Green Building Council Australia

Building a sustainable future

Supporting sustainable development:

A guide to incorporating environmental performance standards into local planning frameworks

20 March 2022

About Green Building Council of Australia

Established in 2002, Green Building Council of Australia (GBCA) is the nation's authority on sustainable buildings, communities and cities. Our vision is for healthy, resilient and positive places for people. Our purpose is to lead the sustainable transformation of the built environment. GBCA represents more than 600 individual companies with a combined annual turnover of more than $46 billion.

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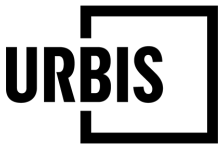

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Overview

The purpose of this guide is to provide information to local governments seeking to incorporate sustainability standards into their local planning framework. The guide includes examples of planning policies and other policy mechanisms which mandate or incentivise compliance with sustainability rating tools, such as Green Star.

The guide has been informed by research undertaken by Urbis, with the support of the Commonwealth Department of Industry, Science, Energy and Resources (DISER). Urbis undertook analysis of state and territory planning systems and conducted interviews with officers from Councils across Australia to understand the challenges, opportunities and achievements experienced in incorporating environmental performance standards into local planning frameworks. The report, *Built Environment Sustainability Frameworks*, is available via the GBCA website, but the key lessons and examples are included in this guide.

The guide outlines the different sustainability rating tools in use around Australia, summarises the state and territory planning systems, acknowledges challenges faced by local government and provides examples of how Ecologically Sustainable Development (ESD) is being successfully embedded in planning mechanisms across the country.

The guide is one of several resources created by Green Building Council of Australia (GBCA), with support from DISER, to help local government planners and sustainability officers understand how Green Star can support ESD in planning. Training is available through GBCA, as well as the Local Government and Green Star factsheet.

Acronyms

DA – Development Application

DCP –Development Control Plans

DISER – Commonwealth Department of Industry, Science, Energy and Resources

EP&A Act – Environmental Planning & Assessment Act 1979 (NSW)

EPI – Environmental Planning Instruments

ESD – Ecologically Sustainable Development[1]

GBCA – Green Building Council of Australia

LEP – Local Environment Plan

LGA – Local Government Area

LPP – Local Planning Policy

LSPS – Local Strategic Planning Statements

MEPS – Minimum Energy Performance Standards

NABERS - National Australian Built Environment Rating System

NatHERS – Nationwide House Energy Rating Scheme

NCC – National Construction Code

PPF – Planning Policy Framework

SEPP – State Environment Planning Policy

VPP – Victoria Planning Provisions

WELS – Water Efficiency Labelling and Standards

[1] ESD is often referred interchangeably as either ‘ecologically sustainable development’ or ‘environmentally sustainable design’. While often understood to mean the same thing, the term ‘ecologically sustainable development’ can have legal ramifications as it is referenced in legislation (i.e., Local Government Act 1993 No 30). For clarity, this document will refer to ESD as ecologically sustainable development but acknowledges that environmentally sustainable design is a term/concept widely used in industry.

Achieving more sustainable outcomes in planning

Success factors

This guide aims to provide practical information for Councils looking for ways to encourage more sustainable outcomes for buildings in their local government areas (LGA). Some of the success factors common across the country include the following:

- Committed staff championing ESD initiatives within Council pays dividends and can be instrumental in embedding sustainability principles in development. Supporting these change leaders (including training and appropriate resourcing where possible) to embed sustainability principles and practice within an organisational culture helps to maintain long-term momentum and achieve best practice.
- Allowing for a range of sustainability tools within planning policies will encourage transparency from developers as well as ensure that a mechanism for compliance is available to projects of all sizes and/or budgets.
- Aligning requirements/targets that support the development profile of a given LGA. For example, encouraging 5 or 6 Star Green Star certification may be appropriate for projects within the CBDs of capital cities, but other measures will likely be more appropriate in city fringe or regional LGAs.
- Providing information to builders, developers, and others in the development community about rating tools, the benefits for projects in using rating tools and the alignment of outcomes between rating tools and Council policy and/or regulation.
- Implementing policies that self-regulate and retain best practice currency. For example, referencing use of a rating tool such as Green Star which is regularly reviewed and updated to reflect industry best practice. This is an inventive way to use policy as it means there is little requirement for Council to regularly update its policy with detailed performance benchmarks to remain relevant with current sustainability development trends.
- Providing incentives such as the reduction of infrastructure contributions/charges and increasing development potential as reward for achieving a given sustainability outcomes (noting this approach is not widespread).
- A strong commitment to sustainability and net zero goals in Council policies and strategies can support implementing change at the planning level. For example, City of Sydney has made strong commitments to achieving net zero carbon and this is informing a range of policies, including proposed new planning rules for energy performance in new and existing buildings.

Challenges

The number of Councils finding ways to influence more sustainable outcomes is growing all the time despite a number of challenges and barriers. Some of these include:

- State policy and legislation which may limit local government's ability to apply and/or enforce ESD principles and sustainability targets beyond minimum statutory requirements.
- The understanding of sustainability and ESD within many Councils' planning teams which can lead to limited:
  - levels of awareness of the value in developments achieving outcomes beyond minimum requirements
  - responsibility to ensure sustainability ratings are or can be achieved.
- Lack of resources within Councils to implement, assess and/or enforce ESD requirements.
- Perceptions across all jurisdictions that the development industry is resistant to increased costs, particularly relating to certification with rating tools such as Green Star.
- Implementing sustainability targets, including through ESD policies, requires a whole-of-government approach and support from Councillors and community which may not be easy to gain and/or coordinate.

However, many Councils are finding ways to influence greater sustainability outcomes despite challenges and barriers.

Learning by example

Councils across Australia are finding ways to encourage greater sustainability in their planning frameworks, including through land management, planning controls, incentives and alignment of broader policies and strategies. Examples and case studies are provided throughout this guide.

ESD start-up checklist for local government policy and planning teams:

1. Review your Council's own ESD and sustainability policies across portfolios for alignment of goals and objectives.
2. Talk to neighbouring councils about what they have achieved or plan to implement.
3. Consider what the community and industry are already doing in your LGA. Builders and developers delivering more sustainable projects can be helpful examples for other builders and developers.
4. Build awareness in the local development community about increasing stringency in the National Construction Code (NCC) and how rating tools such as Green Star and NABERS support compliance with energy efficiency requirements within the code. Awareness raising and capacity building will help to encourage sustainable design decisions as early as possible in a project's design process.
5. Talk to GBCA to learn more about Green Star and how it may be implemented in your LGA.

Introduction – Why ESD is important

Buildings account for almost a quarter of Australia's total carbon emissions. Councils across Australia are recognising that taking action to address localised climate change impacts through planning will be critical for all councils in the journey to a net zero carbon economy. Many councils have net zero targets for their communities' emissions, and many more have set net zero targets for their own operations.

In this context, there has never been a more important time to review how ESD is applied to new developments. During the planning stage key decisions can be integrated into a project's design, budget, and construction timelines. The preparation of planning policies which incorporate ESD principles and objectives can ensure real and measurable ways to benchmark performance.

