

People are talking  
about green buildings...  
how can you get involved?



# Welcome to the green building revolution.

# Green buildings are the future – and the future is here, now.



green building council australia

**Rising utility prices, tightening regulatory requirements and more stringent insurance risk assessments are driving demand for green buildings and placing pressure on local governments.**

But there are a wide range of market forces pushing the transition too.

Green buildings can increase productivity, improve health and work satisfaction, and hold their value for longer than buildings constructed 'the old way.' The Green Building Council of Australia has been helping the construction industry to build greener for ten years and can assist your local government to build greener too.

## **Rate Educate Advocate**

The Green Building Council of Australia (GBCA) is Australia's leading authority on green buildings and sustainable communities. We are a member based, not-for-profit organisation dedicated to developing a sustainable property industry in Australia. We assess and rate buildings using the Green Star rating system, provide a range of education courses and assist organisations, including local governments, to undertake green transitions.

### **Why build green?**

**Efficiency** – Green buildings and retrofits reduce, and can even eliminate, demand for potable water and slash energy usage in existing buildings. Green buildings help you save money on utility bills, and ensure your assets are future-proofed against price rises.

**Productivity** – Many people don't realise that green buildings can significantly boost productivity. Numerous studies have shown that green buildings increase worker productivity by between 2 and 10 per cent. Even modest gains in productivity translate into big savings as staff costs are the largest expense in most organisations.

**Health** – Green buildings can improve health, reduce absenteeism, and make it easier to attract and retain staff by providing high quality indoor environments.

**Value** – Green buildings can retain their value long term but also deliver benefits today. The 2011 IPD Green Investment Index has shown that Green Star-rated buildings deliver returns four percentage points higher on average than non-rated buildings.

**Reputation** – Green buildings can improve local government reputation and boost staff and community pride. Investing in green buildings will demonstrate your commitment to a better, more sustainable and healthier future for your community.

## Doing nothing is not an alternative

The shift to green buildings is gaining momentum. Those who don't act now will be left behind.

Green buildings are a responsible financial investment. Insurance premiums will likely increase for local governments that fail to act to reduce the impacts of climate change. Residents and tenants are demanding greener and healthier buildings in which to live and work, while future legislation changes will require higher levels of sustainability from our buildings. Continuing to build the old way will cost your local government today and well into the future.

Nobody wants to be stuck with obsolete buildings. The lifespan of a commercial building may be 30-40 years. This means the buildings that you build today will still be around in 2050. Will your buildings meet the needs of tomorrow if we keep building for the needs of yesterday?

## What can you do?

Local governments can directly influence and control building decisions made in their communities, provide green skills training to staff and local workers, and demonstrate commitment and leadership by greening local government-owned buildings.

### 1 Your buildings

Leading by example is the first step.

Local councils have kick-started the green building trend by adopting early and proving the business case to their communities. Achieving Green Star ratings for your buildings sends a clear message to developers that green buildings are the future and can establish the local skills base needed to deliver these projects.

The GBCA can help by providing case studies of the economic rewards that councils and companies are reaping through their investment in green buildings. We can also direct you to appropriate education courses to learn more about Green Star and green buildings.

### 2 Your community

Influence the buildings that you don't own or directly control.

Educating your community on the benefits through case studies, information nights and demonstration projects will help to encourage the uptake of green buildings. Providing ongoing assistance and incentives to businesses will encourage them to invest in green buildings, while regulation can be used where appropriate to bring buildings up to a minimum standard.

# The Green Building Council of Australia and Green Star explained

## What is the GBCA?

The Green Building Council of Australia (GBCA) is a member based, not-for-profit organisation committed to developing a sustainable property industry in Australia. We have extensive resources on building green in Australia, well developed connections throughout the building industry and years of experience working with local governments to encourage the adoption of green building practices.



## Green Star – More than energy efficiency

Green Star is an holistic rating tool that assesses the total environmental impacts of a building, not just energy efficiency. It provides best practice benchmarks on the design, construction and fitout of environmentally-sustainable buildings and is widely-accepted throughout the Australian property and construction industry. It has been designed for Australia's unique conditions and can help you embark on the challenge of greening the buildings in your community.

## What types of buildings does it cover?

Green Star can be used to assess almost every building type within a typical local government portfolio including, but not limited to:

- Council offices
- Libraries
- Town halls
- Community centres
- Sports centres

It also covers most key building types within your community, including:

- Schools
- Commercial offices
- Healthcare facilities
- Shopping centres
- Residential towers
- Industrial buildings

## Green Star Communities

The GBCA is currently developing a rating tool for the planning, design and delivery of community development projects. These projects may include new greenfield developments and the renewal and revitalisation of existing precincts and neighbourhoods. Local government will be a key influencer in the successful implementation of this rating tool which seeks to enhance liveability, promote economic prosperity, encourage environmental responsibility, recognise design excellence and promote visionary leadership and strong governance. Further information can be found at [www.greenstarcommunities.org.au](http://www.greenstarcommunities.org.au).

