts.</p> <p>Ensures long-term water security and helps manage the water catchment.</p>	<p><b>Precinct</b></p> <p><b>4. Design sustainable and greener places</b></p>
<p><b>7. Green infrastructure</b> 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)</li> <li>– giving preference to locally Indigenous and Australian native plant species.</li> </ul>	<p>Supports quality of life and wellbeing by establishing a network of high-quality green areas that join towns, public transport and residential areas.</p> <p>Supports outcomes that are critical to the health and resilience of the environment and local communities, including mitigating the urban heat-island effect, providing shade to pedestrians, improving amenity, and providing habitat.</p>	<p><b>Precinct</b></p> <p><b>4. Design sustainable and greener places</b></p>
<p><b>8. Resilience</b> 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>Ensures a risk-based approach to design and adaptation to future risks and vulnerabilities from natural hazards, increasing preparedness for, and mitigation or avoidance of, those vulnerabilities.</p> <p>Fosters climate change adaptation by design.</p>	<p><b>Precinct</b></p> <p><b>5. Design resilient and diverse places</b></p>

PROPOSED CONSIDERATION	BENEFIT	APPLIES TO
<p><b>9. Fine-grain movement</b> 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.</p>	<p>Facilitates the most direct route to a given destination and enables the choice of quieter routes. Facilitates people walking and cycling more and further.</p>	<p><b>Precinct Significant development</b>  <b>3. Design productive and connected places</b></p>
<p><b>10. Density</b> 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.</p>	<p>Ensures newly designed areas are serviceable and capable of supporting vibrancy, making best use of investment and delivering compact urban form, to reduce further sprawl and retain arable land on the urban fringe for food security. Complements the creation of a diverse set of offerings ranging from single dwellings to apartment buildings, offering housing choice and fostering greater affordability.</p>	<p><b>Precinct Significant development</b>  <b>3. Design productive and connected places</b></p>
<p><b>11. Housing diversity</b> 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>Supports mixed communities where key workers can live close to jobs, households can grow or downsize in their local area, and housing can be offered at different pricepoints for greater affordability.</p>	<p><b>Precinct Significant development</b>  <b>5. Design resilient and diverse places</b></p>
<p><b>12. Transport and parking</b> The proposal minimises car parking using the lowest of: – the rates specified in the <i>Guide to Traffic Generating Developments</i> (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.</p>	<p>Balances transport mode share, reduced demand for driving and car parking provision by guiding where car parking should be tempered by public transport availability, car share, adaptive travel planning or managed parking stations, or traded as a commodity.</p>	<p><b>Precinct Significant development All other development</b>  <b>3. Design productive and connected places</b></p>

PROPOSED CONSIDERATION	BENEFIT	APPLIES TO
<p><b>13. Attractive form</b>            The development has, on balance, positive design qualities, and supports beautiful places (including contributing to the local character, where described), as determined against a number of specific aspects of design, including:</p> <ul style="list-style-type: none"> <li>– massing</li> <li>– articulation</li> <li>– diversity and mix</li> <li>– scale, views and vistas</li> <li>– 3D expression</li> <li>– entries and setbacks to public space</li> <li>– details and materials</li> <li>– wayfinding, paths and common areas.</li> </ul>	<p>The design of the built environment shapes the places where we live, work and meet, and well-designed buildings and spaces contribute to the attractiveness of these places, inviting visitors and residents, business activity and investment, and fostering a sense of local pride.</p> <p>Attractive, comfortable, human-scaled buildings and spaces are more likely to be frequented, generate a sense of attachment and thus be cared for, which in turn creates enduring places that contribute to context and character through richness, diversity and quality.</p>	<p><b>Significant development</b>  <b>All other development</b></p> <hr/> <p><b>1. Design places with beauty and character</b></p>
<p><b>14. Impacts on public space</b>            There is no encroachment on existing public open space, and adverse impacts from adjoining built development, with no net loss of public space.</p>	<p>Ensures the quality and amenity of open space is not diminished over time by protecting public space from encroachment, including overshadowing.</p>	<p><b>Significant development</b>  <b>All other development</b></p> <hr/> <p><b>2. Design inviting public space</b></p>
<p><b>15. Impacts on vibrant areas</b>            If in or near ‘vibrant areas’ (including night-time economy areas, major public space and licensed premises) the proposal demonstrates:</p> <ul style="list-style-type: none"> <li>– siting, massing and acoustic design of residential buildings and mechanisms that safeguard future operation of the area</li> <li>– ground floor uses adjacent to vibrant areas enhance the prevailing uses, and</li> <li>– natural light access to major public space is safeguarded and shade provided to activity streets.</li> </ul>	<p>Protects cultural activity and supports the economy of NSW by safeguarding late trading, live music and festivals in night-time economy areas, licensed premises and major parks.</p> <p>Extends the reach and use of vibrant areas through new development which mitigates potential impacts such as providing awnings to ground floor uses or safeguarding solar access to major open space.</p>	<p><b>Significant development</b>  <b>All other development</b></p> <hr/> <p><b>2. Design inviting public space</b></p>
<p><b>16. Activation</b>            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).</p>	<p>Ensures high streets retain their function and vibrancy irrespective of intensification or conversion of upper floors to residential uses.</p>	<p><b>Significant development</b>  <b>All other development</b></p> <hr/> <p><b>2. Design inviting public space</b></p>

PROPOSED CONSIDERATION	BENEFIT	APPLIES TO
<p><b>17. Emissions and resource efficiency</b>            The development meets or exceeds the relevant National Australian Built Environment Rating System (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>Provides a pathway to net zero emissions by 2050, including incremental NABERS targets by decade.</p> <p>Reduces the energy use of both new residential and non-residential buildings by increments over coming decades, to deliver a 35% cut in emissions by 2030 compared to 2005 levels and reach net zero emissions by 2050.</p> <p>Enables the industry to prepare for adopting higher targets in an orderly fashion and accelerate delivery (where possible) by providing 2030, 2040 and 2050 targets.</p> <p>Safeguards the continued application of water efficiency and thermal comfort targets set out in the BASIX SEPP (to be repealed and replaced by the Design and Place SEPP).</p>	<p><b>Significant development</b>  <b>All other development</b></p> <hr/> <p><b>4. Design sustainable and greener places</b></p>
<p><b>18. Tree canopy</b>            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 (DCP) / council replacement 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>Ensures existing tree canopy is not reduced and promotes increased tree canopy for urban heat mitigation and increased urban amenity and biodiversity.</p> <p>Ensures individual lots contribute to increased tree canopy by providing the number of trees per lot, generally within private open space, providing canopy to buildings and back gardens.</p> <p>Recognises that mitigation of heat and other greening benefits can be realised through alternatives to tree canopy, such as green roofs.</p>	<p><b>Significant development</b>  <b>All other development</b></p> <hr/> <p><b>4. Design sustainable and greener places</b></p>
<p><b>19. Affordable housing</b>            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 (Greater Sydney Region Plan Objective 11).</p>	<p>Provides a key component of mixed housing stock in short supply.</p>	<p><b>Significant development</b>  <b>All other development</b></p> <hr/> <p><b>5. Design resilient and diverse places</b></p>

## 3.3 Guidance

**It is proposed new guidance will be exhibited concurrently with the proposed Design and Place SEPP. Where relevant, existing guidance will be revised or updated following the making of the Design and Place SEPP.**

To support the proposed Design and Place SEPP, a suite of existing and proposed guidance (revised and new) has been identified. The guidance is intended to complement the principles and considerations in specialist areas by setting:

- objectives relating to specific development typologies and outcomes
- criteria relating to outcomes, including performance-based criteria where possible
- minimum criteria where required and desirable to help assessment.

### **3.3.1 Existing guidance**

- *Greener Places – An urban green infrastructure design framework for NSW* (GANSW 2020)
- *Practitioner’s Guide to Movement and Place – Implementing Movement and Place in NSW* (TfNSW and GANSW 2020)
- *Local Character and Place Guideline* (DPIE 2019).

### **3.3.2 Guidance to be revised**

- Draft *Connecting with Country – A draft framework for understanding the value of Aboriginal knowledge in the design and planning of places* (GANSW 2020)
- Draft *Evaluating Good Design – Implementing Better Placed design objectives into projects* (GANSW 2018)
- Draft *Government Architect’s Design Excellence Competition Guidelines* (GANSW 2018)
- *Apartment Design Guide – Tools for improving the design of residential apartment development* (DPE 2015) and proposed revisions. Further detail is provided in Appendix A.
- *Guide to Traffic Generating Developments* (RTA 2002), to be revised and retitled *Guide to Traffic Impact Assessments* (TfNSW)
- BASIX website and tools (DPIE). Further detail is provided in Appendix C.

### **3.3.3 New guidance**

- Draft *Greener Places Design Guide* (GANSW 2020 and DPIE) – to provide information on how to design, plan, and implement green infrastructure in urban areas throughout NSW including strategies, performance criteria, and recommendations to help consent authorities, designers, and developers to deliver green infrastructure
- Draft *NSW Public Spaces Charter* (DPIE 2020) – identifies ten principles for quality public space, developed through evidence-based research and discussions with a diverse range of public space experts
- Proposed *Design Review Guide* (DPIE) – to establish consistent terms of reference for the operation of design review panels and the provision of design quality evaluation
- Proposed *Urban Design Guide* (DPIE) – to provide design guidance and criteria for large-scale developments, and to complement the revised *Apartment Design Guide*. Further detail is provided in Appendix B
- Proposed *Resilience Toolkit* – to guide identification of risks to address resilience, and to assess compliance with the resilience priority, and requirements of the SEPP
- Proposed *strategic guide to planning for natural hazards in NSW* (DPIE) – to inform the preparation of regional, district and local strategies and proposals to rezone land.

A modern, multi-story brick building with balconies and large windows. The building is the background of the entire page. In the foreground, two people are sitting on a wooden bench in a courtyard area with trees and a concrete wall.

## Part 4

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# Proposed amendments to existing State Environmental Planning Policies

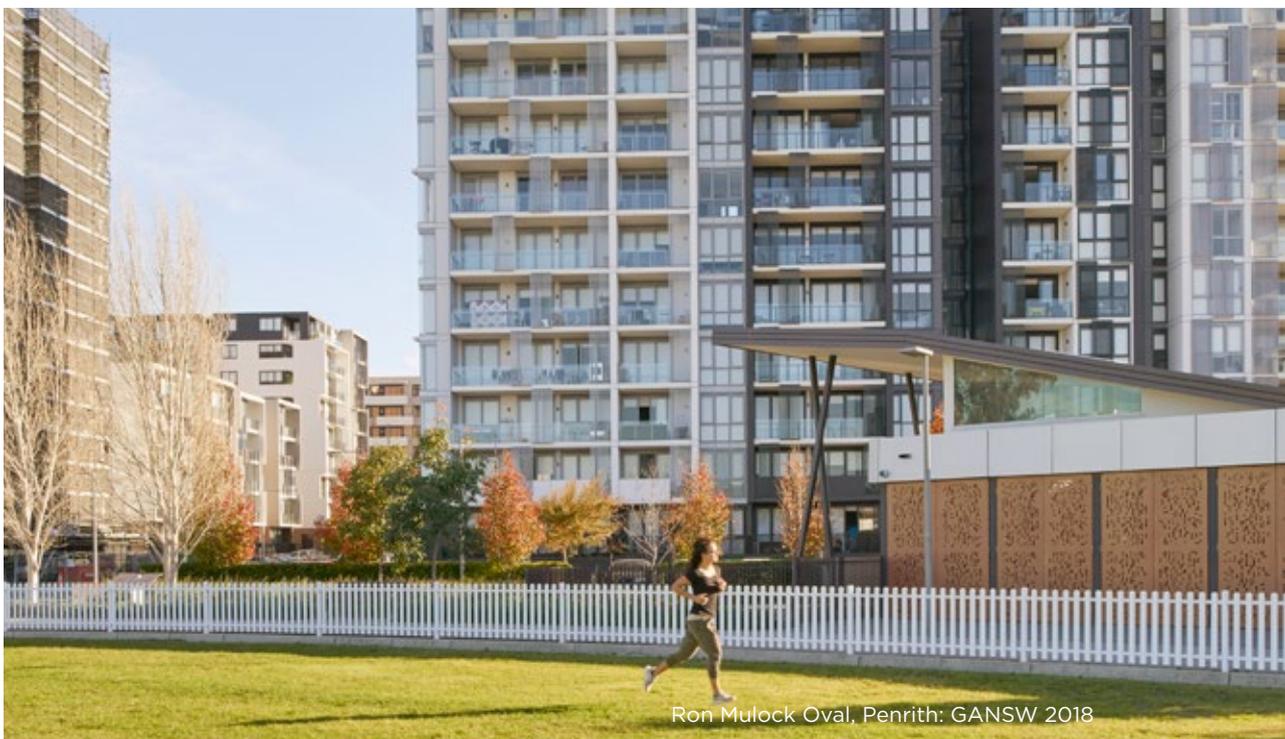
# 4.1 State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development

SEPP 65 was introduced in 2002 to improve the quality of residential apartment development in NSW. While design review, panels and the application of the ADG will continue to apply for all residential apartment development in NSW, as currently set out in SEPP 65, the Design and Place SEPP will subsume SEPP 65 by:

- replacing the SEPP 65 process for design review, including panels and the application of principles, with the Design and Place SEPP process
- replacing the SEPP 65 design quality principles with the principles of the proposed Design and Place SEPP

- incorporating the revised ADG as a matter for consideration under the Design and Place SEPP
- removing precinct-scale considerations from the ADG including key considerations, criteria, and guidance for DCPs, and incorporating these into the UDG
- clearly distinguishing between key considerations, criteria, and guidance for apartment development.

Further detail is provided in Appendix A, including a clause-by-clause analysis of SEPP 65 provisions and how each is proposed to be transferred across to the proposed new Design and Place SEPP where appropriate.



## 4.2 State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

### 4.2.1 Sustainability in residential buildings

The sustainability performance of residential buildings in NSW is administered under the BASIX SEPP. It is one of the main drivers of energy and water efficiency for housing in NSW.

The BASIX SEPP requires residential development applications to be accompanied by a list of sustainability commitments made by an applicant, such as installation of solar panels, to meet sustainability targets. These commitments are detailed in a BASIX Certificate issued through the online BASIX tool.

The Design and Place SEPP proposes to transfer and repeal the provisions from the BASIX SEPP. Appendix C includes a clause-by-clause analysis of the BASIX SEPP provisions and outlines how each provision is proposed to be transferred across to the proposed new Design and Place SEPP where appropriate. Consequential amendments will also be required to the EP&A Regulation.

The *Trajectory for Low Energy Buildings* (Australian Government 2018) was endorsed by NSW and all Council of Australian Governments (COAG) Energy Ministers in February 2019. 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 BASIX as a pathway to deliver cost-effective, low-emission outcomes for residential buildings.

Following regulatory impact and cost-benefit analysis in early 2021, updated sustainability targets will feature in the exhibited and final Design and Place SEPP.

In summary, the following key provisions are proposed to be transferred to the new Design and Place SEPP:

- the policy will continue to apply to NSW and Lord Howe Island for all residential development including alterations and additions that meet or exceed a certain value (currently \$50,000), or install a pool or spa of 40,000 L or more
- competing provisions in any other environmental planning instrument or DCP will not have effect, maintaining the current policy position
- sustainability targets that are currently embedded in the online BASIX tool will be included in the Design and Place SEPP
- to promote consistency across the State, councils are currently not able to set their own higher or lower BASIX targets. This provision will continue to apply and is proposed to be transferred to the Design and Place SEPP. However, mechanisms to allow councils some flexibility in this area will be explored during development of the Design and Place SEPP.

### 4.2.2 Other reforms

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:

- providing more flexibility in the available assessment pathways to demonstrate a design meets sustainability performance requirements
- aligning sustainability performance requirements with the principles of the Design and Place SEPP
- measuring and reporting sustainability performance requirements in a consistent way to other jurisdictions
- improving customer experience and promoting innovation.

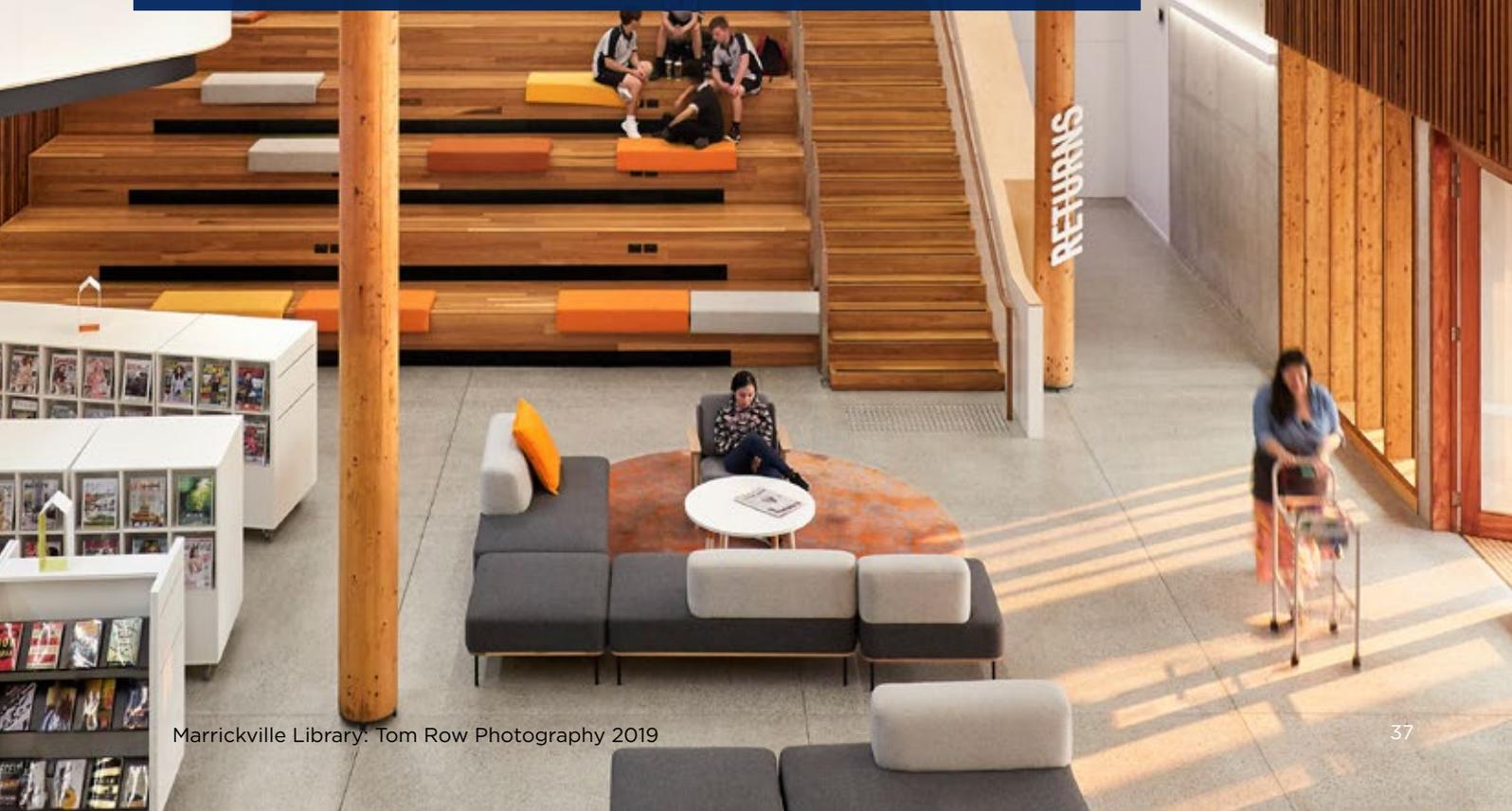
Some of these will form part of the proposed new Design and Place SEPP while others are proposed to be delivered separately to complement the principles such as:

- improved customer experience in using tools
- recognising emerging technologies
- biannual tool updates.

## Part 5

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# Relationship with other planning instruments and policies



## 5.1 EP&A Act, EP&A Regulation, local environmental plans and development control plans

### **5.1.1 EP&A Act and EP&A Regulation**

No amendments to the EP&A Act are proposed. Amendments to the EP&A Regulation to enable implementation of the new Design and Place SEPP, including requirements relating to DCPs, design skills and verification statements and provision of additional information, will be determined and refined during development of the Design and Place SEPP.

### **5.1.2 LEPs and DCPs**

It is proposed the new Design and Place SEPP will have no immediate impact on existing LEPs and DCPs. However, when these plans are undergoing five-year review in accordance with statutory requirements it is likely they will be revised where necessary to align with the Design and Place SEPP and for consistency across NSW.

As part of developing the Design and Place SEPP, consideration will be given to amending cl.4.6 of the Standard Instrument (Local Environmental Plans) Order 2006 to reflect the need to demonstrate that any variation to development standards will result in an improved planning outcome and public good. State or council design review panels may be involved in determining this.