Sustainability rating tools

A variety of sustainability rating tools for the built environment are used in Australia. It is worth noting that some local government policies may allow an 'equivalent' standard to a rating tool which can involve self-assessment rather than the independent, verified approach required by NABERS, Green Star and some other tools. Some policies remain silent on how sustainable development will be measured, leaving it to developers to demonstrate compliance. Whilst there are policies that reference Green Star in this way the GBCA does not endorse a self-assessment or 'equivalence' approach as these often lead to adverse outcomes. This guide will also cover the high risk that comes with this approach.

Overview of sustainability tools in use in the planning systems in Australia

Table 1 provides an overview of tools that are used in planning systems across Australia (not every tool in use is included here, for a more comprehensive table, please see the Built Environment Sustainability Frameworks report). These tools are referenced in existing planning policies to provide guidance and/or measure compliance with desired ESD standards.

Sustainability rating tool	Overview and Strengths and Weakness in with Planning Systems	Jurisdiction Used
Green Star	Green Star is an internationally recognised, voluntary rating system that includes rating tools to certify design, construction, and operational performance of buildings and master planned communities. These rating tools include Green Star Design & As Built, Green Star Buildings, Green Star - Interiors, Green Star – Performance and Green Star - Communities. Green Star Homes assesses the design and construction of Class 1A housing. Green Star ratings span a 1 to 6 Star scale used to assess the performance and sustainability outcomes of development. Green Star Homes does not provide a star rating and instead provides a certified rating. Green Star certification is a voluntary scheme. Strengths: • Internationally recognised tool as well as across Australia. • Takes a holistic view of the development and can be applied to any building type as well as master planned communities. • Clear measurable targets can be set at rezoning or development application (DA)* stage with documentation to support this (there needs to be legislative support for this to be enforced post-consent. Ability to set consent conditions appear to be limited to NSW, VIC and WA). • Green Star provides a pathway for some building projects to demonstrate compliance for requirements under Section J of the NCC. • The independent assessment and verification process is ISO 9001 certified and provides industry leading verification that designed and built outcomes have been achieved. Weaknesses: • Perception that post construction documentation requirements to achieve Green Star ratings can add additional time and cost to projects which can discourage uptake by some developers. • Compliance within a planning system can be difficult to achieve as existing planning legislation limits the ability to legally enforce development consent conditions that are linked to achieving a particular certified rating. (QLD, NT, TAS, SA and ACT) • Understanding of the rating tool amongst council planners can be limited.	ACT – Outside of planning system within SLA lease agreements NSW – Where adopted by Councils it is referenced in Development Control Plans (DCP) VIC – Only in 19 Councils' local planning scheme policies WA – Only within five Councils' local policies QLD – Outside of planning system. Voluntary within the Brisbane City Council – Green Buildings Policy NT – Outside of planning system and voluntary TAS – Outside of planning system and voluntary SA – Outside of planning system and voluntary
National Australian Built Environment Rating System (NABERS)	NABERS is national initiative managed by the New South Wales Government on behalf of the Commonwealth, State and Territory governments of Australia. NABERS implements a half star rating system from 1 to 6 stars for a building's efficiency, including rating tools for energy performance, water, waste, and indoor environment. The tools look at environmental uses over the course of a year, factoring	ACT – Outside of planning system NSW – Where adopted by Councils it is referenced in DCPs

Sustainability rating tool	Overview and Strengths and Weakness in with Planning Systems	Jurisdiction Used
	in building size, local climate and usage patterns, before comparing the data with equivalent or similar buildings. There are also NABERS 'Commitment Agreements' which are contracts signed by a developer or owner to commit to design, build and commission a building to achieve a specific NABERS energy rating. Strengths: • Nationally recognised tool. • Good for marketing a building or tenancy in commercial buildings. • It can be very useful as a 'best in class' benchmarking tool for similar developments within an LGA NABERS Commitment Agreements allows a developer to demonstrate compliance at DA/Planning permit stage when targeting measures and has mechanisms (in VIC and NSW) to be included in consent conditions • The NABERS Commitment Agreement provides a pathway for some building projects to demonstrate compliance for requirements under Section J of the NCC. Weaknesses: • Understanding among planners and council appears to be limited and can be perceived as complex and without simple guidelines for planners	VIC – Not specifically mentioned in local planning policies but accepted as rating tool WA – Outside of planning system and voluntary QLD – Outside of planning system and voluntary NT – Outside of planning system and voluntary SA – Outside of planning system and voluntary TAS – Outside of planning system and voluntary
Nationwide House Energy Rating Scheme (NatHERS)	NatHERS measures a home's thermal efficiency with a star rating. The higher the star rating, the less energy needed to heat and cool the home to keep it comfortable, assuming a number of occupant behaviour settings. NatHERS estimates the amount of heat that needs to be added or removed to keep that home comfortable. The NatHERS tool then generates a NatHERS star rating out of 10 and a certificate. This star rating measures the home's thermal performance, based on its structure, design and materials. A star rating of 6 or above is required in most parts of Australia for detached dwelling houses. Strengths: • NatHERS is an established rating tool across Australia (introduced in 1993) and remains the most popular pathway to demonstrate compliance with the National Construction Code (NCC) energy efficiency (thermal performance) requirements. Weaknesses: • There is no mechanism to assess the ongoing performance of houses and apartments following construction. • NatHERS only models envelope performance and does not consider proposed appliance/equipment, though upgrades to NatHERS via the NatHERS Whole-of-Home work will take this into account. • Its focus on regulatory minimum building fabric standards does not facilitate implementation of higher standards on a voluntary basis	NSW – Delivered within the BASIX scheme, NatHERS is optional for single dwellings and currently is, in effect, mandatory for Class 2 development. VIC – This is highlighted as an example of a rating tool with a minimum star rating to achieve energy efficiency that is used by a select number of Councils to demonstrate compliance with their local planning policy WA – Used in City of Canning Local policy and in Development WA projects NT – Outside of planning system and voluntary TAS – Outside of planning system and voluntary
Built Environment Sustainability Scorecard (BESS)	BESS assesses energy and water efficiency, thermal comfort, and overall environmental sustainability performance of a proposed new building or alteration. BESS was designed to be compatible with the Victorian Planning permit process and can be tied back to the Sustainable Design Assessment in the Planning Process (SDAPP) framework as a means of demonstrating compliance with ESD principles and the overall objective of sustainable development built into the Victorian Planning and Environment Act 1987. BESS can assess any size of type of development. It has inbuilt flexibility with multiple options to demonstrate compliance. Strengths: • Built for use within the Victorian Planning permit process and is accessible to Council planners. • Council planners trained to assess developments using BESS. • Allows some flexibility which can keep development costs down on smaller residential development where budgets costs are key drivers. • Suitable for small-scale developments Weaknesses: • Tends to be used in planning permits for developments in Councils with ESD policies to demonstrate compliance as part of sustainable design assessments (SDA). • Flexibility to meet standards results in inconsistency in like for like developments across different LGAs.	VIC – 25 councils across Victoria

Table 1 – Overview of sustainability tools in use in the planning systems in Australia

* Each state and territory has its own terminology with respect to development applications however the meaning assigned is similar. For example, terms use in NSW include: 'development application' and 'consent conditions', while in VIC: 'planning permit application' and 'planning permit conditions' are the terms used.