## When to use Green Star?

Green Star is used to certify buildings during design and construction to maximise the environmental payoff. It is also used to rate interior fitouts and retrofits of existing buildings. The GBCA is also developing a rating tool to assess the operational performance of existing buildings; Green Star Performance. This tool will assess the operational impacts in the built environment that follow the design and construction of buildings.

Green Star makes it easy for you to compare with accuracy the environmental attributes of one building to another using a common 'language'.



## Which tool to use?

A range of rating tools for buildings exist in Australia and often it is confusing to know which to choose.

Below is a simple guide to most common tools you will encounter, their applicability and when to use them.

Tool	Green Star		NABERS National Australian Built Environment Rating System
	<b>Administered by:</b> Green Building Council of Australia National, voluntary rating system		<b>Administered by:</b> NSW Office of Environment and Heritage National, voluntary rating system, with the exception of NABERS Energy
Rating	4 Star, 5 Star and 6 Star Green Star		0 to 6 Stars in half star increments
Types of property assessed	Office buildings Tenancies and fitouts Retail centres Industrial Healthcare facilities Education facilities Multi-unit residential developments Public buildings		Office buildings Terances and fitouts Residential (self assessment) Retail (15,000m <sup>2</sup> plus) Hotels
Categories assessed	Management Indoor Environment Quality Energy Transport Water Materials Land Use & Ecology Emissions Innovation		Energy Water Waste (offices only) Indoor Environment Quality (offices only) Categories are rated separately and independently, delivering a separate NABERS rating for each category
Website	gbca.org.au		nabers.com.au
When to use	<div> <div>D</div> <div>B</div> <div>O</div> <div>R</div> </div>		<div> <div>D</div> <div>B</div> <div>O</div> <div>R</div> </div>



NatHERS Nationwide House Energy Rating Scheme	BASIX The Building Sustainability Index	Five Star (5 Star) Homes
<b>Administered by:</b> Dept. of Climate Change and Energy Efficiency Nationally available	<b>Operated by:</b> NSW Department of Planning and Infrastructure Mandatory scheme in NSW	<b>Operated by:</b> Sustainability Victoria for the Victorian Government Mandatory scheme in VIC
0 to 10 Stars	BASIX certificate	6 Star standard
Residential	Residential	Residential
Energy / Thermal efficiency Outlines the minimum information sets to be used by tools measuring potential energy efficiency of Australian homes. This includes layout, design, construction materials, orientation and climatic zone.	Energy Water	Energy Water
nathers.gov.au	basix.nsw.gov.au	makeyourhomegreen.vic.gov.au
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## Green Star holistic benefits



**Energy efficiency is a big part of the push for more sustainable buildings, but it isn't the whole story.**

**Green Star is designed to deliver improvements across the entire breadth of a building's environmental impacts. Following are the Green Star categories and a few examples of the environmental, social and economic benefits that projects have gained from investing in each category.**

**Management:** promotes sustainability throughout the entire life cycle of the building and rewards integrated approaches that deliver good environmental performance.

### Case Study

SA Water's Green Star-rated headquarters, VS1, used the management category to divert 98 per cent of construction waste away from landfill, reducing waste processing costs and the strain on local waste facilities.



**Indoor Environmental Quality (IEQ):** aims to improve the wellbeing of building occupants across three key areas of ventilation, indoor pollutants and occupant comfort.

### Case Study

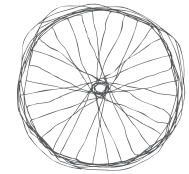
The City of Melbourne prioritised IEQ in its Green Star-rated CH2 building and has been rewarded by productivity increasing by 10.9 per cent, resulting in an estimated saving of \$2 million a year.



**Energy:** seeks to reduce energy consumption by rewarding approaches which minimise energy use, including higher efficiency levels, demand reduction and generation of energy from alternative sources.

### Case Study

The Australian Institute of Management's Green Star-rated education facility in Western Australia generates as much energy as it consumes, reducing its footprint and eliminating energy bills.



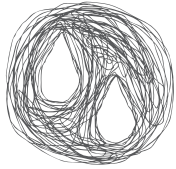
**Transport:** rewards buildings which reduce automotive commuting and encourage alternative transport options such as walking, cycling and public transport.

### Case Study

The Green Star refurbishment of the NAB building at 500 Bourke Street in Melbourne included an upgrade of cycling facilities, such as a secure bicycle cage with 300 spaces, 30 showers and 400 lockers, boosting cycling numbers and improving employee health.

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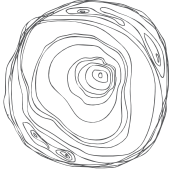
## Green Star holistic benefits



**Water:** rewards buildings that reduce potable water consumption, across a range of areas including efficiency levels of fixtures, fittings and design, rainwater collection and water reuse.

### Case Study

The Green Star-rated Orion Springfield retail centre in Queensland uses 100 per cent rain water and recycled water for cooling towers, toilet and urinal flushing, landscaping, water features and bin wash downs. This saves 21,500,000 litres of water each year, equivalent to 8.6 Olympic swimming pools.