## 5.2 Other environmental planning instruments impacted by the new SEPP

The proposed Design and Place SEPP will interface with multiple other SEPPs, including:

- SEPP (Exempt and Complying Development Codes) 2008 (Codes SEPP)
- proposed Housing Diversity SEPP, to be finalised
- SEPP (Educational Establishments and Child Care Facilities) 2017 (Education SEPP)
- SEPP (Infrastructure) 2007 (Infrastructure SEPP).

It is proposed these and other environmental planning instruments are reviewed and revised for alignment within one to three years of the making of the Design and Place SEPP.

It is also proposed the Design and Place SEPP will supplement other SEPPs where plan-making or development is subject to precinct or master planning controls, including:

- SEPP (Sydney Region Growth Centres) 2006
- SEPP (Western Sydney Aerotropolis) 2020
- SEPP (Activation Precincts) 2020
- SEPP (State Significant Precincts) 2005 and any other SEPPs that require precinct or master planning including the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (a deemed SEPP).

### **5.2.1 State Environmental Planning Policy (Sydney Region Growth Centres) 2006**

The Design and Place SEPP is likely to supplement other precinct SEPPs when they are updated in the next one to three years, including the SEPP (Sydney Region Growth Centres) 2006 (Growth Centres SEPP) by:

- updating existing precinct controls by a certain date to align with the Design and Place SEPP precinct-scale considerations
- inserting Design and Place SEPP principles in cl.16 of the Growth Centres SEPP as matters for consideration
- updating vegetation and cultural heritage considerations to align with the Design and Place SEPP considerations

- reviewing the appendices controls so they align with the Design and Place SEPP precinct-scale considerations
- considering a broader revision that results in spatial planning outcomes and captures precinct plans in another form e.g. DCPs.

### **5.2.2 State Environmental Planning Policy (Exempt and Complying Development Codes) 2008**

The relationship between the existing Codes SEPP and the new Design and Place SEPP is to be determined. The types of development currently permitted through the Codes SEPP will remain unchanged, but the requirements will be aligned with the principles of the Design and Place SEPP to enable this type of development to contribute to a greener, well-designed built environment.

This includes reviewing the Greenfield Housing Code to align its objectives with the Premier’s Priorities Greener Public Spaces and a Greening our City.

The greening, design and quality outcomes intended by the Design and Place SEPP will need to be tested on the standard development types permitted by the Codes SEPP to ensure they can be achieved.

### **5.2.3 Proposed Housing Diversity State Environmental Planning Policy**

The proposed Housing Diversity SEPP will consolidate existing state-level planning provisions relating to a range of less common housing types for special social, economic and accommodation needs into a single instrument. This includes housing types currently facilitated by:

- SEPP (Affordable Rental Housing) 2009
- SEPP (Housing for Seniors and People with a Disability) 2004.

It is intended the Apartment Design Guide will apply to residential apartment development (as currently defined), including the clauses of SEPP 65 and subsequently the clauses transitioned to the Design and Place SEPP. This would include new provisions for market-led housing development and tenure models including student accommodation, co-living and build-to-rent, where accommodated in residential apartment development, with specific provisions to be added for these typologies where appropriate.

## **5.3 Planning circulars and practice notes**

The impact of the new Design and Place SEPP on existing Planning Circulars and Practice Notes, and the need to introduce new Planning Circulars and Practice Notes to explain its requirements, will be determined during development of the SEPP.

## **5.4 Ministerial directions**

The impact of the new Design and Place SEPP on existing Ministerial Directions, and the need to introduce new Ministerial Directions to enable its application, will be determined during development of the SEPP.

## **5.5 Better Placed**

Better Placed was released in late 2017 to support the new objects of the EP&A Act, in particular the promotion of good design and amenity of the built environment, by setting out good design processes and outcomes, and introducing seven design objectives. Better Placed will be updated to reflect developments since its introduction, and to ensure it functions as a complementary policy to the Design and Place SEPP.



## Part 6

# Planning pathways

## 6.1 Development Under Part 4 of the EP&A Act

### **6.1.1 State significant development and precincts**

Development applications that are deemed State significant (development and/or precincts) to which the Design and Place SEPP applies, will be required to demonstrate how principles have been met through considerations relevant to the scale of the proposal. The template SEARs will be updated to align with application requirements in Section 3.2.2.

Consideration of the Design and Place SEPP is required throughout the SSD process. Where a development is sited on urban land, it is recommended the SDRP process is incorporated into the preliminary scoping stage. Early engagement with local Aboriginal community members including Traditional Custodians prior to public exhibition is recommended to appropriately respond to the design principles of the proposed Design and Place SEPP. The principles and considerations of the proposed Design and Place SEPP, and the advice of the SDRP (where applicable) will need to be considered as part of any assessment.

### **6.1.2 Local council**

Development applications where council is the consent authority and to which the Design and Place SEPP applies, will be required to demonstrate how design principles have been met through initiatives relevant to the scale of the proposal, this may include early engagement with the local Aboriginal community including Traditional Custodians.

If the proposal is expected to require a design review or design excellence process, input should be provided by the relevant design review panel in alignment with the Design Review Guide as part of the pre-application consultation process. The advice of the design review panel (where applicable) should be given in a timely manner and considered as part of the development application assessment.

## 6.2 Development Under Part 5 of the EP&A Act

### **6.2.1 State significant infrastructure**

Development applications that are deemed SSI (and critical SSI) to which the Design and Place SEPP applies, will be required to demonstrate how principles have been met through considerations relevant to the scale of the proposal. The template SEARs will be updated to align with the application requirements in Section 3.2.2.

Consideration of the Design and Place SEPP is required throughout the SSI process. Where a development is sited on urban land, it is recommended the NSW SDRP process is incorporated into the preliminary scoping stage. The preparation of the environmental impact statement will typically involve assessing the impacts of the project in accordance with the SEARs and relevant government legislation, policies and guidelines including the proposed Design and Place SEPP. Targeted engagement with local Aboriginal community members, including Traditional Custodians, as part of public exhibition may be required. The principles and considerations of the proposed Design and Place SEPP, and the advice of the NSW SDRP (where applicable) will need to be considered as part of any assessment.

### **6.2.2 Review of environmental factors**

A review of environmental factors (REF) is undertaken in accordance with Part 5 of the EP&A Act, where the applicant is both a public authority applicant and the determining authority.

REFs are prepared in accordance with cl.228 of the EP&A Regulation and include consideration of the relevant legislation and policies applying to the subject land and proposed development or activity, as well as an assessment of the potential impacts of the development or activity on the natural and built environments. Application of the proposed Design and Place SEPP as a matter for consideration when assessing REFs will be determined during development of the SEPP.

## 6.3 Planning proposals

As part of the planning proposal process, any SEPPs relevant to a planning proposal (including the proposed Design and Place SEPP) must be identified and the relationship of the planning proposal must be discussed. In some instances, it may be necessary to undertake a preliminary assessment to demonstrate how the proposal will satisfy the requirements of the proposed Design and Place SEPP.

Gateway assessment will include consideration of the proposed Design and Place SEPP (where relevant) and conditions may include requirements to address consistency with the proposed Design and Place SEPP.

Targeted engagement with the local Aboriginal community including Traditional Custodians may be required if relevant. These requirements may be given effect through Secretary's requirements under s.3.33(3) of the EP&A Act.

## 6.4 Transitional provisions

It is proposed transitional arrangements will be put in place for implementation of the proposed Design and Place SEPP to:

- allow industry stakeholders to mobilise and get ready for any additional provisions that will be applied under the SEPP
- allow councils and other consent authorities to ensure appropriate skills are in place to meet the assessment requirements under the SEPP
- allow qualified designers (and other potential design verification experts) an opportunity to ensure appropriate skills are in place to meet the requirements of the SEPP
- ensure savings provisions are in place in relation to applications that have already been lodged and are being considered
- ensure the consistency and clarify the hierarchy between SEPPs, particularly given the Design and Place SEPP is proposed to include SEPP 65 and BASIX.

The Department is seeking feedback on the lead time required by stakeholders for the components of this SEPP to inform the making of these transitional provisions.

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# Acronyms

ABCB	Australian Building Codes Board
ADG	Apartment Design Guide
BASIX	Building Sustainability Index
DA	development application
DCP	development control plan
DPIE	Department of Planning, Environment and Industry
DRG	Design Review Guide
EIE	explanation of intended effect
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EV	electric vehicle
GANSW	Government Architect NSW
GFA	ground floor area
LEP	local environmental plan
LHS	local housing strategy
LSPS	local strategic planning statement
NABERS	National Australian Built Environment Rating System
NatHERS	Nationwide House Energy Rating Scheme
NCC	National Construction Code
REF	review of environmental factors
SDRP	State Design Review Panel
SEARs	Secretary's environmental assessment requirements
SEPP	State environmental planning policy
SSD	State significant development
SSI	State significant infrastructure
UDG	Urban Design Guide

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# Glossary

Terminology defined in this glossary is for this explanation of intended effect only. Definitions to be included in the proposed Design and Place SEPP are to be determined.

<b>Access</b>	<p>The ability to reach desired goods, services, activities, and destinations – and in the case of movement, reach a given destination (trip end), and the ability to make short trips within a location – as opposed to journeys passing through a location.</p> <p>Access considers how people move within a place, including local walking and cycling, as well as how they get to and from the place. It also includes considering the provision of end-of-trip facilities like cycle racks, parking, and public transport routes and stops.</p>	<b>Biodiversity</b>	<p>The variety of life on Earth and the natural patterns it forms. Current biodiversity is the fruit of billions of years of evolution, shaped by natural processes and, increasingly, by the influence of humans. It forms the web of life of which we are an integral part and upon which we fully depend. (HABITAT III Glossary)</p>
<b>Accessibility</b>	<p>The ability for everyone, regardless of disability, personal circumstances, or where they live, to use and benefit from the transport network. This is achieved by designing for people with mobility impairment or vulnerability. The Commonwealth <i>Disability Discrimination Act 1992</i> (DDA Act) sets out guidelines on equal access and opportunity; ‘DDA compliant’ means something is accessible. (The NSW <i>Anti-Discrimination Act 1977</i> is similar to the DDA Act.)</p>	<b>Better Placed</b>	<p><i>Better Placed – An integrated design policy for the built environment of NSW</i>, published in 2017 by Government Architect NSW (GANSW). See <a href="#">Better Placed</a> (GANSW website).</p>
<b>Accessible</b>	<p>As defined by Australian Standard (AS) 1428.1-2009 – <i>Design for access and mobility, Part 1: General requirements for access – New building work</i>: having features to enable use by people with a disability.</p>	<b>Built environment</b>	<p>The constructed environment, as distinct from the natural environment. Encompasses all aspects of our surroundings made by people, and includes cities and towns, neighbourhoods, parks, roads, buildings, infrastructure, and utilities like water and electricity.</p>
<b>Adaptable</b>	<p>A building, place, or space that is able to adjust to new conditions, or to be modified for a new purpose.</p>	<b>Built form</b>	<p>The regulatory and statutory frameworks that describe the three-dimensional articulation of building type, function, and use. These frameworks provide the limits within which architectural design operates. The limits are related to envelope, solar planes, setbacks, height, mass, and interface.</p>
<b>Amenity</b>	<p>The ‘liveability’ of a place. A place’s amenity is affected by its access to sunlight and views, access to facilities and services, and other design aspects. Amenity includes clean and fresh air, natural ventilation, and protection from noise. Expectations of amenity and comfort change over time.</p>	<b>Connectivity</b>	<p>The number of connecting routes within a particular area, often measured by counting the number of intersection equivalents per unit of area. An area may be measured for its ‘connectivity’ for different travel modes – vehicle, cyclist, or pedestrian. An area with high connectivity has an open street network that provides multiple routes to and from destinations. (Urban Design Guidelines for Victoria, Glossary)</p>
<b>Attractive</b>	<p>A building, place, or space that is aesthetically pleasing, or appealing.</p>	<b>Consideration</b>	<p>A consideration is a matter to be taken into account in deciding a planning application or an appeal against a planning decision. Matters for consideration are relevant to the evaluation of proposals under section s.4.15 of the EP&amp;A Act and may be mandatory (must be taken into account by the consent authority) or discretionary (may be taken into account). Considerations can include (but are not limited to) those set out in Table 1of this EIE.</p>

<b>Context</b>	The physical, social, cultural, economic, environmental, and geographic circumstances that form the setting for a place or building.	<b>Development</b>	In accordance with the EP&A Act, development is considered the use or subdivision of land, the erection of a building, the carrying out of a work, the demolition of a building or work, or any other act, matter or thing that may be controlled by an environmental planning instrument. Scales and types of development to which the Design and Place SEPP will apply are set out in Section 2.4.1 of this EIE.
<b>Country</b>	Country incorporates both the tangible and intangible, knowledges and cultural practices, belonging and identity, wellbeing, and relationships. It relates not only to the nation or cultural groups Aboriginal peoples belong to, but also the lands they yearn for, find healing from, and will return to. It is their place of origin in cultural, spiritual, and literal terms, and includes not only the land but the waters and sky.	<b>Diverse</b>	A building, place, or space that embraces a range of uses and users, to satisfy a broad demography and their multiple needs.
<b>Design</b>	Design is a verb and a noun; both a problem-defining and problem-solving activity that brings together many different pieces of information in order to identify and develop new opportunities. Design should be understood as both a process put in place to do something, and an outcome of creating something. For more information see <a href="#">Better Placed</a> (p.46).	<b>Equitable</b>	A built environment that is fair and able to be accessed in a safe and dignified way by all citizens.
<b>Design excellence</b>	Design excellence is most used to describe a competitive design process used in NSW and brought into effect by statutory planning regulations such as LEPs. It is often also used as an ‘umbrella’ term in planning legislation to describe ‘good design’. For more information see <a href="#">Better Placed</a> (p.54).	<b>Evaluation</b>	Design evaluation happens at several stages throughout the design process – from early design concepts through to highly resolved proposals that are close to final review. It relies on expert advice that responds to established criteria or objectives.
<b>Design process</b>	A series of actions or steps taken to achieve a particular end. Design processes are not linear; they are iterative, collaborative, and circular, where feedback and ideas are intertwined and continual. Design processes help provide solutions to complex problems where many inputs and concerns are needing to be resolved. The design process referred to in this EIE is described in <a href="#">Better Placed</a> (pp. 26–27) and in Draft <a href="#">Implementing Good Design</a> (GANSW 2018).	<b>Fit for purpose</b>	<ol style="list-style-type: none"> <li>1. A building, place, or space that works according to its intended use</li> <li>2. In relation to any land selected, acquired or proposed to be dedicated as public space, ‘fit for purpose’ specifically refers to the proposed public space having qualities (such as grade, width, visibility) that make it capable of supporting the required uses including performative attributes such as being free from hazards and constraints that would encumber safe use.</li> </ol>
<b>Design quality</b>	The tactile, physical attributes related to the material finishes and fixtures of the built environment. Design quality also relates to less tangible attributes regarding sense of place and belonging, and Aboriginal culture. Design quality needs to be valued and maintained over time.	<b>Good design</b>	A phrase that encapsulates the aspirations of <a href="#">Better Placed</a> including its vision for NSW, definition of good process, and objectives for the design of the built environment. Good design creates usable, user-friendly, enjoyable, and attractive places and spaces, which continue to provide value and benefits to people, the place, and the natural environment over extended periods. Good design brings social, environmental, and economic benefits, and builds on these benefits over time – continually adding value.

<b>Green grid</b>	The Greater Sydney Green Grid connects communities to the landscape. It is a long-term vision for a network of high-quality green areas from regional parks to local parks and playgrounds that connect centres, public transport and public spaces to green infrastructure and landscape features. Within the public realm it includes enhanced waterway corridors, transport routes, suburban streets footpaths and cycleway. ( <i>A Metropolis of Three Cities - Greater Sydney Region Plan</i> , Greater Sydney Commission 2018)	<b>Liveable</b>	A built environment which supports and responds to people's patterns of living, and is suitable and appropriate for habitation, promoting enjoyment, health, wellbeing, safety, and prosperity.
<b>Green infrastructure</b>	Green infrastructure is the network of green spaces, natural systems, and semi-natural systems that support sustainable communities and includes waterways, bushland, tree canopy, green ground cover, parks and open spaces that are strategically planned, designed, and managed to support a good quality of life in an urban environment.	<b>Livable housing</b>	Housing designed and built in accordance with the <a href="#">Livable Housing Design Guidelines</a> published by Livable Housing Australia.
<b>Healthy</b>	A building, place, or space that promotes positive social, emotional, mental, and physical health for its people.	<b>Local character</b>	The distinctive features or attributes specific to a neighbourhood, providing a sense of place and identity.
<b>Inclusivity</b>	Recognition that every person has the right to participate in shaping the built environment and to benefit from urban development. It places particular focus on the most marginalised and vulnerable groups of society by promoting participation in planning processes and also diversity in representation. Inclusive cities enable everyone access to services, jobs, and opportunities and to be part of city civic and political life. (HABITAT III Glossary)	<b>Mobility</b>	Movement of people and goods from place to place – used to refer to connectivity to destinations and activities (in lieu of 'accessibility'). This is usually determined by the main mode (or modes) of transport and their catchments – e.g. a measure of mobility from a suburb to a centre may be the frequency and reliability of a given bus service passing through the suburb and centre. Mobility is generally distinct from local access (e.g. walking and cycling around a place).
<b>Integrated</b>	A built environment that links communities and functions and activities within a cohesive place.	<b>Mitigation (of climate change)</b>	Human intervention to reduce the sources or enhance the sinks of greenhouse gases. Mitigation (of disaster risk and disaster) is the lessening of the potential adverse impacts of physical hazards (including those that are human-induced) through actions that reduce hazard, exposure, and vulnerability. (HABITAT III Glossary)
<b>Interface</b>	A point where two systems, subjects, elements, or organisations meet and interact.	<b>Net zero</b>	Net zero emissions means emissions are balanced by carbon storage. The more emissions are reduced, the less sequestration is needed to achieve net zero.
<b>Intersection</b>	Intersections between streets, walking, and cycling paths, including through-site links.	<b>Night-time economy</b>	Night-time economy can be defined as social or business activities that take place between 6pm and 6am. This includes a myriad of business activities, events and services generally categorised into three core areas of entertainment, food and drink. Non-core activities, such as transport, accommodation, education and retail services also contribute to a vibrant and lively night-time economy.

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**Open space** Land that has no buildings or other built structures, including green space.

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**Permeability** Permeability or connectivity describes the extent to which urban forms permit (or restrict) movement of people or vehicles in different directions. Permeability is generally considered a positive attribute of urban design, as it permits ease of movement and avoids severing neighbourhoods. (Wikipedia)

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**Place** Place is the interdependent relationship of people and their environment. It is a relational concept. 'Place' can't be comprehensively defined, but individual places can be described or understood by people in different ways and at different scales. Places are multilayered and diverse environments. They are a synthesis of layers and elements generally understood through:

- meaning – people's understanding and connection to places, which reinforces personal or collective identity and belonging
- physical form – the physical attributes of the surrounding environment including its material, spatial, and natural qualities
- activity – the things that people do and the things that are happening in a particular location or area.

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**Place-based** A holistic understanding of context and the people who populate places to support the long-term needs of the wider community. It acknowledges a place's local knowledge, its unique history, culture, environment, and economy.

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**Precinct** A large area defined by physical characteristics or boundary constraints (as set out in Section 2.4.1 of this EIE).

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**Precinct structure plan** As defined in the relevant instrument – generally understood as a framework document showing how development will occur in a given place, and including building parameters like height, density, shadowing, and environmental concerns. It is a visual document that details a clear strategy or plan for the physical transformation of a place, supported by financial, economic, and social policy documents which outline delivery mechanisms and implementation (variously also a precinct strategy or master plan, depending on scale and level of detail).

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**Public space** Places publicly owned, or designated for public use, that are accessible and enjoyable by all, free of charge and without a profit motive, including:

- public open spaces: active and passive spaces including parks, gardens, playgrounds, public beaches, riverbanks and waterfronts, outdoor playing fields and sports courts, and publicly accessible bushland
- public facilities: public libraries, museums, galleries, civic and community centres, showgrounds and indoor public sports facilities
- streets: streets, avenues and boulevards, squares and plazas, pavements, passages and lanes, and bicycle paths.