About Green Star

First introduced by GBCA in 2003, Green Star is an internationally recognised rating system setting the standard for healthy, resilient, positive buildings and places. Green Star assesses and rates buildings, interiors, master planned precincts and houses, and provides independent assurance that high standards have been met across a range of sustainability categories that align with the UN Sustainable Development Goals. Undertaking Green Star certification demonstrates leadership, innovation, environmental stewardship, and social responsibility. Green Star has certified thousands of projects across Australia including many council-owned and operated properties.

Other benefits of Green Star

Part of the success of Green Star is the ability of the rating system to assess all new and existing building types, as well as master planned precincts and communities. Everything from community centres, schools, and council offices have achieved Green Star ratings as well as large, master planned communities that have development timelines from five years to over 50.

Another element of success is the broad industry awareness and engagement with the rating tool, including in the development of the Green Star credits and benchmarks themselves. The governance process supporting Green Star is rigorous and includes detailed stakeholder engagement. Working groups with participants from all facets of the property industry regularly inform updates and upgrades to the rating tools which ensures they keep up with evolving best practice standards, as well as setting the trajectory towards a climate positive built environment. Projects that are certified with Green Star deliver healthier, more sustainable places to work, live, learn and play. Numerous case studies, as well as reports such as, Closing the performance gap in Australia's commercial office sector,[2] demonstrate the many benefits of Green Star certification.

Why Green Star 'equivalency' is harmful

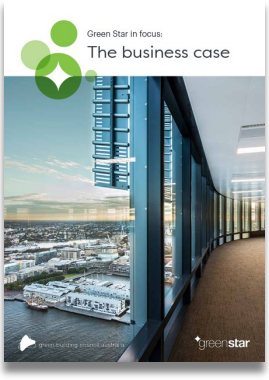
Green Star 'equivalence', 'benchmarking' or self-assessment refers to using Green Star as a framework but not formally certifying a project. While this does happen on projects, it can lead to adverse outcomes. By forgoing certification, any claims made about the sustainability of a project have not been independently verified. These claims are both misleading and can also potentially breach trademark rules related to Green Star. Projects undertaking self-assessment using Green Star have an increased reputational risk of being accused of greenwash.

More importantly, the only way to ensure Green Star outcomes are actually achieved is through independent verification by a third party, which is exactly how the formal Green Star certification process works. The GBCA have heard many accounts of projects that were 'designed to Green Star' that on closer look have been far from meeting the requirements of the standard that formal certification requires. A Green Star certification provides independent assurance that specified requirements and benchmarks across a range of sustainability categories have been met or exceeded. The Green Star certification process itself is underpinned by ISO 9001 accredited quality control giving stakeholders across the project confidence that the project has been designed and built as intended.

Green Star uses registered certification trademarks approved by the Australian Competition and Consumer Commission (ACCC) which indicates to consumers that a product or service meets a particular standard. Linking self-assessment or 'equivalency' to Green Star, can lead to infringement of the trademark rules. This can subsequently land proponents of this approach to issues with the ACCC.

Green Star project costs research

The cost of achieving a Green Star rating has fallen over time. Green Star in Focus: the Business Case,[3] released in 2016, found the average cost of achieving Green Star certification was 2.9% of total project budgets. This has decreased to 2.5% in 2019. The cost of Green Star varies by sector and the number of stars achieved. Six projects within the 2019 sample achieved Green Star certification at no additional construction cost, with certification and submission fees the only cost. Green Star Communities ratings are being delivered for 0.5% of the project budget. Green Star Interiors ratings are being delivered for an average of 5.1% of the project budget.



[2] GBCA. 2021. *Closing* the performance *gap in Australia's commercial office sector*. https://gbca-web.s3.amazonaws.com/media/documents/closing-the-performance-gap-in-australias-commercial-office-sector.pdf

[3] GBCA. 2020. Green Star in focus: The business case. https://gbca-web.s3.amazonaws.com/media/documents/gbca-green-star-in-focus-the-business-case-v1-r6-digital-spreads-reduced-size.pdf

Securing ESD outcomes through the planning system

The value of driving ESD through planning

The findings of the sixth assessment report from the Inter-Governmental Panel on Climate Change (IPCC) released in August 2021 identifies the world is on a trajectory to exceed 1.5 degrees warming within the next two decades. Across Australia, local governments are taking action on climate change and setting goals for carbon emissions reduction. This includes many councils exploring how ESD measures can be embedded in planning frameworks.

With buildings accounting for almost a quarter of Australia's total carbon emissions, the construction and development industry have a significant role to play in curbing Australia's carbon footprint - through high quality building design, limiting direct emissions from buildings, and increasing energy and water efficiency. The Planning Institute of Australia (PIA) released its 'Climate Conscious Planning Systems campaign'[4] in 2021 which outlines 10 actions that governments and the private sector can take to ensure that planning policies align with zero carbon, climate change and resilience objectives. The International Energy Agency (IEA) notes that to avoid locking in emissions over the lifespan of a building, all new buildings should be net-zero carbon ready (highly energy efficient and either uses renewable energy directly, or an energy supply that will be fully decarbonised by 2050) by 2025.

In preparing planning policies which incorporate ESD principles and objectives, there are significant gains to be made, but these must be supported with real and measurable ways to benchmark performance.

Diversity of planning systems throughout Australia

The research undertaken by Urbis compares the differences and similarities of the various State and Territory planning systems and provides a national overview of how local planning policies have sought to implement ESD standards and sustainability rating tools. This research recognises the challenges, while providing insights and identifying examples of how Councils across Australia are encouraging more sustainable outcomes through planning policy so that others may consider how these may be adapted to their own context.

Successful planning mechanisms

Each State has a different approach to incorporating ESD into their planning framework or policies. For example, some States might use a single planning mechanism or combination of planning and climate strategies to influence development outcomes in their region. This relies on a combination of minimum expectations, market drivers and requirements for certain types of development. The policies and mechanisms outlined in this guide highlight some of the approaches used successfully by local governments in different States and Territories.

Planning controls

In NSW, a variety of sustainability rating tools sit within existing planning controls. Select Councils assess developments against the following rating tools which is indicative of the tools generally used by many Councils within NSW:

- State Environmental Planning Policy Building Sustainability Index (SEPP BASIX)
- Water Efficiency Labelling and Standards (WELS) scheme
- Minimum Energy Performance Standards (MEPS)
- Green Star
- NABERS
- NatHERS

[4] PIA. 2021. Climate conscious planning systems. https://www.planning.org.au/planningresourcesnew/climate-change

Sustainability tools used in NSW Local Government policies

The application of sustainability tools in the NSW planning system is achieved through local environment plans (LEPs) and development control plan (DCPs). The NSW Net Zero Plan Stage 1 outlines key priorities for decarbonisation and includes reference to sustainability tools which will trickle down to tangible controls within the planning system.