**Materials:** targets the consumption of resources used in construction and rewards buildings which reuse materials, recycle waste and select building products with the least harmful environmental impacts.

### Case Study

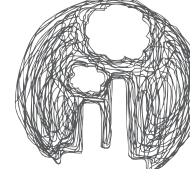
Grocon significantly reduced the environmental impact of its Green Star-rated Pixel building by developing a unique product, 'pixelcrete', which contains 100 per cent recycled aggregate and reduces cement use by 60 per cent.



**Land Use and Ecology:** reduces the impact upon, and aims to improve, ecological systems and biodiversity.

### Case Study

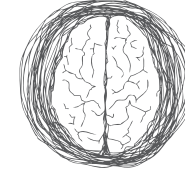
Charles Sturt University improved the ecological value and increased biodiversity at the site of its Green Star building in Albury-Wodonga by planting native shrubs and grasses on an area previously overrun with feral species.



**Emissions:** aims to reduce the environmental impacts of building related emissions, including light pollution, stormwater, sewerage and ozone depleting substances.

### Case Study

The City of Gosnells' new Green Star-rated Civic Centre in WA has incorporated stormwater collection and filtration to decrease pollution levels entering the Canning River. This has improved river health, limits runoff, and will reduce the need for extra in-ground stormwater infrastructure in the future.



**Innovation:** rewards buildings that spearhead or help spread innovative technologies, designs and processes. Points are awarded to a wide variety of innovations, including finding new ways of overcoming old problems.

### Case Study

The Green Star-rated heritage building, 39 Hunter Street in Sydney, achieved four Green Star innovation points. Three points were for exceeding Green Star requirements by reducing peak energy load demand, reusing the building's façade and exceeding the waste recycling target. Another point was awarded for a unique ceiling which improved thermal performance and improved lighting quality demonstrating that even heritage buildings can achieve innovation points.

## Activating green building: incentivise or regulate?

Local government can activate green building through the use of incentives and regulations.

Experience has shown that incentives are an effective measure, although some local governments are encouraging further transformation by mandating Green Star for some building sectors. Please refer to the Advocacy section of the GBCA website for further information.

### Incentivise

Provide incentives to encourage innovation, establish long-term pathways towards sustainability and drive the rapid uptake of green buildings in your community.

#### Financial incentives

Local governments around Australia are stimulating green building with a range of incentives including: investment assistance, rate reductions for certified green buildings, and sustainable development grants.

The GBCA website includes a full database of local as well as state and federal government incentives in use.

#### Non-financial incentives

Red tape is a common barrier to building sustainably. Ensuring that your planning scheme encourages green buildings is the first step.

Other non-financial measures you can undertake include expedited approvals for green buildings, green planning reconsiderations and green education programs for local businesses.

Assistance is also available for local governments. The GBCA can help you find out about incentive programs offered by state and federal governments in your area.



### Regulate

Regulation through planning protocols must be used carefully to be effective.

Some local governments have decided that regulation is appropriate for their community and now require large commercial projects to achieve a minimum 4 star Green Star rating. They have variously achieved this by inserting conditions within their planning protocols, placing specific controls on large projects, and incorporating sustainability targets that reference Green Star.

The GBCA recommends caution when regulating with Green Star as it is a voluntary rating tool that constantly evolves and which rewards best practice and above, with many targets set well above the minimum standards within the Building Code. If your council is thinking about regulation, we strongly encourage you to contact the GBCA first to discuss your options and how best to proceed.

### Other measures

- Start a green business group to help local businesses share their knowledge and experience of green buildings.
- Share green building case studies with your community. The GBCA can provide case studies, or work with you to create a case study of your own Green Star-rated project.
- Host a GBCA event in your municipality to improve community understanding about green building.



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## Next Steps

### Follow these steps to mark your progress:

- ☐ Sign up for the GBCA's monthly newsletter
- ☐ Read case studies of local government green building success stories and see what other councils are doing at the GBCA website
- ☐ Access the GBCA's website for specific local government guidance on building green, along with case studies and examples
- ☐ Access the Advocacy section of the GBCA's website for local government-specific guidance on building green, along with details of policies, incentives and opportunities.
- ☐ Become an active member of the GBCA's Local Government Task Group (LGTG)
- ☐ Read the latest minutes and agendas from the LGTG
- ☐ Conduct a green audit of your own buildings and identify green building upgrade options
- ☐ Review your planning policy and remove red tape for green developments
- ☐ Educate employees and councillors by enrolling in a Green Star course or requesting an in-house course
- ☐ Develop a five year plan to start Green Star certifying your building stock
- ☐ Register a building for Green Star certification
- ☐ Develop a whole of community green building strategy
- ☐ Ask about Green Star – Communities and how you can get involved.

### How much progress has your local government made?

### Contact Information

The GBCA is here to help. Please feel welcome to contact us with your green building questions using the details below.

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