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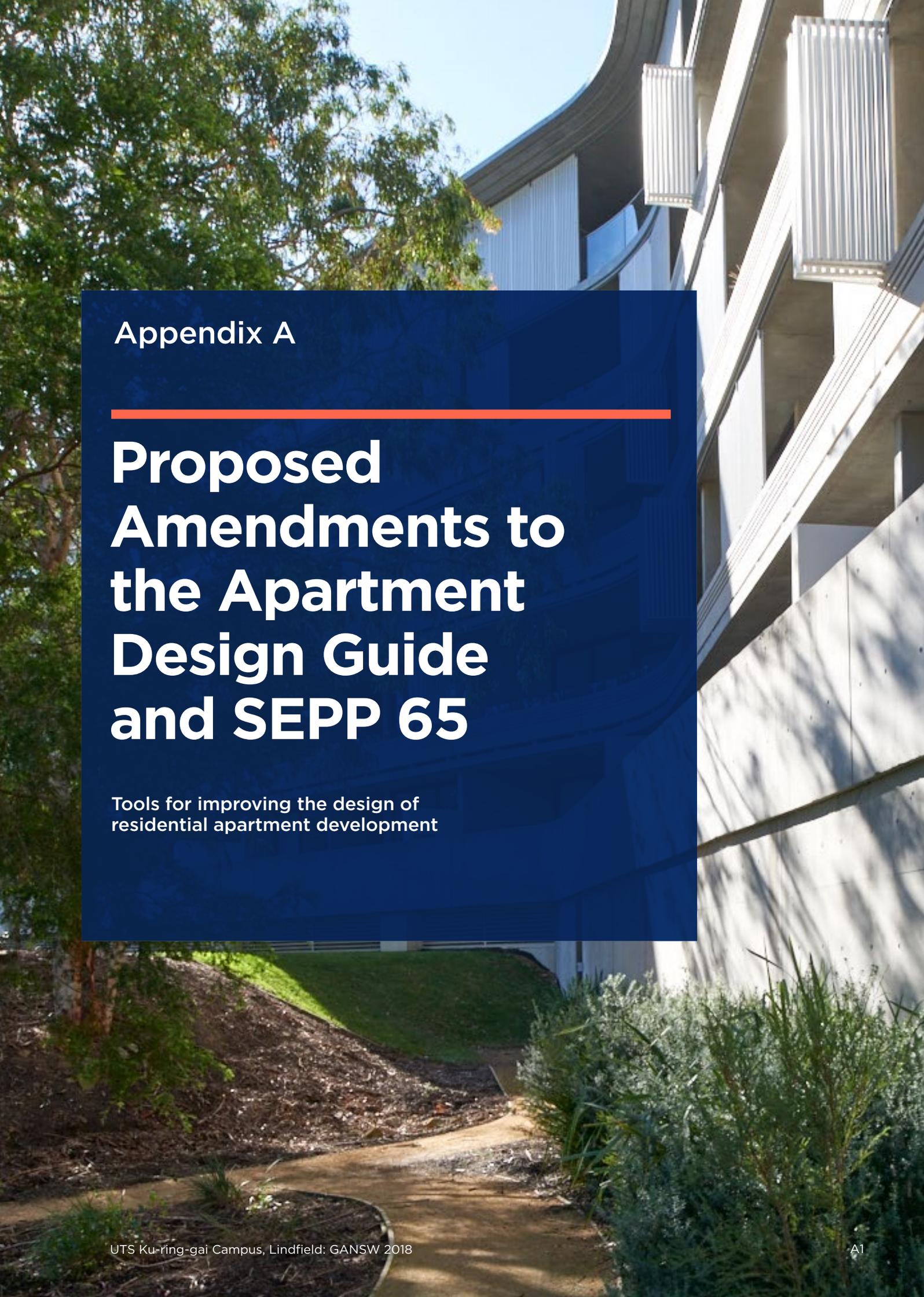
**Quality** The standard of something, measured comparatively against things of a similar kind. 'Quality' can also describe something that is high grade and of superior excellence.

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**Regenerative design** Regenerative design is design that ensures the built environment has a net positive impact on natural systems. To progress towards regenerative design and systems for our planet, we need to understand how to design for all species while respecting planetary boundaries and using science-based targets.

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<b>Resilience</b>	<p>The capacity of a social or ecological system to cope with a hazardous event or disturbance, responding or reorganising in ways that maintain its essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation.</p> <p>Resilience is a complex and dynamic system-based concept used differently in a variety of disciplines, and also a simple concept referring to the ability of a system to return to a previous or improved set of dynamics following a shock. It also refers to the potential for individuals, communities, and ecosystems to prevent, absorb, accommodate and recover from a range of shocks and stresses. (HABITAT III Glossary)</p>	<b>Traditional Custodians</b>	<p>Traditional owners and custodians are the terms used to describe the original Aboriginal or Torres Strait Islander peoples who inhabited a particular area or Country. Traditional custodians today are the descendants of these original inhabitants and have continuing spiritual, cultural, political and often physical connection with the land where their ancestors lived.</p>
<b>Resilience by design</b>	<p>Resilient design is the intentional and systemic design of places, buildings and spaces to anticipate and avoid, mitigate or adapt to the impact of shocks and stresses over time in a way that promotes civic responsibility and sustainability. (Meridian Urban)</p> <p>It recognises that the nature of shocks and stresses will change over the lifetime of a place, and so resilient design enables both adaptive built form and the adaptive capacity of the uses and activities within that built form. (GANSW)</p>	<b>Tree</b>	<p>As defined in AS 4970-2009 – <i>Protection of trees on development sites</i> (i.e. greater than or usually greater than over 3 m in height).</p>
<b>Responsive</b>	<p>Buildings, places, and spaces that react positively to place and local character and context.</p>	<b>Unbundling</b>	<p>A parking strategy in which parking spaces are rented or sold separately, rather than automatically included with the rent or purchase price of a residential or commercial unit. Tenants or owners can purchase only as much parking as they need and are given the opportunity to save money and space by using fewer parking stalls. Unbundled parking is more equitable and can reduce the total amount of parking required for the building. (Source: Illustrated Dictionary of Architecture Copyright © 2012, 2002, 1998 by The McGraw-Hill Companies, Inc. All rights reserved)</p>
<b>Site</b>	<p>A parcel of land with associated land title. Land title is the evidence of a person's rights to land. (NSW Lands Glossary)</p>	<b>Value</b>	<p>A measure of what design is worth. Value is not merely related to economics, but includes an understanding of social, cultural and environmental factors as components contributing to the value of good design.</p>
<b>Standard Instrument</b>	<p>Means the standard local environmental planning instrument prescribed by the Standard Instrument (Local Environmental Plans) Order 2006.</p>	<b>Walkability</b>	<p>The extent to which the built environment is friendly to the presence of people living, shopping, visiting, enjoying or spending time in an area without needing to use a vehicle. Factors affecting walkability include, but are not limited to, street connectivity, land-use mix, residential density, the presence of trees and vegetation, and the frequency and variety of buildings, entrances and other sensations and elements along street frontages. (HABITAT III Glossary)</p>
<b>Sustainability</b>	<p>The endurance of systems, buildings, spaces, and processes – their ability to be maintained at a certain rate or level, which contributes positively to environmental, economic, and social outcomes.</p>		



Appendix A

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# Proposed Amendments to the Apartment Design Guide and SEPP 65

Tools for improving the design of  
residential apartment development

# Executive summary

**As part of the proposed Design and Place SEPP, the Department of Planning, Industry and Environment is undertaking a review of the Apartment Design Guide (ADG), and State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development (SEPP 65). This review will enable the transition of the ADG (and the operative provisions relating to apartments in SEPP 65 and the EP&A Regulation) to this new policy, as well as respond to industry and council feedback in recent years.**

Regular review enables design requirements to reflect lessons learnt and emerging practices, as well as streamline and simplify existing guidance to help industry continue to deliver well-designed apartment buildings that positively shape NSW places for their communities.

In summary it is proposed to amend the ADG to:

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Reduce the overall document length and focus on integrated siting and building design considerations by:

- reducing the number of sections from 48 to 20
- reducing and simplifying the objectives while maintaining amenity, performance and quality outcomes
- removing Part 2 (guidance for local councils to develop planning controls) to a separate Urban Design Guide (UDG)
- removing Part 5 to a separate Design Review Guide (DRG) to define a more consistent and timely process for design review in NSW, including across a broader range of development types.

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Provide greater flexibility in 4 of the 24 existing design criteria:

- communal open spaces, to better reflect occupancy rather than site area
- car parking rates, to enable reduction in parking based on context (such as oversupply and availability of car share) and reduce excavation
- direct solar access, to increase the hours within which solar access can be delivered
- natural cross ventilation, to broaden its application across the whole building
  - deep soil zones to be revised to reflect the amount currently being delivered by a combination of communal open space and deep soil.

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Amend 3 of the 24 existing design criteria to improve internal residential amenity and the productive value of apartments learnt from COVID-19:

- bedroom sizes, to accommodate working from home and family units
- private open space, to increase minimum depth
- storage, to increase total provision.

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Introduce new design criteria and supporting guidance to improve design and place outcomes through new requirements for:

- responding to local needs, character and context
- building footprint and separation controls for residential towers
- increased amenity of common circulation
- bicycle and mobility-aid storage
- mediating internal and external noise.

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As well as:

- clarify ambiguity over ceiling heights for non-residential uses
- improve the environmental performance of apartment buildings and reduce their carbon footprint to reflect current best practices and incentivise the uptake of technology such as electric vehicles
- include build-to-rent apartment development in the application of this policy
- reflect the new principle-based Design and Place SEPP, including replacing the nine Design Quality Principles, with the five principles of the proposed Design and Place SEPP.

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# A.1 Introduction

**This appendix outlines proposed changes to NSW planning regulations for the design of residential apartments. The ADG will be revised, and will move from SEPP 65 to the proposed new Design and Place SEPP. Guidance on apartment design will be accompanied by a proposed Urban Design Guide (UDG) and Design Review Guide (DRG).**

**Figure A1: Proposed new policy context for the Apartment Design Guide**



To support this transition to the new SEPP, a revision of the 2015 Apartment Design Guide is being undertaken in line with regular five-yearly reviews mandated by SEPP 65 (s.33):

- to update the guidance to reflect best practice and lessons learnt since the previous edition
- respond to changing circumstances in NSW
- to better integrate the design of housing with the sustainable design of NSW places and their local needs.

To accommodate increasing urban living across NSW, and a growing proportion of the population residing in and around apartment buildings, there is a strong need to ensure apartments provide residential amenity that supports long-term health and wellbeing. This includes the need to consider the sustainability and resilience of apartment development, how it responds to the local context and community, climate change, and how it minimises resource use and its carbon footprint. Apartment development may also do more to contribute to housing diversity and affordability by providing viable, liveable alternatives to detached housing for households of all compositions, sizes, ages and abilities.

However, not all these aspects can be addressed and accommodated within the site boundaries of an apartment development. The proposed changes also include introducing new urban design guidance to ensure the design quality, amenity and

sustainability of neighbourhoods and precincts. This will be consolidated into a separate guide so the new ADG can focus on site-level design advice.

This revision is also an opportunity to ensure the planning system can facilitate more flexible design approaches that respond to key criteria, help the development sector to deliver better housing and better places while supporting resilience, economic productivity, and learning from the accelerated change brought by COVID-19 pandemic. This revision proposes to update the objectives and guidance for residential apartment development to align with recent policy, best practice, economic recovery efforts, and industry feedback on achieving better outcomes.

This revision of the ADG responds to several key NSW Government initiatives, including:

- the planning policy changes proposed in the new Design and Place SEPP
- NSW Premier’s Priorities: Greener Public Spaces and Greening our City
- Productivity Commission Green Paper - Continuing the productivity conversation* (NSW Treasury 2020)
- Net Zero Plan Stage 1: 2020-2030* (DPIE 2020)
- Better Placed - An integrated design policy for the built environment of NSW* (GANSW 2017)
- A Housing Strategy for NSW - Discussion Paper* (DPIE 2020)

—a proposed new Housing Diversity State Environmental Planning Policy, aiming to consolidate existing state-level planning provisions for housing, increase housing supply, and facilitate new housing types such as build-to-rent, co-living, and student accommodation.

The public are invited to comment on all matters in this appendix, and specifically on direct sunlight access and natural ventilation requirements (Table A6), options to enable adaptable apartment layouts (Table A6), a materials schedule submission requirement (Table A8), proposed bicycle parking rates (Table A4), and combining housing design guidance (Section A.5).

### **A.1.1 Better housing, better places**

More than 60 per cent of all housing development in Greater Sydney in the past five years has been apartment buildings; three quarters of these were four storeys or higher. Across regional NSW growth is occurring in major centres. With more people living in closer proximity to each other through higher density development, housing quality, amenity and long-term sustainability require greater consideration.

This extends to the relationship between new apartment development and the place in which it is located. Development shapes the local public realm, including the streets and open spaces it adjoins, through its built form and landscape design. Apartment development makes a significant contribution to the character and context of local areas, influencing residents' outlook, sense of belonging, and household diversity. Better design guidance is required in response to the increasing number of taller residential buildings to ensure apartment development provides a desirable alternative to detached housing and responds to local needs and conditions at all scales – site-level, neighbourhood and precinct-level – creating liveable and sustainable housing, streets, and public spaces for residents of all ages, abilities and cultures.

### **A 1.1.1 COVID-19**

The past year has seen record numbers of Australians working from home in response to the COVID-19 pandemic, accelerating a global trend towards more flexible working arrangements. The emergence of this trend, and the length of time Australians have been working from home, is likely to make this a permanent shift, increasing the 'productive value' of apartment buildings. Apartment design needs to respond to this trend, and to the specific lessons learnt from having so many people working from home at once, including:

- increased pressure on internal and common spaces as a result of greater daytime occupancy, including the need for space in apartments for desks
- the need for greater internal acoustic separation within apartments with more than two working (or studying) occupants
- larger volumes of people occupying residential areas throughout the day, and using local streets, centres and neighbourhood shops within walking distance
- the need for ground-floor, non-residential uses to serve higher populations in predominantly residential areas
- more people needing well-designed common, open and public spaces for physical activity and recreation.

### **A 1.1.2 Housing supply, feasibility, and affordability**

The ADG has an important role in supporting housing supply, particularly in areas across NSW where housing targets have been set on the basis of intensification of existing land uses or infill development. This type of housing delivery creates opportunities to leverage existing neighbourhood amenity, complement or improve that amenity, and introduce new housing choices that are attractive, high-quality and sustainable. In reviewing the guide, careful consideration has been given to the balance required between supporting the amenity of residents, the affordability of housing, and the need for apartment development to remain financially feasible in the areas where it is being delivered.

### **A 1.1.3 Healthy, sustainable, resilient communities**

Good design contributes to a well-designed built environment – one that is healthy, responsive, integrated, equitable and resilient. The design of housing is fundamental to human health. As a high-density form of housing, the good design of apartment buildings is critical to ensure equity of health outcomes for people living closer together compared to those in lower density and detached housing. Apartment buildings provide for this in a number of ways, such as ensuring adequate access to fresh air and sunlight through good orientation, size and placement of windows (minimising the risk of illness from harmful conditions such as mould growth), and common spaces for recreation and greening. In this respect the ADG can be strengthened to support NSW communities as they continue to grow and change.

Good design is also sustainable for people and the environment in the long term, contributing to social, environmental and economic resilience. Apartment development can support social resilience by providing for local and district community needs (such as open space and ground-floor uses) which in turn generate economic activity and jobs. Apartment development that considers whole-of-life costs can support environmental resilience through sustainable material selection and building systems that improve performance and as well as contributing social, cultural, environmental and economic value.

### **A.1.2 Recent lessons learnt**

Feedback received since the last revision of the 2015 *Apartment Design Guide* has acknowledged the importance of the guide in lifting the standard of apartment development and residential amenity in NSW, and its influence in other jurisdictions. The guide has been used by other states as a basis for reforming planning policy and guidance to improve the design quality of the built environment.

In relation to economic factors, the Productivity Commission Green Paper and parts of industry call for greater flexibility in SEPP 65 and the 2015 ADG to achieve design quality through removing strict development controls and clarifying where discretion can be applied in assessing development applications.

A review of recent principle-based planning system reforms across key national and international jurisdictions reveals the need to balance potential uncertainty and costs to both industry and government where clear numeric criteria are not provided (including increased reporting requirements to justify outcomes) against providing the appropriate level of discretion for innovation in development applications, as well as assessment and decision-making processes.

Therefore a detailed review of key design criteria was undertaken to determine which design criteria were suitable for retention to give certainty to developers, assessors, and the public about how a given outcome will be achieved, and which matters could be dealt with through improved guidance.

Feedback has also highlighted a number of areas where practical improvements could help the industry be more innovative and deliver better quality outcomes within the intent of a given theme.

There are opportunities to revise key design criteria and supporting guidance to ensure adequate flexibility is provided for applicants to meet and exceed design objectives based on merit assessment. Five key themes have been identified:

**Table A1 Lessons learnt from the 2015 *Apartment Design Guide*: key themes**

<b>KEY THEMES</b>	<b>FEEDBACK</b>
<b>Solar access</b>	Provision of solar access for a proposed development, and extent of overshadowing to neighbouring development, depends on the site context and should be determined in consideration to these factors. In some cases, the current design criteria can have unintended impacts on design outcomes including apartment mix, location and internal layout, and this can affect development feasibility.
<b>Natural ventilation and noise</b>	There are differing views on how the design criteria and objectives can be achieved, in particular where alternative methods of ventilation are proposed in areas of lower environmental quality such as along busy roads.
<b>Apartment size and layout</b>	Unit size, configuration and mix is not achieving housing diversity. Currently development is providing mainly one-bedroom and two-bedroom units, and there is a lack of family units, and of provision for home businesses or people working from home.
<b>Deep soil and landscape design</b>	<p>There is a need to increase deep soil (to allow for improving tree planting and pervious surfaces to capture stormwater run-off) as current metrics are insufficient without the supporting site-area common open space target, although any increased targets will need to be appropriate for a diverse range of development typologies and scales.</p> <p>Better landscape design and consideration of tree canopy and green networks is required, and children's play areas need to be considered as part of common space provision.</p>
<b>Parking</b>	Parking rates need to be reviewed. Currently they do not take into account public transport amenity or alternatives, and this is contributing to development costs and oversupply of parking.

Several additional themes have also been identified:

**Table A2 Additional themes from review of the 2015 *Apartment Design Guide***

<b>ADDITIONAL THEMES</b>	<b>FEEDBACK</b>
<b>Communication and interpretation</b>	A new Apartment Design Guide must be clear on its status as a guide, and provide a stronger connection between design criteria and housing outcomes. Numerical values can become compliance requirements if their statutory role is not made clear.
<b>Innovation</b>	To enable innovation, there needs to be greater flexibility in the way design criteria and guidance is structured and applied, to benefit both the design and assessment processes.
<b>Identifying the context</b>	There is a need for mixed housing types that meet diverse housing needs, assigning greater value to history and character, and contributing to precincts that connect residents to a mix of shops and services.
<b>Primary controls</b>	There are inconsistencies between desired minimum standards in local environmental plans, development control plans, and the current apartment design requirements.
<b>Communal and public open space</b>	There is a general need for better guidance to improve the design of shared and public spaces in apartment development to accommodate residents' diverse needs and activities, in particular play spaces for family households with young children.
<b>Public interface</b>	More 'place making' is needed, through improved guidance to encourage activation and definition of streets, public space, through-site links, access and building entries.
<b>Building performance</b>	Guidance could more actively encourage better building performance to minimise running and energy costs and provide long-term sustainable apartments. Best practice waste management needs to be incorporated.
<b>Design review panels</b>	Design review panels could be used to support variations to numerical design guidance. There needs to be greater consistency across local environmental plans in applying design excellence. Design principles and recommendations are not always considered in assessment processes.

### **A.1.3 Aims for the revised Apartment Design Guide**

This revision of the ADG aims to:

- respond to industry concerns since 2015 about guidance in relation to solar access, natural ventilation and noise, apartment size and configuration, deep soil and landscape, and parking
- enable greater design flexibility in relation to solar access, natural ventilation, common open space and car parking objectives through revised design criteria and further guidance (such as alternative apartment layouts)
- support the delivery of greater housing diversity, including family apartments
- strengthen current guidance that contributes to and supports minimising energy use and carbon footprint
- learn from the use of apartments during COVID-19 and support economic recovery
- transition apartment design guidance and SEPP 65 to the new Design and Place SEPP, and
- enable the future consolidation of housing design guidance in NSW.

# A.2

## Key components of this revision

### **A.2.1 Overview**

This revision of the ADG sets out to support design and place in the NSW planning system with regard to residential design, first and foremost for apartment development. It aims to align the ADG with the proposed Design and Place SEPP and Housing Diversity SEPP. The intent is to create a structure that can enable the future consolidation of housing design guidance in NSW.

To facilitate this transition and respond to stakeholder feedback, the following general changes are proposed:

- clarify objectives as they relate to the design of housing
- review design criteria to ensure they are fit for purpose, place-based and evidence-based, and respond to stakeholder and industry concerns
- update design guidance to ensure it provides adequate flexibility for applicants to achieve the design objectives
- introduce case studies to demonstrate best practice examples of different apartment building typologies, layouts, design elements, and environmental performance measures, and to provide support for how objectives and design criteria can be met flexibly
- simplify the structure and content to focus the guidance according to the predominant user groups
  - consolidate and reorder sections by scales of design, to align with the Design and Place SEPP
  - move the majority of Parts 1 and 2 guidance for developing planning controls to a complementary Urban Design Guide (UDG), and amend references in the EP&A Regulation – see Section A2.2
  - move Part 5 to a Design Review Guide (DRG) for NSW to expand guidance and methods in support of other development typologies – see Section 3.3.

The proposed changes to the document are summarised in Table A3.

A detailed explanation of intended effects for these proposed changes is provided in the following sections. Changes to the EP&A Act and EP&A Regulation 2000 to support these changes to the ADG are being determined.