A summary of the sustainability rating tools across select local governments in NSW and how they are applied, is as follows:

Local Government	ESD Tools Utilised	Planning Framework	Documentation Required	Implementation / Compliance
The City of Parramatta	BASIX* and WELS (residential) and NABERS (non-residential) of proposed development	Parramatta DCP 2011 (currently under review to create a consolidated DCP)	ESD report.	Condition of consent requiring development to be consistent with ESD report, prior to issue of occupation certificate.
The City of Sydney	BASIX* and WELS (residential) and Green Star and NABERS (non-residential) depending on GFA of proposed development.	Sydney DCP 2012	Online Design for environmental Performance Template (for larger DA's)	Condition of consent to be consistent with ESD report, prior to issue of occupation certificate.
Newcastle	BASIX (residential) and Green Star (non-residential)	Newcastle DCP 2012	ESD report.	Condition of consent requiring development to be consistent with ESD report, prior to issue of occupation certificate.
North Sydney	BASIX (residential) and Green Star (5 star) and NABERS (4.5 Star) (non-residential) depending on GFA of proposed development.	North Sydney DCP 2013	ESD report and Efficient Use of Resources Commitment Table (Commercial development only).	Condition of consent requiring development to be consistent with ESD report, prior to issue of occupation certificate.
Penrith	BASIX and WELS (residential) and Green Star (4 Star) and NABERS (4.5 Star) (non-residential development, including mixed use developments)	Penrith DCP 2014	ESD report.	Condition of consent requiring development to be consistent with ESD report, prior to issue of occupation certificate.
Ryde	BASIX and Green Star (4 Star) (residential) and Green Star (4-5 Star) (non-residential)	Ryde DCP 2014	ESD report.	Condition of consent to be consistent with ESD report, prior to issue of occupation certificate.
North Ryde	BASIX, Green Star, NatHERS WELS and MEPS ratings (residential) and Green Star and NABERS (non-residential)	North Ryde Station Precinct DCP	ESD report.	Condition of consent to be consistent with ESD report, prior to issue of occupation certificate.
Waverley	BASIX (residential) and Green Star (minimum 4 star) encouraged.	Waverley Development Control Plan 2012	ESD report.	Condition of consent to be consistent with ESD report, prior to issue of occupation certificate.

*BASIX is mandated in NSW planning legislation for eligible residential buildings.

Sustainability tools used in WA Local Government policies

There is no state-wide guidance for implementing ESD requirements at a local government level in WA, but some Councils specify that certain ratings should be achieved for some types of development.

Local Government	ESD Tools Utilised	Planning Framework	Documentation Required	Implementation / Compliance
City of Vincent	Green Star	Local Planning Policy (Local Planning Policy 7.1.1 Built Form) and associated information sheets (Residential, Mixed Use and Commercial)	Multiple dwellings, mixed use and commercial	N/A
	NatHERS	(Local Planning Policy 7.1.1 Built Form – 1.8 Environmentally Sustainable Design) associated information sheet	Single and grouped dwellings	8 Star NatHERS rating
City of Joondalup	Self-designed	Local Planning Policy (Local Planning Policy - Environmentally Sustainable Design)	Multiple dwellings, mixed use and commercial	N/A
City of Fremantle	NatHERS	Local Planning Policy (Local Planning Policy 2.2 Split Density Codes and Energy Efficiency and Sustainability Schedule)	Single dwellings	NatHERS rating
	Green Star	(Local Planning Policy 2.13 Sustainable Buildings Design Requirements)	1000sq.m+ development or redevelopment	Documentation from Green Building Council of Australia
City of South Perth	Green Star	Local Planning Policy (LPP 350.01 Environmentally Sustainable Design)	1000sq.m+ development or redevelopment	Written statement confirming a Green Star Accredited assessor has made up part of the design team or
City of Canning	Green Star (5 Star minimum), NatHERS, E-Tool Gold or EnviroDevelopment (as incentive for flexible development)	Local Planning Policy (Local Planning Policy 10 Incentive-Based Residential Development Assessment)	Optional for single, grouped and multiple dwellings or mixed-use development	Certification is required by a Green Star or NatHERS accredited professional

Sustainability tools used in Victorian Local Government policies

Due to limitations with state-wide policy in Victoria, a number of Councils have developed a relatively consistent set of approaches for development to incorporate ESD within the Victorian planning system. In 2015, six Councils had their respective planning scheme amended to incorporate local policy that requires development to embed and demonstrate best practice ESD outcomes. Since such amendment, over 20 Councils currently have an ESD local policy within their respective planning scheme. Currently, with the support of the Council Alliance for a Sustainable Built Environment (CASBE), 31 Councils are seeking to revisit their existing local ESD Policy and pursue elevated ESD requirements that supports zero carbon development outcomes via an amendment to their planning scheme.

Local Government	ESD Tools Utilised	Planning Framework	Documentation Required	Implementation / Compliance
Greater Geelong	BESS, Green Star, MUSIC and STORM are suggested as tools that could be utilised:	LPP 22.71 Environmentally Sustainable Development	Applicants are to provide: » For residential development. a Sustainability Management Plan and a Green Travel Plan for 10 or more dwellings, or accommodation (other than dwellings) with a GFA greater than 1500m2 » For Non-residential development, a Sustainability Management Plan for development or alterations and additions with a GFA of 1500m2	Assessed by planning officers at planning permit application stage. No details provided within the policy relating to compliance.
Moreland	For residential and non- residential development, BESS/Green Star, MUSIC and STORM are suggested as tools that could be utilised: For mixed-use development NatHERS is also suggested as tools that could be utilised:	LPP 15.02-1L Environmentally Sustainable Development	Applicants and Council are to consider as relevant: » For residential development, a Sustainability Management Plan for 10 or more dwellings, or accommodation (other than dwellings) with a GFA greater than 1000m2 » For non-residential development. a Sustainability Management Plan for development or alterations and additions with a GFA of 1000m2	Assessed by planning officers at Development Assessment stage. No details provided within the policy relating to compliance.
Port Phillip	BESS, Green Star, MUSIC and STORM are suggested as tools that could be utilised:	LPP 22.13 Environmentally Sustainable Development	Applicants are to provide: » For residential development. a Sustainability Management Plan and a Green Travel Plan for 10 or more dwellings, or accommodation (other than dwellings) with a GFA greater than 1500m2 » For Non-residential development, a Sustainability Management Plan for development or alterations and additions with a GFA of 1500m2	Assessed by planning officers at Development Assessment stage. No details provided within the policy relating to compliance.
Stonnington	BESS, Green Star, MUSIC and STORM are suggested as tools that could be utilised	LPP 22.05	Applicants are to provide: » For residential development. a	Assessed by planning officers at Development Assessment stage. No details provided within the policy relating to compliance.