**Table A3  
Summary of  
the existing  
2015 Apartment  
Design Guide  
and proposed  
restructure**

For changes to  
Parts 1 and 2, refer  
to Section A.4

EXISTING SECTION (2015 ADG)	PROPOSED SECTION (REVISED ADG)
<b>PART 3 URBAN DESIGN AND SITE PLANNING</b>	
1A Apartment building types	Response to place
1B Local character and context	
1C Precincts and individual sites	
3A Site analysis	
2A Primary controls	Built form and massing
2B Building envelopes	(Relocate strategic planning guidance to proposed Urban Design Guide)
2C Building height	
2D Floor space ratio	
2E Building depth	
2F Building separation	
2G Street setbacks	
2H Side and rear setbacks	
4C Ceiling heights	
3E Deep soil zones	Green infrastructure
4O Landscape design	
4P Planting on structures	
3C Public domain interface	Ground floor and public interface
4L Ground floor apartments	
4T Awnings and signage	
4S Mixed use	(Integrate with Response to place, Built form and massing, Ground floor and public interface)
3G Pedestrian access and entries	Site access and address
3H Vehicle access	
3J Bicycle and car parking	Parking
<b>PART 4 BUILDING DESIGN</b>	
4F Common circulation and spaces	Common circulation
3D Communal and public open space	Communal spaces
4C Ceiling heights	Apartment mix and configuration
4D Apartment size and layout	
4K Apartment mix	
4Q Universal design	
3B Orientation	Sunlight and daylight access
4A Solar and daylight access	
APP 5 Sunlight access analysis tool	
4B Natural ventilation	Natural ventilation
4J Noise and pollution	
4H Acoustic privacy	Acoustic privacy
4E Private open space and balconies	Private open space and balconies
3F Visual privacy	Visual privacy
4G Storage	Storage
4M Facades	Appearance and materials
4N Roof design	
4R Adaptive reuse	(Integrate with Response to place, Appearance and Materials and Maintenance, Energy)
<b>PART 5 ENVIRONMENTAL PERFORMANCE</b>	
4U Energy efficiency	Energy
4V Water management and conservation	Water
4W Waste management	Waste
4X Building maintenance	(Integrate with Appearance and materials, Green infrastructure, Energy)
<b>Part 5 Design Review</b>	(Relocate to proposed Design Review Guide)
<b>APPLICATION REQUIREMENTS</b>	
APP 1 Site analysis checklist	Application requirements
APP 2 Pre-DA checklist	
APP 3 DA documentation checklist	
<b>APPENDIX</b>	
<b>Glossary</b>	Glossary
APP 4 Apartment building example schemes	Case studies

## **A.2.2 Urban design and site planning**

To improve the design integration of apartment development within its surrounding context, it is proposed to review and consolidate key urban design concepts and elements from Part 1 'Identifying the context', Part 2 'Developing the controls' and move them to Part 3 'Siting the development'. This will provide tailored urban design guidance for apartment development, and establish objectives and new design criteria to support design and assessment.

Currently Part 2 is primarily written for local government strategic planners, to support the development of local planning controls for apartment development, and does not include discrete objectives, design criteria or design guidance for designers and development applicants. It is proposed to move planning-related guidance to a separate Urban Design Guide, to better support the strategic planning process, the preparation of planning proposals, and the urban design of a broader range of development types. Revisions to Part 3 of the EP&A Regulation are proposed to reference the UDG, including replacing the reference to Parts 1 and 2 of the ADG in clause 21A of the Regulation.

Revisions to Part 3 of the ADG are also proposed. The final form of these revisions will be determined in response to community feedback and the development of the revised ADG as a whole. The revised ADG is proposed to have new sections, objectives, and design criteria, and tailored design guidance for the following elements of urban design and site planning:

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**Response to place** including understanding a site beyond its immediate property boundaries, considering its connection with Country, and contributing to local neighbourhoods and planning aspirations, character and place-making.

- New objectives are proposed to require apartment development to demonstrate how it will achieve a positive design contribution to the local area and surrounding neighbourhood through considering connections with Country, local character and place, and integration with the following urban systems and elements:
- landscape, blue and green infrastructure networks
  - public and open space networks
  - movement networks
  - built form and development pattern, building typologies, uses and activities
  - infrastructure and utilities networks.

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## **Simplifying green infrastructure**

requirements by ensuring adequate provision of deep soil landscaped areas, while also revising communal open space requirements so they are more flexible and performance-based according to the development context.

Soil volumes and design criteria will be updated to be consistent with latest practice. To maximise and sustain green cover long term, it is proposed that a landscape maintenance plan be submitted as part of development applications, including considerations for the maintenance of planting on structures. Guidance will be provided on the appropriate siting of buildings to support green open spaces, and maximise green cover and tree canopy.

A new section is proposed, to consolidate existing guidance for landscape design considerations and address green infrastructure holistically. This includes an increase in the percentage of deep soil provision to support green cover, including tree canopy, for mitigating urban heat and to safeguard current delivery without relying on common open space. The suggested ranges for these percentages, detailed in Table A5, are based on an analysis of recent development practice, local government development control plans, and their relationship with communal open space provisions.

Preliminary findings indicate that currently more deep soil is delivered than the minimum 7% of site area as a result of the communal open space design criteria – minimum 25% of site area. Therefore alongside an increase to the percentage of deep soil area, it is proposed to replace the communal open space requirement with a new measure, based on unit mix and occupancy, for greater design flexibility and correlation to actual need (see Section A.2.4 for further detail). This will better safeguard the delivery of green infrastructure, in particular tree canopy.

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**Built form** setbacks and separation to encourage more slender building forms that provide greater residential and ground plane amenity for increased density.

The recent trend towards taller apartment buildings, to support urban renewal while increasing housing supply, requires updated design guidance and new design criteria to ensure the distribution and massing of buildings across development sites is well-considered for both the amenity of residents and the surrounding neighbourhood.

New design criteria are proposed to limit floor plate sizes and the number of apartments per floor for tower development (including any portion of an apartment building with nine storeys or more) to reduce building bulk, improve air circulation in and around development, and promote natural light and sky views at street and ground level for public space amenity. The proposed criteria intend to reduce single-orientation units which have poor natural cross-ventilation.

Consolidated design guidance is proposed to be tailored to address the siting and massing of apartment buildings holistically, in relation to local character, adjacent development, and the selection of appropriate building typologies.

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Enabling a **mix of uses** through the provision of adequately scaled, adaptable ground floor spaces that can provide local services to residents and accommodate local businesses.

Increased apartment development can play an active role in supporting walkable neighbourhoods and the move towards the 30-minute city where local services and jobs can be accessed easily.

New design criteria and design guidance are proposed to ensure consistent ground floor ceiling heights are provided, allowing for different ground floor uses in response to local needs and business opportunities and enabling their change over time.

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Ensuring **access**, entries and movement is organised to support a logical and safe progression from street to apartment, improved neighbourhood vibrancy, connectivity, and ease of sustainable transport options.

The design of apartment development can positively activate streetscapes and contribute to people's sense of address and home when transitioning from public to private space. A new design criterion is proposed to ensure ground floor apartments have direct street access to increase the number of apartments with a street address and improve street activation, convenient access, amenity and identity. Updated design guidance is proposed to promote the integration of through-site links and pathways that improve walkability and connect with the local public space network.

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Revised **car parking** rates to ensure these are well-matched to local area needs and not oversupplied.

Currently the ADG adopts the car parking rates in the Guide to Traffic Generating Developments (RTA 2002) or council rates. These are being reviewed against five potential options for changing car parking requirements, set out in Table A4. This includes reducing car parking where there is oversupply or where good alternatives exist.

High-density apartment development concentrates car ownership in urban locations due to minimum off-street car parking requirements, often where there are other transport options available. Basement car parking can add considerably to development costs, and has an adverse design impact on streetscapes due to large car park entrances and conflicts between vehicles and pedestrians. Where parking is currently provided above ground (such as in flood-prone areas), the impact on streetscapes can be considerably greater. Evidence strongly suggests a reduction in car parking, alongside guidance for how to integrate and adapt spaces for other uses, is needed for the long-term sustainability of urban development in general.

A new design criterion and guidance for bicycle storage and parking is proposed to align provisions with demand, and encourage further uptake of active transport. The Department seeks comment and options for bicycle parking rates.

**Table A4 Options for revising guidance on car parking rates**

PROPOSED OPTIONS FOR CHANGE	DESCRIPTION
<b>Review existing minimum ratios</b>	<p>The prescribed minimum number of parking spaces could be reduced for apartments in defined circumstances, such as:</p> <ul style="list-style-type: none"> <li>—being in a specified location where there is an oversupply of parking; methodology for establishing oversupply to be confirmed, potentially a map, list of areas, or applicant-led analysis</li> <li>—being in a measurable location (e.g. within 800 m of a train station with a service pattern of a number of services per hour or similar); any development that satisfies the criteria would be eligible.</li> </ul>
<b>Apply maximum ratios</b>	<p>Maximum parking requirements could be mandated for new apartments (possibly subject to criteria such as proximity to specified transport). Developers cannot provide levels above this threshold (but are free to provide spaces below this level).</p>
<b>Unbundling</b>	<p>Ownership of parking could be required to be separated from the housing (and therefore from rents or initial housing sale prices). Parking spaces could be centrally managed, or leased or sold separately to residents, thus spaces become a tradeable commodity.</p>
<b>Adaptive travel plan</b>	<p>For larger developments, as part of travel plans, developers could provide evidence to substantiate a reduction in the number of spaces mandated under current controls - with the onus on the developer to demonstrate that public transport (and other alternatives) meet the remaining travel demand.</p>
<b>Increased provision of car share spaces</b>	<p>An incentive-based system for providing car share spaces could replace private car spaces, such as the ability to remove more than one car space for every car share space for a specified fleet provider, or a shared electric vehicle (EV) charging dock. Replacement rates to be determined.</p>

**Table A5 Summary of proposed changes to the Apartment Design Guide in relation to urban design and site planning**

PROPOSED DESIGN CRITERIA	GUIDANCE	BENEFIT								
<p><b>1. Contribution to place</b> Require development to demonstrate a consideration of Country and positive contribution to place, local character and planning aspirations (local strategic planning statement [LSPS], local housing strategy [LHS], LEP, DCP, local character statements) as well as integration with urban and natural systems.</p>	<p>Move new objectives and revised design guidance to Part 3.</p>	<p>Improve the design integration of higher density development through apartment development that responds to its place and context, and adds value to the local neighbourhood and environment.</p>								
<p><b>2. Landscape and greening</b> Consolidate objectives. Increase min. deep soil zones as a % of site area (a fixed minimum % within the range being considered below):  <table border="0" style="margin-left: 20px;"> <tr> <td>&lt; 650 m<sup>2</sup></td> <td>min. 14-18%</td> </tr> <tr> <td>650-1500 m<sup>2</sup></td> <td>min. 14-18%</td> </tr> <tr> <td>1500-3000 m<sup>2</sup></td> <td>min. 14-18%</td> </tr> <tr> <td>&gt; 3000 m<sup>2</sup></td> <td>min. 21-25%</td> </tr> </table>           Allow a pro-rata reduction in the targets if retail, commercial and entrances on the ground floor &gt; 85% of the building footprint.</p>	< 650 m <sup>2</sup>	min. 14-18%	650-1500 m <sup>2</sup>	min. 14-18%	1500-3000 m <sup>2</sup>	min. 14-18%	> 3000 m <sup>2</sup>	min. 21-25%	<p>Update design guidance (tree planting, soil volumes and criteria) to maximise green cover including tree canopy.</p>	<p>Deliver green cover, including tree canopy, to reduce urban heat, and improve the environment, community health, resilience and visual amenity.  Safeguard existing rates of deep soil delivery to enable decoupling of common open space control from site area.</p>
< 650 m <sup>2</sup>	min. 14-18%									
650-1500 m <sup>2</sup>	min. 14-18%									
1500-3000 m <sup>2</sup>	min. 14-18%									
> 3000 m <sup>2</sup>	min. 21-25%									
<p><b>3. Building form</b> Introduce a new criterion for towers (including any part of buildings of nine or more storeys) of:            —maximum gross floor area (GFA) of 700 m<sup>2</sup>.            —adjust existing design criteria and guidance to a maximum eight units per core per floor.</p>	<p>Consolidate objectives and design guidance in a new section: ‘Built form and siting’. Note: 8-12 units per core per floor to remain permissible below nine storeys.</p>	<p>Slender towers reduce building footprint to improve urban and public space amenity: open space; sky view; solar access; reduced bulk, scale, and wind impacts.  Incorporation of tower footprints into design criteria provide clarity for a consideration that is already in the ADG but has no numerical criteria, and improves residential amenity, cross-ventilation, natural light, and reduces the number of single-orientation units.</p>								
<p><b>4. Building separation</b> Require minimum building separation distance for towers of 25+ storeys of 30 m between habitable rooms.  Note: minimum building separation distance for 9-25 storeys: 24 m between habitable rooms (as existing).</p>		<p>Require greater separation for towers to improve ground plane and urban and public space amenity (open space; sky view; solar access; reduced bulk, scale, and wind impacts) and improve residents’ outlook in high-density environments.</p>								

PROPOSED DESIGN CRITERIA	GUIDANCE	BENEFIT
<p><b>5. Mixed use development and street activation</b> Allocate 40% of ground floor space for non-residential use in R3 and R4 zones, and centres.</p>	<p>Update design guidance for mixed-use development to demonstrate new ground floor non-residential uses can contribute to local area needs and street activation, including indicative depth by type of use. Rule of thumb is to provide ground floor uses including community spaces, a neighbourhood shop, neighbourhood supermarket where there are no non-residential uses and amenities within 5 minutes walk.</p>	<p>Increase local business patronage in response to more people working from home during COVID-19. Improve neighbourhood amenity and local economy. Provide space that is matched to the kinds of services missing from a local area, to support local living and reduce the need to travel further afield.</p>
<p><b>6. Clarify ground floor ceiling heights</b> Clarify ground floor ceiling heights for all non-residential uses (habitable rooms only) to 4.2m.</p>	<p>Improve design guidance for determining floor-to-floor heights to achieve ceiling heights.</p>	<p>Improve street activation and future adaptability of ground floor levels for non-residential uses (including retail, commercial, community and communal spaces). Clarify ambiguity of two illustrative heights in 4C.1 and 4C.2 drawings vs one height only in the 4C-1 table.</p>
<p><b>7. Ground Floor Activation</b> Require all ground floor apartments facing a street to have direct access to the street.</p>		<p>Improve street activation and passive surveillance where street activation is not provided through non-residential use.</p>
<p><b>8. Car parking</b> As a minimum, retain the link to the lower of rates in <i>Guide to Traffic Generating Developments</i> (RTA 2002 or its replacement, the <i>Guide to Traffic Impact Assessment</i>) or council rates, and supplement this with: —a reduced minimum parking rate and/or a maximum parking rate that applies to a list or map of locations that meet certain criteria, and/or —an ability by applicants to reduce the parking rate by undertaking certain actions —as set out in Table A4 above.</p>	<p>Include new guidance (in addition to rates or methods for calculation) including for above-ground parking to be naturally ventilated.</p>	<p>Encourage sustainable transport options, discourage private car ownership, and reduce development costs.</p>

PROPOSED DESIGN CRITERIA	GUIDANCE	BENEFIT
<p><b>9. Bicycle parking and mobility storage</b></p> <p>Specify new bicycle parking and mobility storage requirements including number of bicycle spaces per unit, bicycle visitor parking, and access to bicycle parking:</p> <ul style="list-style-type: none"> <li>—studio and 1-bed units – 1 secure space</li> <li>—2-bed units – 2 secure spaces</li> <li>—3-or more bed units – 3 secure spaces</li> </ul>	<p>Require accessible units to be designed to facilitate parking a mobility scooter near the entrance to the unit.</p> <p>Cross-reference to secure cycle design guidance including location and access from street.</p>	<p>Promote cycling through provision of adequate storage.</p> <p>Encourage sustainable transport options, discourage private car ownership, and reduce development costs.</p>

### **A.2.3 Residential amenity**

To improve the liveability of apartment development in NSW, and encourage high-density housing as a viable alternative to detached housing, its amenity must be brought into comparable balance with lower density housing forms. While residents of detached and semi-detached housing can enjoy private garden space, and a greater building perimeter that maximises access to fresh air, sun and outlook, residents of apartment buildings must typically make a trade-off on this amenity. This can be balanced to a certain degree by proximity to jobs and services, affordability, common spaces and a sense of community. However if good internal amenity is not delivered, the results can have a long-term effect on current and future residents.

It is proposed to consolidate and revise objectives, design criteria and guidance to increase opportunities for optimising residential amenity through the following means:

Revise guidance on **sunlight and daylight access and control** to ensure there is adequate flexibility to achieve the objectives for a greater number of apartments across a variety of contexts.

Stakeholder and industry feedback has indicated there is a tendency to face smaller apartments north, with larger apartments typically facing south and receiving less to no sunlight, disproportionately impacting residential amenity for potentially larger and family households. This also impacts smaller apartments, typically single-aspect, where natural cross-ventilation is difficult to achieve, and apartments exposed to direct sun can overheat. Other feedback indicates deficient shading and glare control is leading to poor thermal performance, increasing demand for air conditioning and heating, increasing energy use.

To improve flexibility and guide better outcomes, it is proposed to increase the range of sunlight access hours that comply, balanced with application of the requirement to a greater number of apartments. The intention is to enable more apartments to receive direct sunlight to improve liveability and wellbeing. New and revised design guidance is also proposed to:

- limit the extent of facade glazing to reduce solar heat load, and promote options for shading and glare control, contributing to improved thermal performance in response to rising urban temperatures

- reduce the number of east-facing and west-facing single-aspect units to avoid the potential for apartments to overheat
- simplify the method of calculating solar access, with development to demonstrate how site arrangement has maximised number of apartments facing within 15 degrees of north. This intends to support faster design and assessment processes while ensuring passive design opportunities for managing solar and daylight access are embedded through building orientation.

The Department is seeking industry feedback on options for revising current design criteria and guidance to improve flexibility for achieving these objectives.

Improve **natural and cross ventilation** through better definitions of what counts as natural cross-ventilation, and encourage better performance through floor-plate configuration.

- Access to adequate fresh air is a fundamental housing need; its importance has been made more acute during the COVID-19 pandemic. It is proposed to:
- increase the number of naturally cross-ventilated apartments, and provide clearer definitions for dual-aspect units and guidance for how to achieve design criteria. Apartments over 10 storeys are proposed to be no-longer deemed as naturally cross-ventilated, as supported by air modelling studies. This is intended to provide flexibility and encourage a greater proportion of tower apartments with natural cross-ventilation to offset lower-level apartments where building footprints are typically deeper
  - include new requirements for ceiling fans to habitable rooms with 2.7m ceilings to improve airflow within apartments affordably and reduce demand for air conditioning.

The Department is seeking industry feedback on improving natural cross-ventilation for housing, for better design and health outcomes.

Encourage **diversity of apartment types, sizes, and layouts** to accommodate households of all ages, abilities, sizes and needs, including increased demands on space and acoustic privacy due to more people working from home.

Recent stakeholder feedback has highlighted that current design criteria and guidance may be contributing to apartment layouts, sizes, and storage options that unintentionally discourage families with children, larger families, intergenerational households, the elderly, and those with a disability from living in an apartment. These households generally require more space to live comfortably.

In NSW, apartment size is in contrast to the size of detached housing, which is among the largest in the world. During COVID-19, the average floor area of new detached housing grew with the demand for greater space and internal amenity while households were spending most of their time at home. Considering the average floor area of apartments is nearly half that of a detached house, this presents a significant barrier for the NSW population to move between different types of housing stock, particularly families with children wishing to affordably upsize, and the elderly wishing to downsize.

Recommendations from one sector includes reducing apartment sizes nominally to generate a development cost saving. Other sectors recommend introducing larger and twin bedrooms for more adaptable apartments to better accommodate families and working from home. On balance, and in comparison to similar national and international jurisdictions, current minimum apartment sizes remain appropriate, with improvement possible through additional design guidance for varying internal configuration within overall areas.

Standard apartment layouts do not demonstrate the potential adaptability of spaces for different uses such as bedrooms for studies or home office spaces, or additional living areas, or dual key or co-located units for a variety of potential household configurations.

SEPP 65 and the 2015 *Apartment Design Guide* currently allow for departures from minimum apartment sizes, including smaller apartments, based on merit assessment at the discretion of the consent authority. The revised ADG proposes to retain this and provide additional guidance on how this merit assessment may be done.

To encourage a greater variety of apartments and layouts, catering for the growing demand for apartment living by diverse households, it is proposed to revise existing requirements and include additional supporting guidance (such as indicative floor plans and case studies of varied configurations) including:

- requiring development to demonstrate how it will contribute to local housing strategies and targets and local needs
- increasing the percentage of universal design to the Livable Housing Design silver performance level, in line with other government research
- increasing the minimum depth of private open space for studio and two-bedroom apartments to improve liveability of outdoor space. This is linked with new environmental performance standards to require centralisation of heating and cooling infrastructure to avoid impinging on private open space amenity. Added design guidance is proposed for private open space in tower typologies to address amenity issues relating to natural cross-ventilation, wind impacts, safety, outlook and opportunities for alternatives to balconies.