Local Government	ESD Tools Utilised	Planning Framework	Documentation Required	Implementation / Compliance
		Environmentally Sustainable Development	Sustainability Management Plan and a Green Travel Plan for 10 or more dwellings, or accommodation (other than dwellings) with a GFA greater than 1500m2 » For Non-residential development, a Sustainability Management Plan for development or alterations and additions with a GFA of 1500m2	
Yarra	BESS, Green Star, MUSIC and STORM are suggested as tools that could be utilised:	LPP 22.17 Environmentally Sustainable Development	Applicants are to provide: » For residential development. a Sustainability Management Plan and a Green Travel Plan for 10 or more dwellings, or accommodation (other than dwellings) with a GFA greater than 1500m2 » For Non-residential development, a Sustainability Management Plan for development or alterations and additions with a GFA of 1500m2	Assessed by planning officers at Development Assessment stage. No details provided within the policy relating to compliance. It is worth highlighting that this LLP was initially undertaken among 6 councils and subsequently introduced into 19 local planning schemes. This reinforces a consistent approach based on broad based collaboration among other LGA's.

Financial incentives and development bonuses

In Queensland, sustainability targets are not mandated under any legislation. Brisbane City Council launched a voluntary policy called the Brisbane Green Buildings Incentive Policy (GBI Policy). The aim of this policy is to support and encourage development of greener and more energy efficient buildings. Eligible applicants are provided with a 50% rebate on Council infrastructure charges upon commencement of the use and verification of successful installation of specific green and energy-efficient design elements. Eligible developments need to demonstrate compliance against one of a range of design and sustainability criteria options (including Green Star and EnviroDevelopment as eligible design criteria).

The City of Sydney allows eligible projects to access the Design Excellence clauses in its Local Environment Plan. The provisions provide that a building that demonstrates design excellence, and is the winner of a competitive design process, may qualify for a bonus of up to 10 per cent of additional height or floor space to that which would otherwise apply to the site. Among the specific clauses under which design excellence can be assessed are:

> "(vii) environmental impacts, such as sustainable design, overshadowing and solar access, visual and acoustic privacy, noise, wind and reflectivity,
>
> (viii) the achievement of the principles of ecologically sustainable development".

In WA, the City of Fremantle offers a density bonus in split density coded areas. Applicants for subdivision and development in these areas may be granted a higher density code if they can demonstrate compliance with the City's Energy Efficiency and Sustainability Schedule:

- A dwelling must demonstrate a NatHERS star rating one star in excess of the current energy efficiency requirement of the Building Codes of Australia for class 1A buildings; and
- The NatHERS star rating for the dwelling shall be certified by a NatHERS accredited energy assessor using NatHERS accredited software and shall be provided at the development application stage; and
- Provision of a minimum 1.5kw photovoltaic solar panel system; and
- Provision of a minimum 3000L capacity rainwater tank plumbed to either a toilet or laundry within the dwelling; or alternatively an approved grey-water reuse system that collects grey water from the laundry and bathroom and re-directs it for garden irrigation/ground water recharge.

Land management

In the ACT, sustainability targets are not mandated under any legislation. However, the Suburban Land Agency (SLA) will plan and prepare a site for development, including subdivision and servicing, before leasing to a developer to construct the building (all land in ACT is Crown land and leased to property developers to develop and occupy). Within the leasing contract, SLA will often include any requirements for sustainability targets.

SLA has selected Green Star as the common sustainability target for developments and usually requires that a 4 Star Green Star rating is achieved, though this could be scaled up depending on the value of land.

Summary of State and Territory planning frameworks

ACT

Summary of planning framework

The ACT Planning system, management of land use and development applications are governed solely at a Territory level by the ACT Government's Environment, Planning and Sustainable Development Directorate (EPSD). The *Planning and Development Act 2007* establishes the EPSD as the relevant ACT planning authority, the legal planning framework for the Territory, and the requirements of the Territory Plan.

The *Planning and Development Act 2007* identifies the requirement for a "planning strategy for the ACT that sets out long term planning policy and goals to promote the orderly and sustainable development of the ACT, consistent with the social, environmental and economic aspirations of the people of the ACT".

The Territory Plan is the overarching planning strategy for the ACT. Its purpose is to manage land use change and development in a manner consistent with strategic directions set by the ACT Government, Legislative Assembly, and the community. It must not be inconsistent with the National Capital Plan which is the strategic plan for Canberra and the ACT administered by National Capital Authority which is the statutory authority of the Australian Government established to manage the Commonwealth's interest in the planning and development of Canberra.

The ACT Climate Strategy 2019-2025 (while not technically part of the planning framework) sets out a number of interventions across all functions of government. The Strategy outlines drivers to achieve sustainable development outcomes through target requirements incorporated into lease agreements with developers in greenfield and urban renewal projects, including ensuring all new government capital works with a budget of more than $10 million either seek or are consistent with an independent sustainability rating such as an Infrastructure Sustainability rating from the Infrastructure Sustainability Council, or a Green Star rating from GBCA.

Challenges to implementing ESD requirements

The format of the Territory Plan establishes a highly prescriptive planning system with little scope for alternative outcomes. The ACT Government is currently undertaking a review of the Territory Plan. Reviews are legislated as a mandatory requirement every five years. It is understood that the format of the Territory Plan and the ACT planning system are being reformed to a performance/outcome based planning system, meaning greater flexibility and merit-based assessment for development applications are to be introduced. Draft District Strategies are targeted for exhibition in mid to late 2022.

The time and cost for achieving a rating and the relatively small ACT market are perceived to be barriers for uptake of independent sustainability rating tools.

Celebrating positive ESD outcomes

Case study – Ginninderry

Ginninderry is a greenfield development that has been certified as a 6 Star Green Star Community – the highest rating available under the Green Star Communities rating tool.

The voluntary use of Green Star at Ginninderry has helped to contribute to positive policy change. Ginninderry was the first project for which the ACT Government waived the requirement for all new suburbs to include gas infrastructure following advocacy by the project developers for an exemption in line with making the community net zero carbon-ready. The ACT Government is now removing mandatory requirements for gas connections for all new suburbs.

Ginninderry, ACT. Riverview Projects (ACT) Pty Ltd. 6 Star Green Star-Communities rating

NSW

Summary of planning framework

In NSW, the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *Environmental Planning and Assessment Regulation 2000* (EP&A Reg) provides the regulatory framework governing planning in the state. The Act establishes the framework for matters such as planning administration, planning instruments, development assessment and building certification.

The planning process involves an assessment of a proposed development against specific statutory and policy requirements, some of which are contained in SEPPs and LEPs. These environmental planning instruments (EPIs) are made under the EP&A Act. The planning process also considers a set of non-statutory plans prepared by Councils that set out detailed planning controls to support the statutory provisions within the LEP known as DCPs. These can detail specific controls for a type of development or a particular geographical area. DCP controls support the provisions of an EPI and can be varied.

NSW has 128 local Councils, responsible for land use planning and development assessment at a local level to maintain quality amenity for its residents. This is achieved by abiding by the EP&A Act, the EP&A Reg and the Local Government Act 1993.

Local Councils are required to prepare Local Strategic Planning Statements (LSPS), which are strategic documents to locally deliver the strategic objectives set by the Regional Plans prepared by the NSW Department of Planning and Environment and inform the review of LEPs, which are the principal planning controls for each LGA. An LEP guides land use planning through zoning and mandatory planning controls.

In addition to preparing and implementing LEPs, Councils also prepare DCPs to provide more detailed planning controls that define built form, character and other requirements, including ESD guidelines. While not as enforceable as LEP requirements, DCPs often contain design provisions that are clearly ESD related.

Supporting compliance with documentation requirements

The City of Sydney's Guidance on sustainable development provides a resource for incorporating sustainable elements early in the design process to save money, time, and effort. In its DCP, the City of Sydney includes requirements for NABERS and Green Star for commercial office developments, and BASIX and WELS for residential development. Developments in the City of Sydney may utilise the Design Excellence clause to access bonus floor space. Council will typically leverage this process to require a minimum sustainability rating requirement to demonstrate design excellence, including entering into a NABERS Commitment Agreement where appropriate. With this approach, a condition of consent for a Concept Development Application requires a development to achieve a Green Star and/or NABERS rating as part of its Detailed Development Application.

All of the NSW Councils consulted in the preparation of the Built Environment Sustainability Frameworks report have requirements for non-residential development to achieve Green Star and/or NABERS certification. These Councils require an ESD report to accompany development applications which demonstrates how the sustainable design outcomes will be achieved. Compliance can be demonstrated in the form of:

- An ESD report identifying selected methods, including assessment against a selected sustainability rating tool (i.e. Green Star) and/or
- A completed Efficient Use of Resources Commitment Table
- An online Design for Environmental Performance template (City of Sydney).

If an applicant has proposed to achieve a sustainable design rating, or Council has enforced this requirement as part of a design excellence process, then a condition of consent will require formal certification that the resultant development has achieved the design rating. The applicant will then progress through the relevant independent administrative process for formal certification.

While controls for sustainability rating tools are not included in Councils' LEPs, most Councils will provide some direction for achieving sustainability outcomes and/or ratings within their DCP.

The EP&A Act specifically states that provisions within the DCP are not statutory requirements, therefore alternative solutions to development controls can be applied. This means an applicant can ask Council that their project not be required to achieve formal certification for a sustainability rating and propose an alternative sustainable design outcome, such as equivalency with a sustainability rating target. If a Council accepts the proposal to achieve an equivalency of a sustainability rating target, then a condition of consent may be applied. For example, providing evidence of Green Star project registration.

Some Councils have chosen to provide sustainability rating targets for specific types of development, whereas other Councils require sustainability ratings to be achieved for developments within a specific area such as a town centre.

Case study – City of Ryde

In 2010, City of Ryde introduced ESD objectives into the local planning framework, including various DCP controls.

Controls for ESD are not consistent within the DCP and vary depending on the development type or location. Some examples of DCP controls include:

- Part 4.2 Shepherds Bay Meadowbank – All commercial buildings over 1500 m2 are to be designed to a minimum of 4 Stars under the Green Star rating system
- Part 4.4 Ryde Town Centre – Development within Precinct 1 is to achieve a minimum 5 Green Star Rating and development in Precinct 2 is to achieve a minimum 4 Green Star Rating.

Case study – City of Sydney

In a first for a local council in Australia, the City of Sydney has proposed introducing new performance standards to optimise energy efficiency of buildings. Development applications for new office buildings, hotels and shopping centres and major redevelopments of existing buildings will have to comply with minimum energy ratings to help transition the city to net-zero emissions.

The performance standards address requirements in the Greater Sydney region plan and respond to local, state and industry goals, including the NSW net zero plan and electricity strategy, district plans to reduce carbon emissions and sustainability actions in local planning. The performance standard references Green Star and NABERS outcomes as performance targets.

The regulations will come into effect in January 2023 and achieve net-zero energy output by 2026.

NT

Summary of planning framework

The NT planning system is run at a state government level via the *Planning Act 1999* and the *Planning Regulations 2000*. Most of the NT is governed by the *NT Planning Scheme 2000* (The Scheme). The Scheme applies to all areas of the NT apart from Jabiru.

The NT planning system does not include the use of any ESD rating tools. While many Councils in the NT have sustainability directives aimed at guiding their own operations, none have policies for ESD.

QLD

Summary of planning framework

In Queensland, Development Applications are guided by the *Planning Act 2016* ('the Planning Act') and the Development Assessment Rules ('DA Rules').

The Planning Act defines what a development is, the types of development and the types of applications available. The DA Rules set out the assessment process for all parties involved, including the applicant, assessment manager and any referral agency. In Queensland, sustainability targets are not mandated under any legislation. Instead, sustainability rating tools are a voluntary mechanism which can be taken up by developers as a separate process, certified and managed by third-party consultants. Their use sits firmly outside the planning system and has no impact on development assessment of applications.

Case study – Brisbane City Council

Brisbane City Council introduced a voluntary policy called the Brisbane Green Buildings Incentive Policy (GBI Policy). The aim of this policy is to support and encourage development of greener and more energy efficient buildings. Eligible applicants are provided with a 50% rebate on Council infrastructure charges upon commencement of the use and verification of successful installation of specific green and energy-efficient design elements.

Eligible developments need to demonstrate compliance against one of a range of design and sustainability criteria options, including:

- Criteria 1 – Obtaining a 5-star Green Star rating from the Green Building Council of Australia;
- Criteria 2 – Receiving UDIA Envirodevelopment six leaf certification (3 to 15 storeys);
- Criteria 3 – Complying with criteria and sub-elements from the New World City Design Guide – Buildings that Breathe;
- Criteria 4 – Obtaining carbon neutral certification; and
- Criteria 5 – Achieving a minimum green plot ratio.

For a development to be eligible for the infrastructure charges rebate it must:

1. be a minimum of three storeys high;
2. have an eligible DA approval granted between 1 July 2020 and 30 June 2022;
3. lodge a request for incentive between 1 July 2022 and 31 December 2023; and
4. must not be receiving another development incentive benefit from Council.

WA

Summary of planning framework

WA's Planning System is built through a combination of institutional arrangements which provide for centralised statutory regional planning, subdivision control and the facilitation of local planning. Planning and development within WA is guided by the *Planning and Development Act 2005* and the Planning and Development (Local Planning Schemes) Regulations 2015. Other overarching legislative and policy provisions adopted by the State Government that encourage building energy efficiency and/or emissions reductions include State Policy Planning 7.0: Design of the Built Environment, the *Building Act 2011* and Building Regulations 2012, Western Australian Climate Policy and Shaping Western Australia's low-carbon future. The WA Government, along with all State and Territory Governments, has adopted the Trajectory for Low Energy Buildings.

The Western Australian Planning Commission (WAPC) has responsibility for decision-making for urban, rural, and regional land-use planning. The Department of Planning, Lands and Heritage (DPLH) provides the WAPC with professional and technical expertise, administrative services, and resources to assist with the implementation of decisions.

Local Governments are involved in planning for local communities by ensuring proper planning controls exist for land use and development. Primarily, this is achieved by preparing and administering their local planning schemes and strategies.