Feedback is sought on options for enabling more adaptable apartments for diverse households including families, and to support working from home, through larger bedrooms and guidance to support different configurations.

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Provide **adequate storage** to support diverse households and their whole-of-life residential needs such as families with children, tradespeople, the elderly, and mobility impaired.

Feedback and current practice has identified insufficient guidance on providing adequate storage for basic living needs, with storage often provided in awkward and inconvenient spaces. It is proposed to increase storage requirements outside apartments to better accommodate large items that households acquire over the longer term such as tools, toys, mobility devices, camping and leisure equipment, etc. Dimensions for internal storage outside kitchens, bathrooms and bedrooms will also be provided to ensure this accommodates tall cleaning and laundry items and linen.

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Provide **acoustic separation** for internal and external noise sources to respond to increased work-from-home needs and increased density in urban areas where exposure to busy road, rail corridors and industrial uses is more prevalent.

Design guidance is proposed to be updated to incorporate recent local government best practice controls for development in noisy or poor quality environments, ensuring residential amenity is achieved where it is necessary to depart from design criteria on natural cross-ventilation, solar and daylight access, private open space and balconies.

Internal acoustic amenity has been identified as an issue during the COVID-19 pandemic and in response to broader trends of increased working and studying from home. There is a need for apartments to better accommodate working from home. New design criteria are proposed to require suitable spaces are acoustically separated from main living areas.

**Table A6 Summary of proposed changes to the Apartment Design Guide in relation to residential amenity**

PROPOSED DESIGN CRITERIA	GUIDANCE	BENEFIT
<p><b>1. Solar access</b> For the avoidance of doubt, clarify that design criteria are mandatory. An increase to the range of hours in which a development may achieve solar access is being considered, subject to design testing and industry feedback.</p>	<p>Simplify the method for calculating solar access. Limit east-west single-aspect units, and/or maximise units within 15 degrees of north.</p>	<p>Direct solar access to apartments has numerous benefits including providing warmth in winter, and improving indoor air and light quality to support people’s daily routines and sleep patterns. Extending the time period to which the design criteria apply aims to improve direct solar access to a greater number of apartments for improved liveability and health.</p>
<p><b>Shading and glare control</b></p>	<p>Provide additional guidance on achieving shading and glare control including assessment criteria, with practical guidance such as 50% glazing and no glass (or high-performance glazing) for the first metre from the floor.</p>	<p>Reduce solar heat gain and glare from glazed facades exposed to direct sun, to enable better use of indoor space and improve thermal comfort.</p>
<p><b>2. Natural ventilation</b> a. Require ceiling fans for habitable rooms with 2.7 m ceiling heights.  b. Increase natural cross-ventilation requirements to 70% of units, and apply this requirement across all storeys.</p>	<p>Provide new supporting design guidance.  Improve definitions and guidance for which units can be counted, including ‘dual aspect’ and corner units. Use benchmarks and guidance to achieve more kitchens and bathrooms with windows.</p>	<p>Improve resident thermal comfort, provide greater choice for enhancing natural airflow, and reduce the need for air conditioning.  Increase the number of apartments with adequate fresh air circulation. Improve indoor air quality, liveability, health, and building longevity. Reduce mould growth, absorption of cooking smells, and exposure to material off-gassing. Reduce reliance on mechanical ventilation. Removing this specification for below nine storeys enables flexibility in how % natural cross-ventilation is achieved across the building.</p>
<p><b>3. Livable Housing targets through universal design</b> The requirement for a specified Livable Housing Australia level and percentage will be increased if NSW government research supports higher standards.</p>		<p>Increase the number of apartments suitable for our growing ageing population, and for other households that benefit from universal design such as families with children.</p>

PROPOSED DESIGN CRITERIA	GUIDANCE	BENEFIT
<p><b>4. Apartment size</b> No change</p>	Provide guidance to assess departures from minimum areas.	Improve the range of layouts to accommodate the growing diversity of households living in apartments.
<p><b>5. Apartment layout</b> Enable varying layouts to support different households, and people working or studying from home, by requiring 20% of 2 or more bedroom units to be ‘family units’, providing minimum 12 m<sup>2</sup> bedrooms for all bedrooms.</p>	Encourage non-structural walls to be used between dry areas of apartments, capable of being modified by the occupants (subject to strata bylaws or consent where necessary).	Improve the ability for apartment residents to adapt their dwellings to suit their changing needs – to enable working from home, and support intergenerational and mixed occupancy.
<p><b>6. Local planning considerations</b> Develop specific criteria for responding to local housing strategies.</p>	Revise objectives and design guidance for development to demonstrate a response to local planning needs, including reference to local housing strategies and contribution to local housing targets through apartment mix.	Ensure development contributes to local housing need as recently determined through new planning instruments (LSPS and LHS).
<p><b>7. Private open space</b> No change to total area. Increase min. depth of private open space:</p> <ul style="list-style-type: none"> <li>—studio units     min. 1 m</li> <li>—1-bed units     min. 2 m (no change)</li> <li>—2-bed units     min. 2.4 m</li> <li>—3+ bed units    min. 2.4 m (no change).</li> </ul>	Revise design guidance for private open space including: <ul style="list-style-type: none"> <li>—recommending air conditioning condensers and hot water units not be located on balconies</li> <li>—for towers (apartment buildings of nine or more storeys) provide additional guidance for the design of balconies and wintergardens.</li> </ul>	Improve residents’ quality of life through increased amenity, safety and usability of private open space, in particular for high-rise apartment development.

PROPOSED DESIGN CRITERIA	GUIDANCE	BENEFIT
<p><b>8. Storage</b></p> <p>Increase requirements to:</p> <ul style="list-style-type: none"> <li>—studio units 6 m<sup>3</sup></li> <li>—1-bed units 9 m<sup>3</sup></li> <li>—2-bed units 12 m<sup>3</sup></li> <li>—3+ bed units 15 m<sup>3</sup></li> </ul> <p>Decrease the minimum amount to be provided inside the unit to one third (from 50%) (i.e. the remaining amount can be provided outside the unit).</p>	<p>Require internal storage to provide for one storage space outside bedrooms:</p> <ul style="list-style-type: none"> <li>—studio and 1-bed units – 0.6 m deep x 0.9 m wide x 2.4 m high</li> <li>—2+ bed units – 0.6 m deep x 1.2 m wide x 2.4 m high</li> </ul>	<p>Increase storage to provide adequate amenity more equal to detached housing, and support long-term residents and diverse and family households.</p> <p>Note: No change to requirements for internal volume, as amount within apartments is the same as current ADG requirement (50% of 4 m<sup>2</sup> = one third of 6 m<sup>2</sup>).</p>
<p><b>9. External noise &amp; pollution</b></p> <p>Introduce new requirements for development on busy roads (as currently defined, i.e. &gt; 20,000 vehicles per day) to supplement the Infrastructure SEPP.</p>	<p>Update design guidance to align with recent best practice developed by local councils.</p>	<p>Improve the amenity and consistency of development expectations for apartments where environmental quality is compromised (including road and rail corridors).</p>
<p><b>10. Acoustic separation</b></p> <p>To support people working from home or studying:</p> <ul style="list-style-type: none"> <li>—for 1 or 2-bed units, provide one acoustically separable area from the main living space</li> <li>—for 3+ bed units, provide two acoustically separable areas from the main living space.</li> </ul>	<p>Provide new guidance: ‘acoustically separable’ is a room with sound transmission of &lt; 45 dBA (generally via a solid-core door). These spaces may be bedrooms.</p> <p>Provide guidance to show how desk space can be accommodated in all apartment configurations, and multiple desks for 3+ beds.</p>	<p>Accommodate the increase in the NSW population working from home due to the changing nature of work and increased flexibility, made more acute by COVID-19.</p>

#### **A.2.4 Common spaces and vertical circulation**

With a greater number of households living and working in apartment buildings, there is greater demand on shared spaces to accommodate a broader range of activities tied to domestic and social life. This includes play space for children, social events, strata meetings, quiet places for respite, and the ability to dry clothes in the sun. Common spaces also comprise the front doors to people's homes in circulation areas which are often overlooked in design quality and amenity.

It is proposed to revise key objectives, design criteria and guidance to ensure communal spaces can respond to contextual factors, address apartment mix, and improve liveability and inclusivity:

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Decouple objectives and criteria for **communal open space and landscaping and common rooms** so these can be delivered flexibly to meet local needs and conditions.

Existing requirements for communal open space are based on a percentage of site area rather than the potential needs of future households. This can result in overprovision of common space in low-rise apartments, and insufficient common space in high-density settings. This also indirectly ties the provision of communal space with open space for landscaped areas. It is proposed to develop separate requirements for communal open space and common spaces or rooms, to enable a development response based on local conditions and apartment mix to better serve residents and provide a diversity of social spaces.

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Improve the **amenity of common circulation spaces** to require natural light and ventilation, and adequate space for universal access and moving furniture.

Existing provisions for natural light and ventilation to common areas are discretionary. Learnings from COVID-19 and recent stakeholder consultation warrant raising these provisions to a mandatory requirement to ensure apartment development is healthy, liveable, and resource-efficient across the building life cycle, and does not become an unnecessary financial burden to occupants. Proposed increases to livable housing standards in line with the NCC also aim to ensure there is sufficient space for households of all ages and abilities to circulate freely. Requirements for easing the moving of furniture are detailed below.

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Ensure **lift provision** delivers adequate vertical circulation and mobility for residents of high-density apartment development.

Tower apartment typologies are underserved by existing provisions for lifts, affecting waiting times, convenience and crowding for residents. It is proposed to require a lift report for development over nine storeys, or where there are over 40 units sharing a single lift, to verify suitable servicing. New design guidance is proposed to ensure there is provision of a lift with minimum clearances for moving furniture.

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Encourage **all stairs** to be used for daily circulation needs (including fire stairs) through guidance that demonstrates how to locate and design for natural light and easy access.

**Table A7 Summary of proposed changes to the Apartment Design Guide in relation to common spaces and vertical circulation**

PROPOSED DESIGN CRITERIA	SUPPORTING MATERIAL	BENEFIT
<p><b>1. Communal open space</b>            Replace the site area metric (min. 25% of site area) with a unit mix / occupancy metric, subject to the delivery of specific requirements for communal space in apartment development, including:</p> <ul style="list-style-type: none"> <li>—new specific requirements for communal open space and communal (internal) rooms to recognise the needs of apartment dwellers, particularly in higher density development</li> <li>—providing covered communal space accessible from the street capable of hosting private or community events and activities, consisting of               <ul style="list-style-type: none"> <li>— 2.5% of GFA for non-residential uses</li> <li>— min. 250 m<sup>2</sup> for residential developments &gt; 1000 m<sup>2</sup>.</li> </ul> </li> </ul>	<p>Requirements to consider flexibility for addressing resident/apartment mix and contextual factors including green infrastructure.</p>	<p>Safeguard open space for the needs of residents, while enabling flexibility to provide appropriate and diverse common spaces for residents based on contextual factors. Link open space provision with the need to improve amenity as urban density increases.</p> <p>A quantum of common space is required, independent of any public space or deep soil, to ensure sufficient gathering space for events, childrens play, and strata meetings.</p> <p>One specific space sought will be a common room or event space capable of hosting a range of activities including strata meetings, events, parties and gatherings.</p>
<p><b>2. Daylight and ventilation</b>            Introduce a new requirement to provide adequate daylight and natural ventilation to all common circulation spaces.</p>	<p>Provide supporting design guidance on adequate daylight and natural ventilation to all common circulation spaces.</p>	<p>Improve the amenity of common circulation spaces, in particular for adequate fresh air in response to COVID-19, and to reduce energy consumption and building running costs.</p>
<p><b>3. Lift requirements</b>            Require a lift report to be submitted for development nine or more storeys or over 40 units.</p>	<p>Provide one lift with a clear internal height of 2.5m to accommodate movement of furniture, plant and large household items. Clear space in front of the lift to be 2.5m wide.</p>	<p>Clarify current guidance to ensure the suitability of lift provision. Improve lift servicing for high-density apartment development, and provide space for moving furniture where there is a higher incidence of rental units.</p>
<p><b>4. Building access, common circulation and spaces</b>            Require access and circulation spaces to achieve Livable Housing Australia silver performance level. Ensure equitable access from the street and to on-site facilities for all housing types (social, affordable, open market).</p>	<p>Note minimum corridor widths to allow a wheelchair to turn.</p>	<p>Increase the number of apartments with universal access to cater for residents and visitors of all ages, abilities and household types (including families with children needing prams, the elderly, and people with impaired mobility).</p>
<p>Upgrade fire stairs to meet NCC common circulation requirements by providing hold-open fire doors and natural light to allow residents to access and use stairs daily.</p>	<p>Provide new design guidance for fire stairs.</p>	<p>Leverage development space for common amenity, reduce reliance on lifts, and improve opportunities for residents to be active.</p>

### **A.2.5 Environmental performance**

Apartment buildings have a long life cycle compared to other forms of housing, given their greater development scale and investment to accommodate multiple future owners and tenants. Well-designed built-form orientation, energy and water infrastructure, material selection, and landscaping over structures can substantially save running and maintenance costs and reduce environmental footprint. With climate change increasing severe weather events and temperatures, improved environmental performance of apartment buildings will help mitigate these impacts on residents. The long-term resilience of the built environment depends on the holistic consideration of environmental performance including resource use. There is opportunity for apartment buildings to contribute to net zero targets, urban water security, reducing urban heat, and supporting local material supply chains while reducing household bills and protecting residential amenity.

This revision of the ADG intends to update design objectives and guidance and introduce some new design criteria in the following areas:

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Empowering residents to use less **energy and water** by providing monitoring tools for individual apartments, and requiring systems design to enable choice of suppliers.

New design criteria proposed require the provision of real-time energy and water use displays for each unit. A separate criterion is also being considered to ensure resident choice for water and energy supply to save household costs and enable selection of renewable sources. Requirements for minimum WELS standards are under consideration in coordination with BASIX reform.

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Providing for **electric vehicles** including future-proofing apartment buildings and setting targets for car spaces.

To support the NSW Government Net Zero Policy, the Department is investigating targets for electric vehicles in apartment development and provision for supporting infrastructure and energy supply. An incentive-based scheme is proposed to encourage EV use, with lower replacement rates for private car spaces proposed for shared car spaces and EV charging points (see proposals for car parking in Section A2.2).

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Requiring the centralisation of **heating and cooling infrastructure** to improve efficiencies and increase the amenity of private open space.

It is proposed to elevate design guidance for the central location of heating and cooling infrastructure to a mandatory requirement. The location of air condenser units and instant gas units on balconies and private open space impinges on space and creates noise, heat, unwanted air flow, and visual impact. A new design criterion will require these building services to be centralised and integrated with the overall building design, to avoid amenity loss to individual apartments. Updated design guidance is proposed to ensure building services are considered holistically with regard to resource use, running costs, and long-term resilience.

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Safeguarding **green infrastructure** for urban cooling through passive and recycled water irrigation targets and building maintenance requirements.

The long-term viability of green infrastructure depends on its sustainable ongoing maintenance and care.

To support green infrastructure while conserving water use, it is proposed to introduce new design criteria for sustainable irrigation through passive means, e.g. via water-sensitive landscape and urban design and through the use of recycled water.

The Department is investigating potential targets and measures, and welcomes submissions on options for improving these objectives.

An additional design criterion will require development applications to demonstrate, through a landscape maintenance plan, how green infrastructure including tree canopy and green cover, in deep soil and on structures, will be maintained and sustained over the life of a building. The intent is the plan will be checked for compliance at construction certificate and occupation certificate stages, and transferred to the strata corporation for ongoing implementation.

Promoting the use of **sustainable and local materials** to support net zero targets.

New objectives and design guidance are proposed to encourage the use of materials with low embodied energy, and support the pursuit of green building ratings. A proposed option put forward for public comment is for development to submit a materials schedule that details how material selection will lower the carbon footprint of a development.

Improving **waste management** of mixed-use development.

New design guidance is proposed for the separation of waste-sorting spaces for residential and non-residential uses to ensure these are adequately serviced and amenable, aiming to improve recycling activity.

**Table A8 Summary of proposed changes to the Apartment Design Guide in relation to environmental performance**

PROPOSED DESIGN CRITERIA	GUIDANCE	BENEFIT
<p><b>1. Energy efficiency</b></p> <ul style="list-style-type: none"> <li>—Provide a real-time energy use display or smart meter for each apartment.</li> <li>—Design energy systems to enable choice of energy suppliers.</li> <li>—Apply NABERS Common Property Energy requirements to common areas, with targets to be specified in the Design and Place SEPP.</li> </ul>	<p>Update objectives and design guidance for development to address energy use more holistically and encourage use of renewable energy, including considering resilience.</p>	<p>Reduce energy use, and carbon emissions, and empower residents to reduce energy costs and switch to renewable energy sources.</p>
<p><b>2. Energy efficiency – electric vehicles</b></p> <p>Specify a target (or general incentive through replacement rates) for EV charging stations and car spaces. (Target to be determined.)</p> <p>Require development to be EV-ready, providing sufficient power to the meter board to enable vehicle charging at every car space, and delivering power supply to each car space for future conversion and adoption.</p>	<p>Update objectives and design guidance and coordinate this with car parking guidance.</p>	<p>Contribute to achieving NSW net zero policy goals, and reduce carbon emissions by accommodating sustainable transport options. Encourage car sharing, use of electric vehicles and other reduced-emission transport options.</p>
<p><b>3. Heating and cooling infrastructure</b></p> <p>Require heating and cooling infrastructure (including condensers) to be located in a centralised location in the basement, on each floor plate, or on the roof, and integrated with the building design, using facade and roof elements to screen it from view.</p>	<p>Encourage car sharing, use of electric vehicles and other reduced-emission transport options.</p>	<p>Improve environmental impacts of exposed building services on the neighbourhood and residents' amenity in high-density urban environments.</p>
<p><b>4. Water management</b></p> <ul style="list-style-type: none"> <li>—Introduce minimum WELS standards.</li> <li>—Require a strategy for on-site water re-use, including % of landscaped area for passive or recycled water irrigation.</li> </ul>	<p>Update objectives and design guidance to support a holistic approach to water use, recycling and stormwater collection.</p> <p>Set new benchmarks for on-site stormwater management and rainwater and grey water harvesting.</p>	<p>Improve water use and building performance to reduce urban water demands, helping to address the rising frequency of extreme heat and drought periods.</p>

PROPOSED DESIGN CRITERIA	GUIDANCE	BENEFIT
<p><b>5. Building and landscape maintenance</b>            Require a building and landscape maintenance plan to document maintenance regimes for the building structure, soft landscaping, waterproofing, plant maintenance, replacement and repair strategies (including common property) and material life cycles. Require the landscape maintenance plan to identify how landscaping will be periodically maintained after completion (5-year, 10-year planning).</p>	<p>Provide new objectives and design guidance to support the proposed design criteria.</p>	<p>Ensure ongoing maintenance of landscaped areas.</p>
<p><b>6. Environmental performance of materials</b>            Require development to reduce carbon footprint and contribute to net zero targets and the circular economy including:            —pursuing green building ratings            —selecting materials with low carbon and embodied energy</p> <p>Require carbon footprint and embodied energy of materials to be set out in a <b>materials schedule</b> documenting types, quantum, source, life span, embodied energy and recycled content of each material.</p>	<p>Provide new objectives and design guidance to support the proposed design criteria.</p>	<p>Encourage sustainable material use and supply chains, and minimise the carbon footprint of development.</p>
<p><b>7. Waste management</b></p>	<p>Provide new design guidance: waste facilities for residential and non-residential uses to be separated</p>	<p>Improve space planning for ease of use and to encourage recycling.</p>

## A.3 Proposed transition from SEPP 65

The proposed transition of the ADG from SEPP 65 to the Design and Place SEPP intends to transfer all the general operational provisions of SEPP 65, including design review, and to align the objectives of the guide with the principles of the new Design and Place SEPP, in lieu of the principles in Schedule 1 of SEPP 65.

Table A9 Proposed transition of SEPP 65 provisions to the Design and Place SEPP

PROVISION	PROPOSED
<b>Clause 1 Name of this Policy</b>	SEPP 65 to be incorporated into the Design and Place SEPP
<b>Clause 2 Aims, objectives etc</b>	To be transitioned to the Design and Place SEPP with revisions to coordinate the aims and objectives of the Design and Place SEPP. The intent is to extend the consideration of design quality to development types other than residential apartments, as well as consider design quality at a neighbourhood and precinct scale. The proposed structure of the Design and Place SEPP will allow for new design requirements and guidance to be added in response to other scales and types of development as they arise.
<b>Clause 3 Definitions</b>	<ul style="list-style-type: none"> <li>—Apartment Design Guide (ADG) definition to be changed to reflect its reference in the proposed Design and Place SEPP. The ADG will be restructured to enable guidance for other typologies to be aligned in the future, and to ultimately enable a unified Housing Design Guide.</li> <li>—The proposed Design and Place SEPP principles will replace the design quality principles.</li> <li>—Changes to design review panel definitions will reflect the proposed design review process in Part 2 of the proposed SEPP.</li> <li>—The Design and Place SEPP will expand the range of development types to which it applies. However, specific provisions will continue to apply to residential apartment development under the ADG.</li> </ul>
<b>Clause 4 Application of Policy</b>	The Design and Place SEPP will apply to a broader range of development types although the ADG will only apply to the typologies contained in the ADG (currently, residential flat buildings). The existing design verification process for residential flat buildings and shop top housing (three or more storeys and four or more dwellings) will continue to apply. It is expected the build-to-rent residential typology will be incorporated once the proposed Housing Diversity SEPP is finalised.
<b>Clause 5 Land to which this Policy Applies</b>	The approach to application of the Design and Place SEPP is set out in Section 2.4 of this EIE. Further investigation into the reasons for exclusion of SEPP 65 from the Alpine Resorts SEPP will be undertaken. This may relate to specific climate-related requirements in this area.
<b>Clause 6 Relationship with other environmental planning instruments</b>	Reference to BASIX SEPP will be amended to refer to BASIX provisions of the Design and Place SEPP. BASIX will be incorporated into the Design and Place SEPP.

<b>PROVISION</b>	<b>PROPOSED</b>
<b>Clause 6A Development control plans cannot be inconsistent with Apartment Design Guide</b>	This clause will be moved to the Design and Place SEPP, and be updated to reflect the new relevant sections of the ADG.
<b>Division 1 Appointment</b>	Some changes to the constitution of panels are being considered to provide greater flexibility and reflect the proposed design evaluation process in Section 3.2.3 of this EIE.  Existing design review panels will remain in place. There may need to be differentiation in roles between councils' and State panels.  New guidance for design review panels is proposed in a new Design Review Guide to be used with the Design and Place SEPP.
<b>Division 2 Functions of a panel</b>	The functions of a design review panel are to be reconsidered to reflect the proposed design evaluation process in Section 3.2.3 of this EIE.  New guidance for design review panels in providing design advice, and for assessment officers in considering design advice, is proposed in a new Design Review Guide to be used with the Design and Place SEPP.
<b>Clause 28 – Determination of development applications Clause 29 – Determination of applications for development consent modifications</b>	The application of the Design and Place SEPP will be expanded to apply to a broader range of development and application types including certain State significant development which is referred to the NSW State Design Review Panel.
<b>Clause 30 Standards that cannot be used as grounds to refuse development consent or modification of development consent</b>	Non-discretionary standards for residential flat buildings are intended to be transferred to the Design and Place SEPP. The list will be updated and expanded in accordance with those proposed as part of this revision of the ADG to ensure conflicts with LEPs are removed (summarised below): <ul style="list-style-type: none"> <li>— car parking rates</li> <li>— minimum apartment areas</li> <li>— minimum ceiling heights</li> <li>— deep soil zones</li> <li>— building footprint</li> <li>— building separation</li> <li>— direct sunlight access</li> <li>— natural ventilation</li> <li>— storage</li> <li>— communal spaces.</li> </ul>
<b>Clauses 31 to 33</b>	Transition provisions of policy review clauses will be included in the proposed Design and Place SEPP.
<b>SCHEDULE 1 - DESIGN QUALITY PRINCIPLES</b>	
<b>Principles 1 to 9</b>	The design quality principles will be replaced with the principles of the Design and Place SEPP.

# A.4 Proposed relationship to an Urban Design Guide

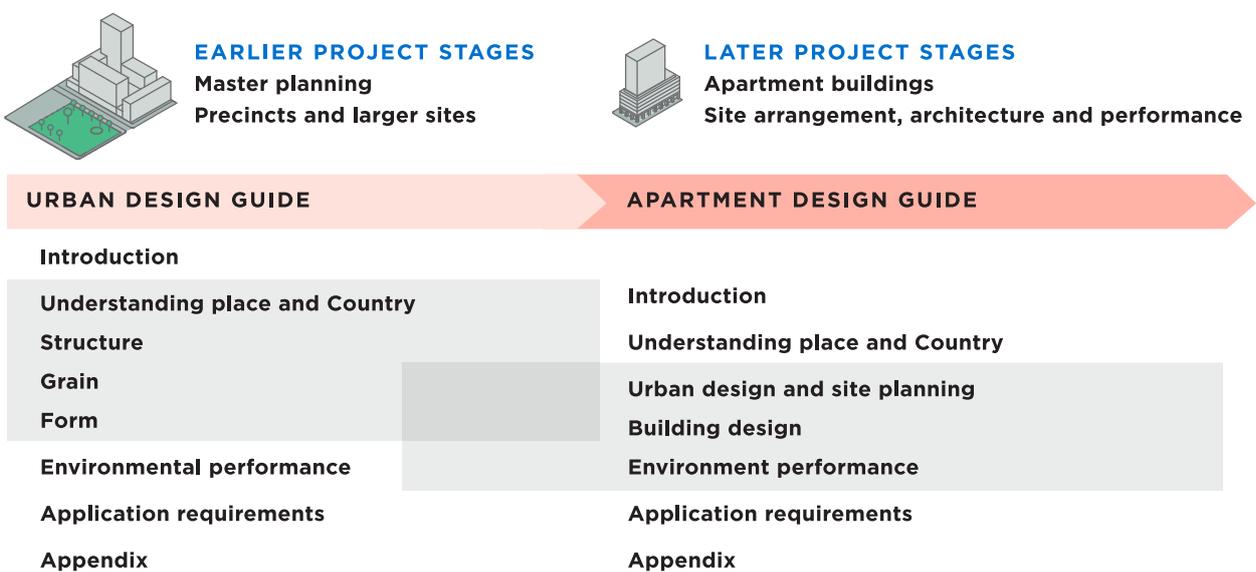
The ADG is proposed to be complemented by an Urban Design Guide (UDG) under the Design and Place SEPP. This intends to adapt and expand planning-related guidance from Parts 1 & 2 of the 2015 *Apartment Design Guide* to provide a framework that will support local and regional planning, including planning proposals, to achieve identified outcomes for specific places. The UDG also intends to provide a more holistic and hierarchical approach to design guidance for development projects of a variety of types, scales, and settings across NSW.

Initial studies suggest these documents could share a similar structure and themes for ease of use, with content coordinated across both to ensure there is clear delineation between the two guides. Is it proposed the UDG be used with the Design and Place SEPP and provide the requirements and design guidance for the

urban structure, grain, and form of planning proposal and development applications for larger scale precincts and sites (including the detail of context and primary considerations contained in Parts 1 and 2 of the 2015 *Apartment Design Guide*). Correspondingly, the revisions to the ADG propose to focus requirements and design guidance on the site configuration, architectural design, and performance of apartment development.

For larger projects, it is intended that applicants use both documents depending on the project stage, commencing with urban design before using the ADG for architectural concept development and detailed design resolution. A consistent approach to design between these documents is intended to inspire and facilitate the delivery of vibrant and valuable places.

**Figure A2 Proposed structure of the UDG and the ADG showing their interrelationships**



## A.5

# Proposed relationship to the Housing Diversity SEPP

The proposed Housing Diversity SEPP will consolidate into a single planning policy the existing state-level planning provisions relating to a range of less-common housing types that cater for special social, economic and accommodation needs. This includes new provisions for recent market-led housing development and tenure models including student accommodation, co-living, and build-to-rent housing, and housing types currently facilitated by the following SEPPs:

- State Environmental Planning Policy (Affordable Rental Housing) 2009 (ARHSEPP)
- State Environmental Planning Policy (Housing for Seniors and People with a Disability) 2004 (Seniors SEPP).

It is proposed the ADG (including SEPP 65 and its subsequent transition to the Design and Place SEPP) will apply where these housing types are accommodated in residential apartment development (as currently defined), with specific provisions to be added for new housing types where appropriate.

It is intended the ADG will be revised over time to combine all housing design guidance into a single design guide to be used with the Housing Diversity SEPP and Design and Place SEPP. This would include additional design guidance for student accommodation, co-living, boarding houses, and housing for seniors.

The Department is seeking comments on this intent.

## Appendix B

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# Proposed new Urban Design Guide

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# B.1

## The need for an Urban Design Guide

**An Urban Design Guide (UDG) is proposed to complement the proposed NSW Design and Place SEPP by facilitating the delivery of place-based design approaches to planning for precincts and significant developments.**

At present, there is no single comprehensive design guide for precinct planning and larger scale development proposals in NSW. Without such guidance, urban outcomes can be of variable quality. This includes inconsistencies in the provision of and access to public spaces and green infrastructure, active and public transport, local shops, schools, and services. Greater consistency in public space and urban design can be delivered by providing direction on the design process, setting clear requirements, and guiding outcomes for better evidence of social, environmental, or economic value. A detailed and illustrative guide can support the Design and Place SEPP in its application to precinct design and planning processes and outcomes, and establish conditions for the foundation of liveable, sustainable, and productive communities in NSW.

There is increasing focus on improving the quality of our urban environments in NSW, including the creation of Premier's Priorities for a Better Environment (Greener Public Spaces and Greening our City) to deliver greater access to public space and tree canopy, and the appointment of a Minister for Planning and Public Spaces in April 2019. The guide can play a significant role in creating a common language and shared expectations of urban environments to enhance people's health and wellbeing, revitalise nature, and reinforce vibrant local economies. The Department proposes to do this by bringing together existing place-based urban design practices and responding to emerging urban challenges, and by recognising the importance of the network of public spaces in forming the physical and social backbone of places. This can enable the creation of more distinctive and meaningful places in NSW.

### **B.1.1 Implementing best practice**

The guide can give effect to universal aspirations for our precincts and neighbourhoods, including:

— *United Nations Universal Declaration of Human Rights* (UN 1948)

**Article 25: Everyone has the right to a standard of living adequate for their health and wellbeing and that of their family, including adequate housing.**

— *United Nations Sustainable Development Goals* (UN 2015)

**Goal 11: Cities and human settlements that are inclusive, safe, resilient, and sustainable**

**Goal 3: Healthy lives and wellbeing for all at all ages**

**Goal 8: Inclusive and sustainable economic growth, and productive employment and decent work for all.**

— *NSW Premier's Priorities* (NSW Government 2019)

**Priority 11: Greener Public Spaces** – Increase the proportion of homes in urban areas within a 10-minute walk of quality green, open and public space by 10 per cent by 2023.

**Priority 12: Greening our City** – Increase the tree canopy and green cover across Greater Sydney by planting one million trees by 2022.

National and interstate urban design best practice can also be reflected in the guide, including *Our Cities, Our Future – National Urban Policy* (Australian Government 2011), and *Creating Places for People – An Urban Design Protocol for Australian Cities* (Australian Government 2011).

NSW policy can also inform the guide, including *Better Placed – An integrated design policy for the built environment of NSW* (GANSW 2017), related policy such as *NSW Net Zero Plan Stage 1: 2020-2030* (NSW Government 2020), and other guidance such as *Draft Integrating Urban Design* (GANSW 2019), *Draft Implementing Good Design* (GANSW 2018), and *Draft Connecting with Country – A draft framework for understanding the value of Aboriginal knowledge in the design and planning of places* (GANSW 2020).

### **B.1.2 Serving the community**

Well-designed built environments have a strong positive influence on people's quality of life. They establish the foundation for health and wellbeing, generate community connectivity and social resilience, and form the basis of a collective appreciation of place. There is strong demand in NSW for more appropriate housing in walkable neighbourhoods close to amenities, public transport, and open spaces. Guiding more consistently well-designed built environments in NSW can involve:

- creating greener and more walkable streets and public spaces that facilitate sustainable mobility and raise mental and physical health across the local population
- integrating networks of public spaces (including streets, open spaces, and community facilities) and green infrastructure for greater social, cultural, and ecological connectivity
- developing more resilient built environments that address extreme weather events and climate change with sustainable and regenerative design
- delivering a more equitable distribution of housing types and tenures, and opportunities to access everyday living needs, infrastructure, and services throughout cities and towns.

### **B.1.3 Developing guidance**

Reviews of current design and planning processes and industry peak body engagement have identified a range of domains where urban-scale design guidance is desirable, including:

- the need to consider, and methods for measuring, gross dwelling density; this is achievable through planning controls (including land use zoning, height, and floor space ratio)
- a common place-based approach to design at urban scales, including site and context analysis and mapping

- structuring networks of public space and green infrastructure, to ensure urban environments are more permeable, sustainable, responsive to climate change, and adaptable to change over time
- planning precincts to ensure that new housing is within walking distance of local and district open spaces, shops, fresh food, schools, and public transport
- guiding the design of public space (complement by the Greener Places Design Guide).

The guide will be informed by the Apartment Design Guide, for example by providing a limited number of key design criteria and design guidance. The guide will incorporate a contextual approach in the design process to enable diverse place-led responses by limiting design criteria to foundational elements such as street networks, access to open space, and key built form parameters. Contextual controls such as development control plans, local character statements, and heritage conversation plans will continue to operate alongside these foundational parameters.

The guide will replace the precinct planning and general context components of the ADG in Parts 1 “Identifying the context” and 2 “Developing the controls”.

### **B.1.4 Responding to contemporary strains**

NSW has recently experienced several strains on our environment including severe droughts, bushfires, storms and floods, coastal erosion, and the coronavirus pandemic. These events have affected human life and health, ecosystems and biodiversity, and caused economic disruption.

While the coronavirus pandemic has generated differential impacts across places in NSW, it has engendered a greater demand for, and valuing of, public spaces and green

infrastructure. Use of open spaces and local services within walking distance of homes has increased. It has also led to changes in how we use our built environment, with many people working from home – an acceleration of a long-term trend. Public transport, private vehicle use, and freight patterns have also shifted in response to changes in work, shopping, and social activity. The pandemic has revealed new challenges for healthy activity in the urban realm, and has highlighted the need for:

- increased space on streets for safe and well-connected walking and cycling paths to encourage healthy independent mobility
- increased space on streets for physical distancing of outdoor social activity and outdoor retail trade to maintain social connections and support local economies
- connected networks of local green infrastructure that encourage healthy recreation by enabling more activities, such as physical exercise, to take place outdoors
- community places that can be flexibly used and repurposed for a range of activities
- frequent public transport services for COVID-safe transit (particularly when capacity is reduced) and to facilitate a sustainable return-to-work for those that choose to do so.

Recent events have also highlighted the influence our urban environments have on communities’ physical and mental wellbeing. There is increased need for our urban realm to be designed to support greater resilience, sustainability, equality, and liveability.

### **B.1.5 Delivering value**

Guiding urban design can also create significant social, environmental, and economic benefits for the community, government, and private sector.

- Sustainable mobility options can realise
  - physical and mental health benefits, including reduced heart disease and obesity
  - environmental benefits of lower carbon emissions, cleaner air, and less noise
  - economic benefits of reduced expenditure on roads and garaging.
- Greater urban density around transport and services can attract businesses and skilled workers; increase the efficiency of public transport and built form; reduce demand for car parking, services, and utility costs; and reduce the development of marginal land.
- Access to a range of high-quality open spaces can encourage greater participation in community, cultural, and physical activities, and can improve urban economic performance by attracting more people and activities.
- Walking and cycling access to schools enables children to enjoy better health, alertness and learning capability, social interaction, development of autonomy, and more sustainable travel.
- Guidance on street and lot sizes can more efficiently allocate land to housing and reduce conversion of productive arable land on the periphery.
- Consideration of resilience and climate change, including an approach to hazards in site planning, can reduce the risk of loss of life and property damage.
- Tree canopy shading can reduce urban heat and air conditioning demand.

## B.2 How the Urban Design Guide can work

### **B.2.1 Referencing existing initiatives**

To reinforce current and emerging developments in design and place practices, a UDG will draw from, or refer to, existing documents and practices, including:

- *Better Placed, Greener Places*, and draft *Connecting with Country Framework*
- the *Local Character and Place Guideline*
- the principles of the Draft *NSW Public Spaces Charter*
- the methods and targets set out in the Draft *Greener Places Design Guide*
- Parts 1 and 2 of the Apartment Design Guide
- the processes and coastal geography considerations set out in the Draft *NSW Coastal Design Guidelines* and the proposed strategic guide to planning for natural hazards in NSW
- the approach to street design in the Draft *Practitioner's Guide to Movement and Place* and proposed Western Sydney Street Design Guide.

### **B.2.2 Consolidating design guidance**

The guide is intended to:

- supplement existing precinct and master planning under geographic SEPPs by providing holistic design considerations for all larger scale developments
- facilitate local strategic planning (including in the development of local environmental plans and local strategic planning statements)
- inform requirements for larger scale planning proposals and State significant developments
- replace Parts 1 and 2 of the ADG as matters for consideration in the preparation of development control plans under the EP&A Regulation.

New material will also be developed using evidence, testing, and engagement (including this EIE).

### **B.2.3 Establishing good design approaches**

The proposed guide will adopt the aims of the Design and Place SEPP and give guidance on how these ideas can be applied in precinct-scale design and planning. This may involve embedding design and place practices throughout the development process, including:

- establishing processes and outcomes for good design at an early stage in the development process
- ensuring a holistic and uniform consideration of local place context in site analysis
- creating design criteria for foundational urban structuring elements including the networks of streets, public spaces, integration of the natural environment, and infrastructure integration
- setting expectations for forming streets, open spaces, sites, and built form envelopes
- guiding the alignment of stages of development with the provision of public amenity and services.

### **B.2.4 Applying consistent design processes**

A consistent design process for precinct design and planning is proposed, including:

- site analysis and mapping: developing a strong understanding of the site within its local and wider contexts by mapping and analysing layers of information and identifying issues and opportunities
- engagement with community
- setting visions, principles, objectives, and guidelines where substantial change is envisaged
- design development: drawing upon the analysis by exploring a range of design scenarios in precinct structure plans
- evaluation: testing the design outcomes to determine a clear and coherent solution.

## B.3 What the Urban Design Guide can cover

### **B.2.5 Delivering amenity through urban design**

The development and redevelopment of urban environments in NSW can improve the health and wellbeing of communities by delivering greater amenity such as public space, greening, and access to opportunities. Urban renewal also enables more diverse housing, employment, transport, and recreation, a high-quality public space network, and vibrant local places.

Analysis and response to key metrics of precinct design can improve strategic decisions on where and how to intensify existing areas, guided by a minimum set of design criteria including rights-of-way for new streets, fit-for-purpose open spaces, and community facilities. This new amenity can benefit both new residents as well as existing communities, and so provides a positive contribution alongside growth. It also avoids the creation of new neighbourhoods in areas where it will be difficult to achieve good liveability outcomes, service new housing, or provide connectivity to existing urban areas.

### **B.3.1 Scope**

The guide is proposed to cover precinct structure planning as referred to in the Design and Place SEPP. The guide will not apply to all forms of development, and the land application will be confirmed in the draft document together with the draft SEPP, which may exclude specific zones (such as SP1 special uses) or development types (such as items 1 to 10 of Schedule 1 of the State and Regional Development SEPP). Some design criteria may be further limited in their application as appropriate.

It is intended for the guide to cover good practice for new precincts and the rezoning of existing urban areas, including brownfield or greenfield development and the intensification or repair of existing urban areas.

The guide is intended to be structured by scale, moving from urban structures and systems to the massing of individual buildings and configuration of spaces and streets. This also aligns with different stages in the precinct planning process, such as the setting of broad parameters in LEPs, distinct from the configuration of massing and space in DCPs and on significant developments.

### **B.3.2 Relationship to the Apartment Design Guide**

The proposed Urban Design Guide is intended to be coordinated with an updated Apartment Design Guide under the Design and Place SEPP. The aim is to provide consistency in the application of site planning and focus the ADG on more detailed apartment design considerations. See Section A.4 (Proposed relationship to an Urban Design Guide) for a more detailed discussion of this relationship.