Local planning schemes contain planning controls such as designation of appropriate land-uses, residential densities, and development standards. All decisions must be made based on the provisions and controls in their local planning scheme, which must be consistent with State Government planning objectives and requirements.

There are two primary pathways for development approvals within WA: Local Government application or a Development Assessment Panel application.

Supporting compliance with documentation requirements

Case study – City of Vincent

City of Vincent's Local Planning Policy 7.1.1 identifies the need for "Development that considers the whole of life environmental impact of the building and incorporates measures to reduce this impact". For each form of development, the ESD requirements vary, but sustainability rating tools are referenced for some:

Apartments and Mixed-Use developments and Commercial developments: Developments must demonstrate they are capable of achieving a minimum 5 Star Green Star rating or Life Cycle Assessment in accordance with EN15978 – Sustainability of construction works – Assessment of environmental performance of buildings – calculation method or ISO 14044 Environmental management – life cycle assessment – requirements and guidelines (or equivalent). City of Vincent allows a project self-assessment to be prepared by a Green Star Accredited professional rather than achieving independent Green Star certification, as recommended by GBCA.

Some large-scale projects, such as the Home Collective (Dale Alcock Homes, 301 Vincent Street, Leederville), have undertaken formal Green Star registration at the time of Development Approval and provided the appropriate ESD information to Council at this stage. These assessments have been reviewed by planning officers during the assessment process, allowing the officers to have confidence in the assessment of the ESD inclusions and provide support for the proposal.

VIC

Summary of planning framework

The Victorian planning system is comprised of several planning instruments which are used to regulate planning decisions, planning scheme amendments, Section 173 agreements, planning permit applications, roles of different stakeholders and decision makers, public participation, and legislative changes with the primary legislative instrument being the *Planning and Environment Act 1987*.

An LGA's (Council's) planning scheme provides guidance with respect to planning decisions which shape the urban settlements throughout Victoria. Each Council and the State Government are responsible for the preparation of a Council's planning scheme that is associated with a Council's municipal area.

The *Planning and Environment Act 1987* is the legislation which provides primary authority for all state and local planning policy and direction, including the formation of a Council's planning scheme. A Council's planning scheme generally consists of a Municipal Planning Statement (MPS) or Municipal Strategic Statement (MSS), the Planning Policy Framework (PPF), including local policies, and the Victoria Planning Provisions (VPP) which includes Zones, Overlays, Particular, General and Operational Provisions. The VPP is the state-wide application of the details and particulars used to administer the planning system and generally sets out the framework for local policy to follow. A Council's ESD Policy currently resides within the local policy framework of a Council's planning scheme.

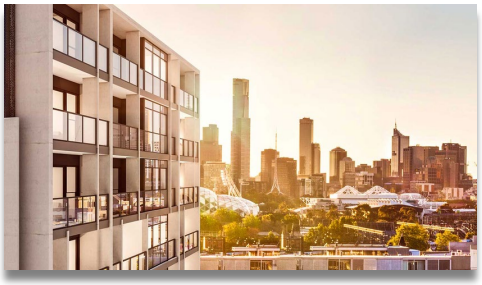
Through a Council's planning scheme, each individual council has the ability to control development approvals and land use given specified permit prohibitions and requirements. Planning applications are assessed by the Council or by the relevant State Government Planning Department and approved based on their merit and compliance with a Council's planning scheme.

There are a number of Victorian Civil and Administrative Tribunal (VCAT) determinations that explore the merits of ESD initiatives within development applications. Reliance is particularly placed upon a Council's local ESD policy, within the planning scheme, for a development to demonstrate that best practice ESD commitments and measures will be met.

Case study – Yarra City Council

Yarra City Council has an ESD policy that highlights 10 Key Sustainable Building Categories. Medium or large developments in the LGA need to demonstrate best practice against these categories in their design. Mandatory requirements are in line with NCC and other relevant legislation and regulations, but information is provided for each category about how to go beyond minimum requirements. Yarra City Council identified the following projects to highlight that the ESD requirements can be successfully implemented to achieve better ESD outcomes. Each of the projects has been assessed for their merit and achievements in the 10 Sustainable Building Categories where applicants must demonstrate best practice against each ESD objective detailed in the LPP 22.17 of the Yarra Planning Scheme. A range of fact sheets and case studies, as well as webinars and industry engagement activities have greatly assisted getting traction within the development industry.

- 1-3 Railway Place, Cremorne – 585 m2 site with a 9-storey residential building with 38 dwellings, and a ground floor cafe. This project has a 7 Star NatHERS rating and a 4 Star Green Star rating.
- 186 Street Georges Road, North Fitzroy - 2800 m2 site with a 3-storey Community Hub. This project has a 6 Star Green Star rating.
- 66-88 Green St, Cremorne – 2868m2 site with retail, food and beverage, gallery space and office floor space. This project has a 6 Star Green Star rating and 5 NABERS rating.



Railway Place Apartments, VIC.
Richmond Icon Pty Ltd
4 Star Green Star- Multi Unit
Residential Design rating

SA

Summary of planning framework

The SA planning system was recently reformed and implemented in March 2021. The system is now directed by the Planning and Design Code (the Code) which applies to all the metropolitan areas in the State. The previous 72 State development plans have been consolidated into one electronic code and located in the PlanSA portal. The Code supports the *Planning, Development and Infrastructure Act 2016* (PDI Act) by consolidating all the planning policies, rules and classifications used within the State for development assessment.

All proposals must go through the development assessment process to gain approval. The developments must adhere to the Planning, Development, and Infrastructure Regulations 2017.

The key statutory authorities for planning and development applications in SA are:

- The Minister for Planning and Local Government – Responsible for impact-assessed developments such as state significant developments and key infrastructure projects.
- State Planning Commission – Responsible for assessing restricted development applications occurring outside of local Council areas or as directed by the Minister, for example projects of state significance. It also assesses developments in the City of Adelaide with values greater than $10 million.
- Assessment Panel and Assessment Manager – Under the new planning system, Councils are no longer a relevant authority for planning consent and land division consent. They must appoint an Assessment Panel and an Assessment Manager to perform the assessment functions on their behalf.

Assessment Managers are planners that are accredited under the Accredited Professionals Scheme as a Planning Level 1. They may be a senior planner from the local Council or a private consultant who has been engaged by the Council. The Assessment Manager helps support, advise and coordinate the work of the Assessment Panel and will also be responsible for the assessment of certain types of applications as a decision authority in their own right. The Assessment Panel may review an assessment decision made by the Assessment Manager, if requested to do so by an applicant.

There is no mandated use of sustainability tools to measure any ESD principles within the planning system, noting that all Councils are bound by the Code. However, there are several clauses contained within the Code that pertain to sustainable development and design.

Supporting compliance with documentation requirements
No documentation requirements are specified in the Code, but in practice, compliance with any clauses relating to sustainable development and design may be achieved via an ESD Report produced by a specialist ESD consultant and/or a sustainability rating achieved via a recognised sustainability tool. In most cases, this would be assessed by planning officers at DA stage.