### **B.3.3 Proposed structure**

The proposed document structure and general content is outlined below:

#### **Introduction**

- Purpose and intent
- Who the document is for and how to use it
- Design and planning process including site analysis and mapping; setting a vision, principles, and objectives; design development; and evaluation
- Concepts and definitions

#### **Part 1 Understanding Place and Country**

- Connecting with Country
- Natural environment context e.g. coastal, ranges, western plains
- Built environment context e.g. city, town, neighbourhood, regional
- Social and economic context e.g. demographics, local sentiment, character, social and recreation needs, industry and employment sectors, and investment
- Urban design actions e.g. urban infill (intensification), urban renewal, change of use (brownfield), urban extension (greenfield)
- Responding to risks, climate change, and building in resilience by design

#### **Part 2 Structure**

- Natural systems: green infrastructure network, landscape, hydrology, biodiversity
- Urban systems: layout of public space, activity centres, neighbourhoods
- Urban structure: street patterns and street types, intersection density and block size, walking distance to key destinations, transport and utility infrastructure
- Distribution of intensity and uses, including residential density

#### **Part 3 Grain**

- Subdivision into blocks and lots: recommended dimensions, permeability
- Urban repair: methods for improving existing urban patterns, such as those that are less walkable, or a lack of public space
- Change over time: designing lots with flexibility for future adaptability

#### **Part 4 Form**

- Street types: design elements of each street type, and design approaches such as filtered permeability, living streets, 'cars as guests'
- Open space types: specific considerations for typologies including plazas, squares, and parks (to the extent not covered by the Greener Places Design Guide)
- Site orientation and planning: general considerations such as address, access, interface with the public realm, water management
- Building types: specific considerations for a wide range of typologies (including public buildings and community facilities) such as massing to public space, addressing privacy, car parking integration
- Designing with heritage in its place

#### **Part 5 Environmental performance**

- Energy
- Water quality and water management
- Waste
- Management and maintenance
- Utilities integration

#### **Part 6 Documentation**

Precinct structure plan checklist  
Setting planning controls to safeguard design intent e.g. activity streets, housing diversity, protecting public spaces, and night-time economy areas

### **B.3.4 Design considerations**

**Design considerations proposed to frame the approach of the guide are set out below.**

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#### **Part 1 Understanding place and Country**

##### **Connecting with Country**

Connecting with Country is vital for understanding how Country and culture shape local place identity. This understanding can emerge through being guided by Aboriginal people, developing our awareness and use of language, building mutually beneficial relationships, reawakening memories of cultural landscapes, and sharing knowledge of Country and culture. A collective consideration of people, nature, and landscape can enable us to support the health and wellbeing of Country in design and planning. The guide proposes to set out considerations for relating with and responding to Country in precinct planning. Promoting good design that embeds Aboriginal knowledge into the design and planning of the built environment can help us all to care for Country.

##### **Understanding context**

The design process begins with an understanding of the social, environmental and economic context, of which the built environment is only one aspect. The guide will outline specific geographic considerations that apply to the different regions of NSW, and to different built environment settlement types, as the kind and scale of urban design actions are affected by the regional or urban context in which they occur. An understanding of the demography of the existing and future population, current place sentiments, needs and industries also can help inform a place-based design response. The intention is to guide designers to consider the context of the brief – the common challenges and opportunities for different urban design actions undertaken in NSW. The economic context includes the ability for compact urban form to enable greater potential for more vibrant and efficient local economies to develop and deliver people greater access to opportunity.

##### **Resilience by design**

Urban environments are complex and dynamic systems that change over time. Site-specific pressures may include long-term environmental stresses, social or economic strain, physical constraints, and extreme events. In urban environments, acute shocks and extreme stresses often occur concurrently and are impacted and compounded by each other to create unique challenges for communities.

The UDG intends to provide information on how precinct design can actively anticipate uncertain futures and develop strategies for ongoing resilience. This includes consideration of resilience risk assessment and implementation planning required under the proposed Design and Place SEPP (see Section 3.2.2: Application requirements).

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## Part 2 Structure

### Green infrastructure

Landforms, water, and nature are fundamental elements in urban settlements that should be designed in, or around, and restored where possible. We need to ensure natural processes are considered for the environment as well as people. Urban tree canopy provides shade, visual appeal, and mitigates urban heat for human health, wellbeing, and comfort – as well as providing habitat and ecological diversity. Intended guidance will cover methods for incorporating natural systems into design, connecting green infrastructure to surrounding green networks, and achieving tree canopy targets.

### Public space framework

Public space is the framework for civic and social life. Streets and public spaces create places for exchange, casual socialising, and active recreation, and make a significant contribution to local place character. The guide intends to inform the arrangement of the network of public space – where nodes like activity streets, open spaces, and community facilities are located and connected together, and how urban systems such as transport, utilities, and smart infrastructure are arranged.

The amount of public space (streets, open spaces, and community facilities) provides a good indication of the level of permeability and amenity in a precinct, and so it is intended the guide establishes a benchmark for the amount of public space to be provided in a precinct plan. One option for this benchmark is to require a minimum of 25 per cent of urban-capable land dedicated to streets. Another option sets a benchmark as a holistic public space measure, requiring a minimum of 40 per cent of urban-capable land dedicated to public space (streets, open spaces, and community facilities). In either option, additional considerations for public spaces would apply, such as the equitable distribution of public space as outlined in the Design and Place SEPP, and the open space performance indicators listed in the Draft *Greener Places Design Guide*.

A key design element of public space is the street, making up some 80 per cent of the public space of our cities. Streets are the key social spaces in a community and provide the address for all residents and visitors, as well as facilitating movement and place

activities. Finer grained street networks enable greater walkability and introduce a diversity of street types. New street grids in current precinct planning practice can often be too coarse to facilitate walkability, and the streets themselves, designed for cars, can lack sufficient provision for walking, cycling, and trees within a compact footprint, or lack differentiation of function.

Methods for calculating performance-based metrics of street intersection density and block sizes will be set out in the guide. Additional guidance on the design and connectivity of pedestrian and cycle networks, and the delivery of council and State government active transport routes will be provided, together with desired dimensions for streets based on their role and function.

### Distribution of intensity and uses

Recent studies including the *Australian National Liveability Study* (University of Melbourne 2016) have demonstrated the need for communities to be well-connected via public and active transport infrastructure to employment, education, shops, and services (including public open space, and social, cultural, and recreational opportunities). The study identified strong correlations between health benefits and walkability to fresh food (supermarkets and grocers), public open space, local living destinations, as well as fine-grain street networks, public transport, and dwelling density.

Prioritising walking, cycling, and public transport enables new and existing urban environments to deliver better health and wellbeing, and more sustainable and efficient mobility – the ‘walkable neighbourhood’. Existing guidance including *Integrating Land Use and Transport – Improving Transport Choice – Guidelines for planning and development* (DUAP 2001) is intended to be supplemented with metrics.

The guide intends to foster inclusionary zoning and mixed communities through setting a maximum percentage of ‘single use’ zones (such as low-density residential), as well as guiding the activation of ground floor uses in medium-density and high-density residential zones to inform site planning, such as non-residential ground floors in new apartment development.

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### **Part 3 Grain**

Guidance is proposed to introduce requirements for lot dimensions (depth and width), subject to the typology intended for the site as well as the street interfaces and street wall height. The intent is to facilitate compact urban form and better match subdivision of lots to the housing typologies sought.

Guidance will also be provided on other aspects of urban grain, such as methods for introducing new public space and through-site links in infill areas with poor walkability or a lack of public space, and how to design precincts to accommodate change over time, such as progressive development of town centres. This is intended to broaden the toolkit of solutions used when seeking to accommodate growth in brownfield and greenfield settings. The placement of sensitive land uses away from busy roads and rail will also be set out in the guide, consistent with existing guidance (*Development near Rail Corridors and Busy Roads- Interim Guideline*, DoP 2008).

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### **Part 4 Form**

Developments contribute to the local character through their address to the street. Site planning, access, and interface guidance is intended to inform front and rear setbacks so that development engages with the street and provides space for canopy tree planting.

Guidance is proposed on setting urban design parameters that affect the design of buildings and spaces in later stages, such as determining the appropriate massing for different building types, privacy and car parking integration, and the appropriate dimensions for certain open space types (where not otherwise covered in the *Greener Places Design Guide*), such as squares and plazas.

Guidance will also be provided on the arrangement of street types such as the ratio of street wall to right of way for enclosure and the arrangement of elements (carriageway, footway, parking, cycling and trees) within the street right of way. These dimensions provide the basic building blocks for new streets to which detailed guidance on roads and streets can be applied. Guidance will also be provided on common methods for designing streets and street elements such as point closures for 'filtered permeability' of walking and cycling.

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### **Part 5 Environmental performance**

#### **Energy, water, and waste**

Guidance is proposed on how precincts can address energy, water and waste needs in an integrated way at scale, such as local power generation, water re-use, and waste consolidation.

#### **Management and maintenance**

Assessment of the quality of the urban environment includes how it is proposed to be sustained over time, including the periodic renewal of parks and spaces, maintenance of private open spaces and streets, and the design and operation of shared facilities such as school ovals. Considerations for preparing staging, management, and maintenance plans are proposed here.

#### **Utilities integration**

Guiding the placement and integration of utilities infrastructure in urban development is intended to facilitate provision of essential services while minimising disruption to other essential infrastructure such as canopy trees.

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### **Part 6 Documentation**

To guide the formalisation of precinct structure planning under the Design and Place SEPP, a proforma precinct structure plan can show each drawing proposed, the relevant scales of design, and examples.

Precinct planning will also be encouraged to consider safeguarding the amenity of public spaces in later development stages, such as setting sun plane controls to major open spaces, and proforma clauses for this purpose are proposed to be included here, for use in drafting DCP controls.

### B.3.5 Intended effects

Intended effects of the proposed UDG are detailed below. These should be read in conjunction with the considerations that inform planning for precincts and significant development in the Design and Place SEPP (Table 1).

#### Proposed design criteria

The UDG proposes to provide additional information to explain design and place considerations 1 - 9, including using a risk-based approach to hazards to inform land use planning, integrating precinct-scale water detention and reuse strategies, providing adequate public space, connecting green corridors, and street network structures that achieve the street density and block length targets.

Specific metrics proposed to supplement design and place considerations are:

- total public space area
- average block size
- maximum single block size.

The UDG proposes to introduce design criteria for the integration of streets with surrounding street networks, and for the creation of new streets within precincts. These criteria will include specified right-of-way widths for streets depending on their type (Table B1).

The UDG also proposes to introduce design criteria and guidance relating to:

- the preparation of walking and cycling networks, including delivery of the Principle Bicycle Network in Greater Sydney
- complementary design techniques like continuous footpath crossings on key walking routes, and rear lane access to activity streets and key cycling routes to minimise driveway crossovers

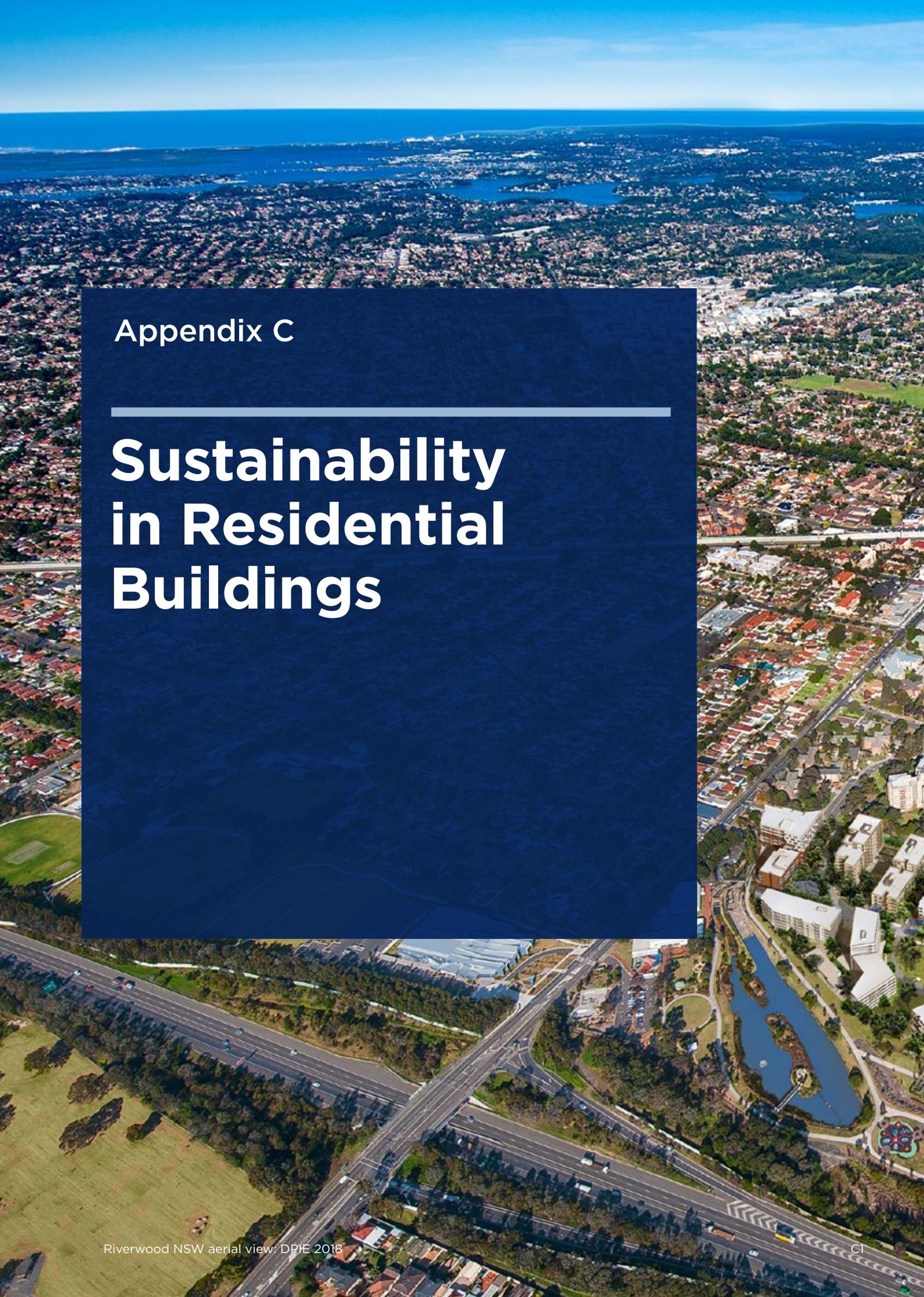
- limiting the amount of single use residential zones within new precincts to less than 50 per cent, and the minimum non-residential ground floor space required in R3 and R4 zones and centres
- dwelling lot sizes, including a lot width design criteria that relates to housing typology, and a lot depth design criteria that relates to lot width and rear lane access
- locating sensitive land uses away from busy roads, rail lines, designated freight routes, noxious uses, and facilities that pose a serious risk to life e.g. high-voltage substations
- front and rear setbacks relating to street type, land use and urban setting
- side setbacks, including a mechanism for neighbours to reduce side setbacks to zero by agreement
- wayfinding, street wall heights and utility integration.

The following guidance is proposed to support public space and urban design quality applied in a diversity of situations and contexts:

- guidance on when to prepare local character statements and how these differ from heritage conservation areas
- guidance on street orientation and street enclosure for solar access and avoiding excessive heat loss, as well as street design techniques for walking and cycling
- guidance on how to calculate residential density in R1 to R4 zones to support Consideration 10: Density of the Design and Place SEPP
- guidance on site planning and access including minimising driveway crossovers
- guidance on locating public community facilities.

**Table B1 Example of design criteria for streets by type in the UDG**

TYPE	RIGHT OF WAY WIDTH	FOOTPATH WIDTH	TREE ROWS	LANDSCAPE ZONES
1 (Grand Street)	25m +	3.2m each side	4 (2 each side)	2.1m
2 (Neighbourhood Street)	16 - 25m	3.2m each side	2 (1 each side)	1.3 - 1.5m
3 (Little Street)	12 - 16m	2m each side	1-2	-
4 (Lane)	4.5 - 8.5m	2m unless shared zone	0-1	-



## Appendix C

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# Sustainability in Residential Buildings

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## C.1 Introduction

**One of the priorities of the proposed Design and Place SEPP is to minimise human impacts on natural systems, reduce emissions and support NSW Government's Net Zero Plan to reach net zero emissions by 2050.**

This includes the impacts from residential development. The Building Sustainability Index (BASIX) currently regulates the sustainability requirements for new residential development and alterations and additions in NSW. Exploring new flexible pathways to meet sustainability requirements and improving how BASIX works for new residential development is proposed as part of introducing the new Design and Place SEPP.

Separate work to implement the *Trajectory for Low Energy Buildings* (COAG Energy Council) is also underway and will align with National Construction Code (NCC) upgrades proposed in 2022. Figure C1 outlines the key deliverables as part of the Design and Place SEPP and how this relates to the Australian Building Codes Board (ABCB) program to update the NCC. Section C.2.3 provides background to sustainability measures in NSW and across jurisdictions.

## C.2 Objectives of sustainability reforms

The NSW Government has identified key areas to shape the sustainability of residential development:

- providing more flexibility in the available assessment pathways to demonstrate a design meets sustainability performance requirements
- aligning sustainability performance requirements with the principles of the Design and Place SEPP
- measuring and reporting sustainability performance requirements in a consistent way to other jurisdictions
- improving the customer experience and promoting innovation
- staged and incremental increase in sustainability targets to enable industry to plan for future change and implementation in line with the NSW Government's Net Zero Plan.

Each of these is outlined below.

### **C.2.1 Providing more flexibility in the available assessment pathways**

Some building designers use other software to simulate the sustainability performance of a house or apartment building. The underlying data and simulation method varies between software. As such, it can be time consuming and costly for a designer to transfer specifications from a different design tool into the BASIX Tool. There may also be innovative sustainable design solutions which are more difficult to model using the BASIX Tool. Allowing the use of other tools to model residential building performance outside BASIX can make the process more efficient for designers and allow more design creativity. For these reasons, the proposals include additional assessment pathways, outlined below.

### **C.2.1.1 An independent, merit assessment pathway**

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.

The benefit of this approach is that an applicant has a range of different options to demonstrate the development meets the sustainability performance requirements and can choose the approach that best suits their needs.

While this approach provides the greatest flexibility for applicants, there are several matters to resolve while developing this pathway. These include:

- ensuring the assessment is rigorous – we propose to specify qualification and accreditation requirements for assessors, and design an audit process for such assessments
- ensuring councils and certifiers understand this other assessment pathway – we propose to specify the format of reports so councils and certifiers are provided with details of each assessment. This is important to ensure the building's commitments can be checked by building certifiers at the construction and occupation certificate stages
- maintaining data from such assessments – we will develop a new process to capture the most important data from any developments using the merit assessment pathway.

This is a significant change to the way sustainability is assessed in NSW. To ensure success, a detailed implementation plan will be developed, and the new pathway could be piloted in a limited set of local government areas or for certain types of residential development.

### **C.2.1.2 Providing other assessment tools that 'plug in' to BASIX**

There are currently two types of alternative assessment pathways available in BASIX:

- minor variation pathway – the applicant must complete all three components of the BASIX assessment. However, the Department agrees to vary part of one component (e.g. modifying the energy use of a lift system to recognise energy savings from innovative technology not included in the BASIX Tool)
- major variation pathway – the Department allows the use of another software tool to demonstrate that one (or more) of the BASIX components has been met (e.g. thermal comfort). The applicant must complete the other components of BASIX (i.e. for this example, energy and water).

We are making the existing alternative assessment pathway more flexible. For instance, we recently expanded the major variation pathway within BASIX to recognise software tools underlying the Passive House standard as satisfying the BASIX thermal comfort component. A BASIX assessment of the energy and water use would still be required.

We are also considering recognising the following tools under BASIX, which assess both thermal comfort and energy performance:

- the Green Star Homes Standard currently being developed by the Green Building Council of Australia (GBCA), which may be available in 2021
- the 'Whole-of-Home' tools to be accredited by the NatHERS Administrator, which are proposed to be available in 2022.

### **C.2.1.3 Allowing a tailored approach for thermal comfort and energy performance**

Currently in BASIX, there is:

- a minimum requirement for thermal comfort performance of a home's building shell
- an energy performance requirement, which considers the thermal comfort performance plus the energy efficiency of appliances and systems and the use of solar photovoltaics

The thermal comfort performance requirement cannot currently be reduced (or traded off) by installing more energy-efficient appliances or more solar PV.

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).

## **C.2.2 Aligning sustainability performance with Design and Place SEPP principles**

In NSW, BASIX currently regulates some, but not all, of the impacts of residential development on the natural environment. NSW residential sustainability requirements could be expanded to assess other impacts on the natural environment. We are examining what other impacts of residential development could be assessed at a building-lot scale. These include:

- embodied energy – the energy consumed in producing the materials for the construction of the home
- green infrastructure – this includes lawns, tree cover and gardens that can cool the site, reduce the energy required for cooling, and retain stormwater
- stormwater run-off – the volume of stormwater that leaves the site, which is impacted by the use of rainwater tanks and green infrastructure.

There are different options for assessing each of these elements. This includes using existing tools or metrics or developing new assessment tools.

## **C.2.3 Sustainability assessment consistent with other jurisdictions**

BASIX was developed before sustainability metrics were developed in other jurisdictions. For this reason, there are differences between the way BASIX measures energy savings and thermal comfort performance compared to other jurisdictions. This includes the BASIX assessment of thermal comfort compared to NatHERS software.

We are considering changing the way BASIX reports the estimated water and energy consumption of a development in comparison to a benchmark so it aligns with the NCC requirements that apply in other jurisdictions. Currently, the benchmark is based on the water and energy use of a typical residential development before 2004 (when BASIX was introduced).

In comparison, NatHERS uses a star rating for thermal comfort performance, while the measurement rating framework for the NatHERS Whole-of-Home framework (thermal comfort and energy performance) is still being determined. No equivalent water use requirements are planned.

We are working with the NatHERS Administrator and an expert stakeholder group to align the BASIX calculation approach for thermal comfort with NatHERS. For example, we have recently aligned the BASIX approach to modelling the effect of ceiling fans with NatHERS (i.e. in the BASIX Tool, ceiling fans will be recognised as improving thermal comfort performance).