Case study – Adelaide City Council

In an effort to improve energy and water performance of the built environment, the City of Adelaide has introduced a financial incentives scheme to help promote the installation of sustainable technology in buildings.

Rebates are available for commercial properties and apartments across a number of initiatives including, but not limited to, the following[5]:

Up to $20,000 per site ($500 per premise) for shared solar systems that provide electricity to multiple spaces

Up to $5000 for electric vehicle charging equipment (cars and bikes)

Up to $5,000 for greenhouse gas inventory (plus additional up to $2,500 for other steps) towards carbon neutral certification for organisations, precincts, buildings or events

Up to $5,000 for NABERS or Green Star Ratings.

[5] The complete list of initiatives can be found via the City of Adelaide's website (https://www.cityofadelaide.com.au/about-council/grants-sponsorship-incentives/sustainability-incentives-scheme/)

TAS

Summary of planning framework

The Tasmanian Planning system is undergoing significant reform which will impact the way in which the planning system functions. The current system consists of policies, strategies and frameworks used to guide the decision-making process for planning and development approvals. The current system is called the Resource Management and Planning System (RMPS). The proposed changes will move to a state-based system with a centralised planning scheme for the State.

Like the Victorian system, planning approvals are typically sought through the local Council in adherence with the legislation. The applicant must show compliance with the planning scheme when seeking approval. The Tasmania Planning Commission was established under the *Tasmania Planning Commission Act 1997*, and it is responsible for assessing major projects.

Case study – Central Hobart Precincts Plan

The Central Hobart Precincts Plan (CHPP) is a good example of Council seeking to work around the restrictions of a state-based planning scheme to achieve more ambitious sustainability outcomes. A discussion paper was released on 26 October 2021 to inform the final scope of the CHPP.

The paper outlines five City-shaping goals. Within each goal are several themed ideas which include:

City Shaping Goal 3 – Sustainable Buildings with Character, Idea twelve – Environmental Excellence

The overarching idea of this goal is that by 2042, Central Hobart will adopt a range of measures that produce more sustainable buildings and precincts. The idea notes that while many aspects of sustainable buildings are regulated by the NCC, there is a role for local government to play in setting the conditions to allow sustainable design to occur. This idea includes the following:

1. Flexible built form guidelines to allow designers to respond to climatic conditions on individual sites.
2. Incentives within a planning scheme could encourage sustainable design, such as providing setbacks that allow equitable sun access for properties.
3. That the CHPP could include a planning overlay to achieve sustainable precincts. This could include sunlight amenity standards to reduce heating loads, higher energy rating tools such as NABERS and mandating that roofs are designed to provide positive benefits for the community. Rooftops can be used to house solar panels and rooftop gardens for communal outdoor space, air drying clothes, harvesting water and growing food.

Under this work potential options include:

4. Investigation of frameworks for sustainable precincts
5. Recognition of the importance of, and develop a framework for, blue and green infrastructure, water sensitive urban design and urban greening to increase the city's resilience
6. Encouraging the development of green roofs and green walls, develop guidance and policy
7. Design City of Hobart to meet best practice sustainable design
8. Promotion and encouragement sustainable building design and where possible include planning scheme provisions to advocate changes to building provisions.

Despite the planning system moving to a single state-based planning scheme, the CHPP could provide an opportunity for real and measurable ESD principles to be implemented in Central Hobart. The majority of significant commercial and residential development that should trigger Green Star certification or similar is based in Central Hobart (such as the 5 Star Green Star Ibis Hotel and the 9 Star NatHERS The Commons Hobart) so it is an ideal opportunity to encourage these outcomes.

Given the CHPP has not yet been finalised, it is too soon to judge success or failure, but Councils such as Launceston and Devonport have noted that they are watching to see if similar policies could be enacted in their own areas.

Other ESD drivers

Section J in Volume 1 and Part 3.12 in Volume 2 of the NCC that applies to energy use in non-residential and residential buildings, respectively. Eligible buildings can demonstrate compliance with Section J using energy modelling undertaken as part of a Green Star certification or a NABERS Commitment Agreement. The option to demonstrate compliance for requirements under Section J of the NCC using Green Star and NABERS Commitment Agreements may help to drive uptake of these rating tools and consequently, deliver greater sustainability outcomes.

Green Star and NABERS are different rating systems but have been designed to complement one another to achieve the best possible sustainability outcomes and to avoid duplication of modelling and documentation when both certifications are sought (for example, the energy modelling used for NABERS Commitment Agreements, can be used to demonstrate compliance with the Energy Use credit within Green Star).

Councils can help to raise awareness of these pathways to Section J compliance as another way of encouraging uptake of sustainability rating tools.

The relationship between Green Star and NABERS and the energy efficiency outcomes in buildings using these rating tools was examined in research undertaken by GBCA in 2013, and then updated in 2021; *Energy performance in Green Star buildings: Closing the performance gap in Australia's commercial office sector*.

The energy performance gap is the difference between the predicted energy consumption of a building in design and the actual energy consumption of a building in operation. The performance gap has been identified as a barrier to achieving building energy policy goals. GBCA carried out a study to see if predictive energy modelling undertaken during the design of Green Star rated buildings translates into performance in operations for office buildings.

The research shows that the average NABERS Energy star rating has increased over time, rising from 4.5 stars in 2012 to 5 stars in 2019 while the gap between the predicted and actual ratings has narrowed markedly. While 69% of Green Star certified office buildings analysed in 2012 achieved their modelled greenhouse gas performance target or were within 0.5 stars, 88.1% achieved the same result in 2021.

Taking ESD forward

GBCA has embarked on an ambitious pathway towards a climate positive future for our built environment. Green Star rating tools will evolve over the coming years to ensure all buildings are on a trajectory to net zero and beyond, whilst also responding to global megatrends and emerging challenges.

There are five Green Star rating tools available:

- Green Star Buildings
- Green Star Performance
- Green Star Fitouts
- Green Star Communities
- Green Star Homes

More information and resources are available at gbca.org.au about the Green Star rating tools, future updates and our Climate Positive Roadmaps for the built environment. No matter where your Council is on its journey towards embedding ESD in planning, there are resources and experts that can help you take the next steps.

Fact sheet - Green Star and ESD

GBCA has developed the Local Government and Green Star factsheet to explain how Councils can use Green Star to deliver on ESD objectives and requirements through local planning policies. This guide is intended as a quick explainer guide on the benefits of Green Star, how the rating system works, and where to find further information.

Speak to independent experts

The GBCA website has a directory of Green Star Accredited Professionals who are qualified to help achieve a project's Green Star goals, and a GBCA member directory of the organisations who support GBCA's important work. Both of these resources can be accessed free and GBCA encourages Councils to engage with these individuals and organisations if they intend to get involved in their own Green Star project.

Working with GBCA

To learn more about including Green Star in policy and/or your planning framework, please contact GBCA. Call 02 8239 6200 or email info@gbca.org.au. GBCA also offers a wide range of education and training options, as well as opportunities to connect with other Councils. Please see gbca.org.au for more information.