Similarly, we are collaborating with the NatHERS Administrator and other jurisdictions on the development of the NatHERS Whole-of-Home framework, which examines both the thermal comfort and the energy performance of a development. This includes comparing the NatHERS and BASIX algorithms for estimating thermal comfort and energy performance.

The outcome of this collaboration will help to align BASIX with the way sustainability is assessed in other jurisdictions.

## **C.2.4 Improving the customer experience and promoting innovation**

### **C.2.4.1 Improving the customer experience**

We propose to make a number of changes to BASIX to improve the customer experience.

As a first step, we will rebuild the BASIX Tool on an updated software platform to provide a modern 'look and feel' for users, and a more intuitive experience when completing a BASIX assessment online.

Additionally, this new user interface will be integrated with the NSW Planning Portal. This will streamline the development application process by better integrating BASIX data (including the BASIX certificate) with other planning data. Some of the benefits from this change include:

- allowing customers to view more information about the development on a single platform
- digitally capturing the full development journey (from development application to occupation certificate)
- providing more opportunities for consent authorities to validate and audit compliance with planning legislation.

We will engage our users in developing the new user interface.

### C.2.4.2 Promoting innovation and the adoption of new technology

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.

We will adopt a more structured approach to further updates and enhancements to BASIX over time. This will involve formally seeking suggestions for changes and making upgrades twice each year, in April and August.

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.

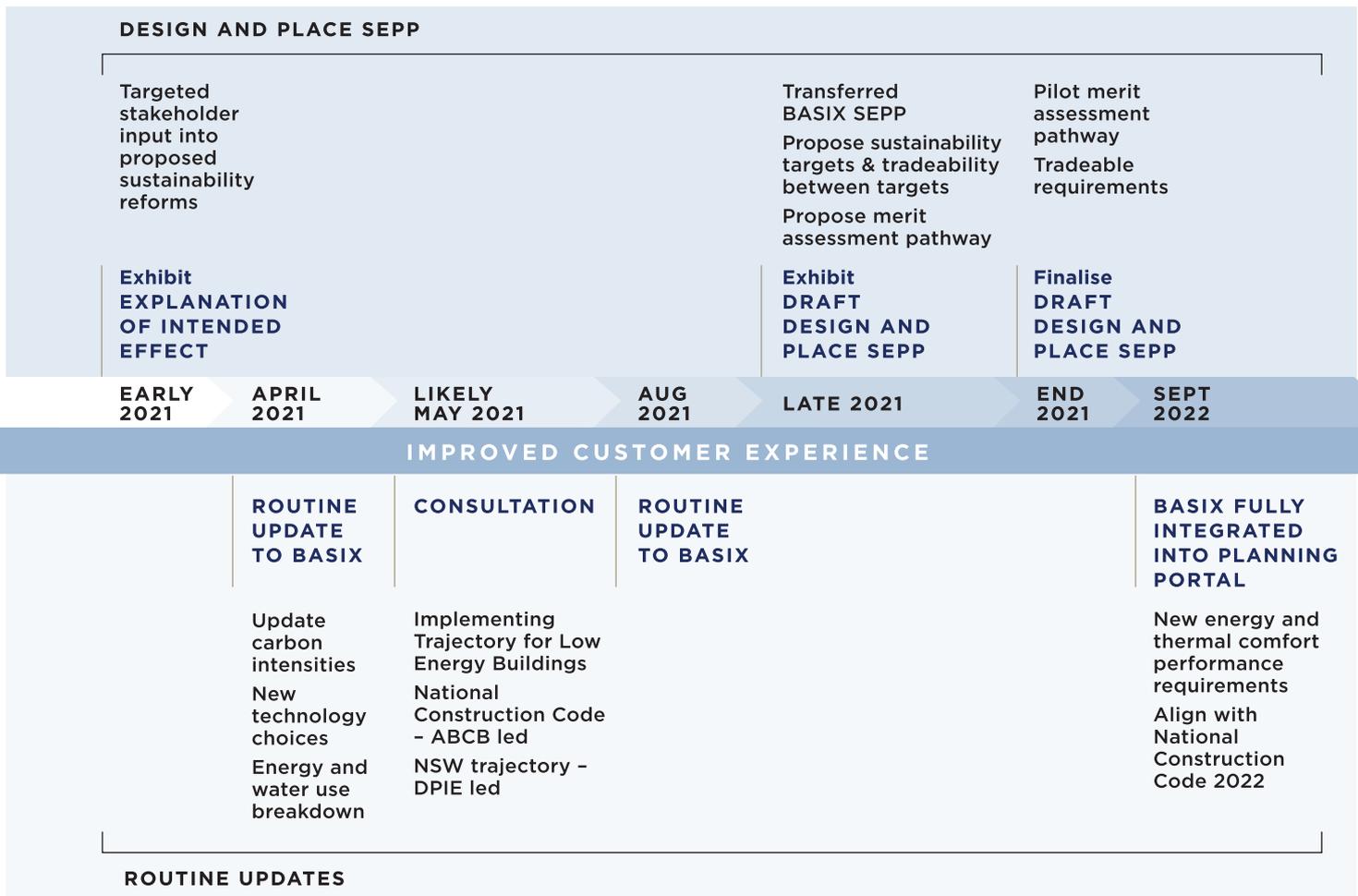
We recently added a showcase of good sustainable house design on the BASIX website, and this will be updated from time to time, recognising residential development that exceeds minimum requirements.

## C.3 Implementation

**The proposed initiatives will be delivered over a two-year period. This will align with the time frames to deliver the Design and Place SEPP (2022) as well as the updates to the NCC 2022.**

Figure C1 provides a summary of the key deliverables and the timing to implement the reforms.

**Figure C1 Timeline for BASIX reforms**



## C.4 BASIX Policy Initiatives

The proposed policy initiatives for BASIX are set out in Table C1. Existing policy initiatives will be carried over into Design and Place SEPP to enable their continued application.

**Table C1 Proposed policy initiatives to support sustainability in buildings**

PROPOSED CONSIDERATIONS	BENEFITS
The Design and Place SEPP continues to give authority to BASIX and overrides competing instruments at present (as is the case with the current BASIX SEPP).	BASIX SEPP will be absorbed into the Design and Place SEPP. This ensures that work done for national consistency is reflected in the BASIX Tool. The manner in which BASIX may recognise innovation and higher performance is discussed in C.2.
Aligning with the Design and Place SEPP priorities, including exploring new policies that could be assessed using BASIX, such as embodied energy, green infrastructure, and stormwater runoff.	Expands BASIX to take into account the need for a circular economy, and to better reflect the initiatives in this SEPP for increased tree canopy and water management.
Energy-efficiency targets will be aligned, where possible, with National Construction Code Reform 2022, and NatHERS thermal comfort calculation.	Greater national consistency of standards and methods of calculation.
Enable alternative pathways to satisfy BASIX requirements. This may include an independent merit assessment pathway (with criteria), or expanding the use of other rating tools that 'plug in' to BASIX, or both.	Increasing the flexibility afforded to the market to achieve the sustainability goals sought by BASIX through other means or as assessed by other tools.
Allowing thermal comfort to be traded off by increasing energy performance (more energy-efficient appliances or more solar PV).	Recognising that thermal comfort can be achieved through both passive and active means, and that local power generation or reduced power use may offset the cost of mechanical cooling.

## C.5 Impacts on the BASIX SEPP

The sustainability measures outlined in this document will be integrated into the Design and Place SEPP. The existing BASIX SEPP will be repealed and its key content relocated to the Design and Place SEPP. This change will take effect when the Design and Place SEPP commences. Table C2 sets out a clause-by-clause description of the proposed changes to the BASIX SEPP.

**Table C2 Proposed changes to the BASIX SEPP**

PROVISION	EXISTING BASIX SEPP	PROPOSED
<b>Clause 1 Title</b>	This Policy is State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.	This section will be deleted and is no longer required
<b>Clause 2 Commencement</b>	This section will be deleted and is no longer required	The commencement date will be the date the whole Design and Place SEPP commences.
<b>Clause 3 Aim of Policy</b>	<ol style="list-style-type: none"> <li>1. Regulations under the Act have established a scheme to encourage sustainable residential development (the BASIX scheme) under which:               <ol style="list-style-type: none"> <li>a. an application for a development consent, complying development certificate or construction certificate in relation to certain kinds of residential development must be accompanied by a list of commitments by the applicant as to the manner in which the development will be carried out, and</li> <li>b. the carrying out of residential development pursuant to the resulting development consent, complying development certificate or construction certificate will be subject to a condition requiring such commitments to be fulfilled.</li> </ol> </li> <li>2. The aim of this Policy is to ensure consistency in the implementation of the BASIX scheme throughout the State.</li> <li>3. This Policy achieves its aim by overriding provisions of other environmental planning instruments and development control plans that would otherwise add to, subtract from or modify any obligations arising under the BASIX scheme.</li> </ol>	<p>The Design and Place SEPP will integrate the 'Aim of Policy' section of the BASIX SEPP.</p> <p>Clause 3(1) will be retained and apply to all pathways for BASIX compliance, including the proposed new merit assessment pathway.</p> <p>Clause 3(2) about ensuring 'consistency in the implementation' may be adapted so it applies to all developments affected by the Design and Place SEPP.</p> <p>Clause 3(3) about 'overriding provisions of other environmental planning instruments and development control plans' will be included for BASIX, and the wording may be adapted to apply to all developments.</p>

PROVISION	EXISTING BASIX SEPP	PROPOSED
<b>Clause 4 Definitions</b>	<p>1. In this Policy:</p> <p><b>BASIX affected building</b> has the same meaning as it has in the Environmental Planning and Assessment Regulation 2000.</p> <p><b>BASIX affected development</b> has the same meaning as it has in the Environmental Planning and Assessment Regulation 2000.</p> <p><b>BASIX certificate</b> has the same meaning as it has in the Environmental Planning and Assessment Regulation 2000.</p> <p><b>BASIX commitment</b> means a commitment set out in a BASIX certificate.</p> <p><b>BASIX optional development</b> has the same meaning as it has in the Environmental Planning and Assessment Regulation 2000.</p> <p><b>competing provision</b> means a provision:</p> <ol style="list-style-type: none"> <li>that establishes development standards, or</li> <li>that requires a consent authority to have regard to, or take into consideration, any matter when considering or determining an application for a development consent, or</li> <li>that requires a consent authority to be satisfied as to any matter before it grants a development consent, or</li> <li>that requires a consent authority to impose a condition on a development consent, or</li> <li>that affects the granting of a development consent, or the conditions on which a development consent is granted,</li> </ol> <p>other than a provision that encourages, or offers incentives for, the adoption of measures beyond those required by provisions of the kind referred to in paragraphs (a)–(e).</p> <p><b>the Act</b> means the Environmental Planning and Assessment Act 1979.</p> <p>2. Notes in this Policy do not form part of this Policy.</p>	<p>Clause 4 definitions will be incorporated into the Design and Place SEPP definitions</p>
<b>Clause 5 Land to which Policy applies</b>	<p>This Policy applies to the whole of the State, including Lord Howe Island.</p>	<p>Clause 5 will be unchanged as the Design and Place SEPP will also apply to the whole State.</p> <p>Any site-specific exemptions to the Design and Place SEPP are still being determined. Some clarification may be required to explain that BASIX clauses still apply regardless of other exemptions.</p>

PROVISION	EXISTING BASIX SEPP	PROPOSED
<b>Clause 6 Buildings to which Policy applies</b>	<p>1. This Policy applies to buildings arising from the following development:</p> <ol style="list-style-type: none"> <li>a. proposed BASIX affected development for which the regulations under the Act require a BASIX certificate to accompany a development application or an application for a complying development certificate or construction certificate,</li> <li>b. proposed BASIX optional development in relation to which a BASIX certificate accompanied a development application or an application for a complying development certificate, despite the fact that the regulations under the Act did not require a BASIX certificate,</li> <li>c. BASIX affected development and BASIX optional development the subject of a development consent, complying development certificate or construction certificate that, pursuant to the regulations under the Act, is subject to a BASIX commitment.</li> </ol> <p>2. This Policy also applies to buildings that become BASIX affected buildings because of development of the kind referred to in subclause (1).</p>	This clause will be relocated to the Design and Place SEPP.
<b>Clause 7 Relationship with other environmental planning instruments</b>	This Policy prevails over any other environmental planning instrument, whenever made, to the extent of any inconsistency.	This clause will be applied to the whole Design and Place SEPP.
<b>Clause 8 Other environmental planning instruments do not apply to BASIX commitments</b>	<p>1. The competing provisions of an environmental planning instrument, whenever made, are of no effect to the extent to which they aim:</p> <ol style="list-style-type: none"> <li>a. to reduce consumption of mains-supplied potable water, or reduce emissions of greenhouse gases, in the use of a building to which this Policy applies or in the use of the land on which such a building is situated, or</li> <li>b. to improve the thermal performance of a building to which this Policy applies.</li> </ol> <p>2. If the development concerned involves:</p> <ol style="list-style-type: none"> <li>a. the erection of a building for both residential and non-residential purposes, or</li> <li>b. the alteration, enlargement or extension of a building that is intended to be used for both residential and non-residential purposes, or</li> <li>c. the change of use of a building to both residential and non-residential purposes,</li> </ol> <p>subclause (1) does not displace the competing provisions to the extent to which they apply to the part of the building that is intended to be used for non-residential purposes.</p>	<p>No change. This clause may be expanded to clarify the approach to other building types.</p> <p>This clause will be retained to enable different sustainability outcomes in the non-residential part of the development. This clause may be reformatted to include sustainability provisions for other building types</p>

PROVISION	EXISTING BASIX SEPP	PROPOSED
<b>Clause 9 Development control plans do not apply to BASIX commitments</b>	<p>1. The competing provisions of a development control plan under Division 3.6 of the Act, whenever made, are of no effect to the extent to which they aim:</p> <ul style="list-style-type: none"> <li>a. to reduce consumption of mains-supplied potable water, or reduce emissions of greenhouse gases, in the use of a building to which this Policy applies or in the use of the land on which such a building is situated, or</li> <li>b. to improve the thermal performance of a building to which this Policy applies.</li> </ul> <p>2. If the development concerned involves:</p> <ul style="list-style-type: none"> <li>a. the erection of a building for both residential and non-residential purposes, or</li> <li>b. the alteration, enlargement or extension of a building that is used for both residential and non-residential purposes, or</li> <li>c. the change of use of a building to both residential and non-residential purposes,</li> </ul> <p>subclause (1) does not displace the competing provisions to the extent to which they apply to the part of the building that is intended to be used for non-residential purposes.</p>	<p>No change. This clause may be expanded to clarify the approach to other building types.</p> <p>This clause will be retained to enable different sustainability outcomes in the non-residential part of the development. This clause may be reformatted to include sustainability provisions for other building types.</p>
<b>Clause 10 Provisions providing for exceptions to development standards do not allow departures from BASIX commitments</b>	<p>State Environmental Planning Policy No 1—Development Standards does not apply to a development standard that arises, under the regulations under the Act, in connection with a BASIX commitment for a building to which this Policy applies or for the land on which such a building is situated.</p>	<p>This clause may need to be amended to take into account the proposed merit assessment pathway.</p>

# C.6 Background

## C.6.1 NCC and other jurisdictions' requirements

The NCC sets national requirements for the design and construction of new buildings and renovations to existing buildings. This includes sustainability requirements. The NCC also includes state and territory variations to the national requirements. One variation specifies that in NSW, the BASIX requirements apply to residential development in place of the NCC requirements for thermal comfort. The NCC does not currently include equivalent requirements to BASIX for energy performance and potable water use.

Figure C2 compares the sustainability requirements for residential development in NSW with the current and proposed NCC requirements that apply in other jurisdictions. In other jurisdictions, applicants typically meet the NCC 2019 thermal comfort requirements by completing a NatHERS assessment. Other pathways are possible provided the applicant can demonstrate the result is equivalent to a 6-star NatHERS rating.

For NCC 2022 (the next release), the ABCB is considering increasing the existing national requirements for thermal comfort and introducing new national requirements for energy performance. This is due to the Energy Ministers in the COAG Energy Council agreeing, in February 2019, to the *Trajectory for Low Energy Buildings*.

**Figure C2 Residential sustainability requirements in NSW and other jurisdictions**

		NSW		OTHER STATES AND TERRITORIES	
		REGULATORY MECHANISM <sup>a</sup>	EP&A Regulation and BASIX SEPP <sup>b</sup>	NCC 2019	NCC 2022 (being developed)
ASSESSMENT COMPONENT	THERMAL COMFORT		BASIX	6 star NatHERS rating or equivalent	Higher requirements likely <sup>c</sup>
	ENERGY			No requirements equivalent to BASIX	Requirements being developed <sup>c</sup>
	WATER			No requirements equivalent to BASIX	No requirements equivalent to BASIX

Notes

a: The NCC requirements are given effect via state-based legislation.

b: Additionally, NCC 2019 states that in NSW, BASIX applies instead of the NCC requirements for thermal comfort.

c: For NCC 2022, NatHERS is developing a new framework to assess both thermal comfort and energy performance, which they refer to as a Whole-of-Home assessment framework.

### C.6.2 About BASIX

Under NSW legislation, all new residential development and renovations that exceed \$50,000 (known as BASIX-affected development) must meet the BASIX sustainability requirements, which cover:

- thermal comfort
- carbon (energy) emissions
- potable water use.

For all BASIX-affected development, the applicant must submit a BASIX certificate (as evidence the development has met the BASIX requirements) as part of the development application.

The assessment against the BASIX requirements must be done using the free online BASIX Tool. Figure C3 illustrates the various components that are assessed under the Tool. It also shows that thermal comfort can be assessed within the BASIX Tool for detached dwellings, while NatHERS must be used for other types of residential development. The development must pass each of the three components.

The requirements are based on a comprehensive cost-benefit analysis. The requirements for each of the three BASIX components vary depending on the climate zone and the type of residential development. For example, BASIX recognises it is more cost-effective to reduce energy use in a detached house than in a high-rise apartment building.

However, the Tool provides some flexibility in the way a ‘pass’ outcome can be achieved

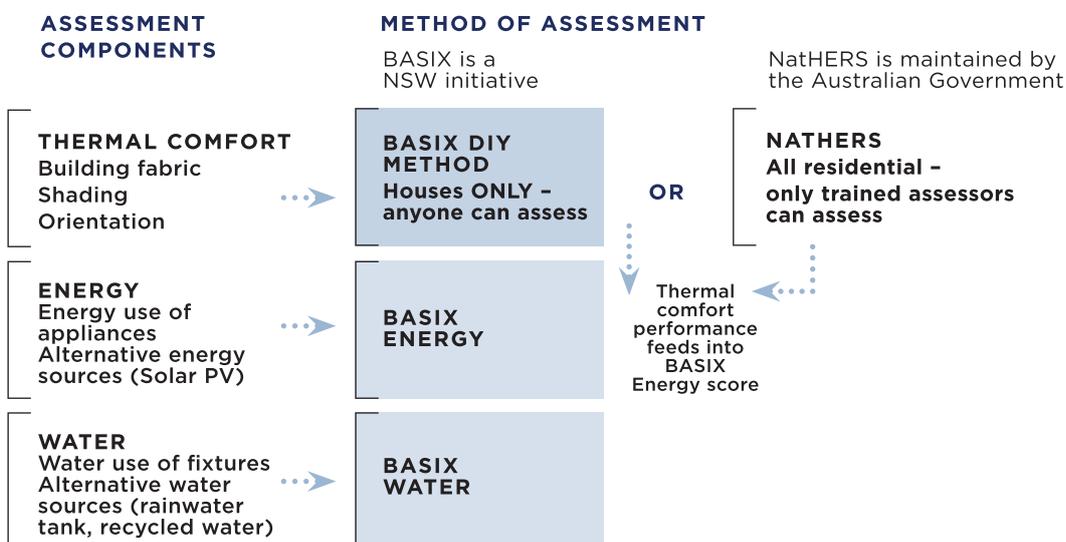
and allows some trade-offs e.g. choosing a more energy-efficient hot water system to reduce the size of a solar PV system.

The Tool is robust in its design and provides an estimate of the actual energy and water use of each development. This information is used by organisations such as Sydney Water Corporation in their future infrastructure and service planning. It is user friendly as it provides suggestions to improve the development’s sustainability performance and does not require special training or qualifications to use like many other tools. The user can complete the assessment without requiring input from the Department. This provides a low-cost, consistent development pathway. The Tool is maintained by the Department and is currently updated biannually.

The user generates a BASIX certificate as evidence the development has met the policy requirements. The certificate lists the key commitments for the development. Councils and certifiers can then check these commitments have been met at construction certificate and occupation certificate stage.

Each year, the BASIX Tool is used to assess the sustainability performance of tens of thousands of new residential dwellings. The Tool captures all the data from these assessments, which provides a rich source of information for reporting and analysis. The Department used this data to produce *BASIX Annual Snapshot 2017/18* (DPIE 2019) which provides sustainability data trends in NSW residential development over the six years to 2017-18.

**Figure C3 Sustainability assessment using the BASIX Tool**





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