

Greater Sydney Commission  
Draft Greater Sydney Region Plan  
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22 December 2017

Dear Commissioners,

### Re: Draft Greater Sydney Region Plan

The Green Building Council of Australia (GBCA) welcomes the opportunity to make this submission to the Greater Sydney Commission on its commitment to the sustainable management of change and growth in Greater Sydney through its draft Greater Sydney Region Plan.

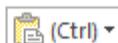
#### About the GBCA

Established in 2002, the Green Building Council of Australia (GBCA) is the nation's authority on sustainable buildings, communities and cities. Our vision is to create healthy, resilient and positive places for people and the natural environment. Our purpose is to lead the sustainable transformation of Australia's built environment. To do this, we:

- **Rate** the sustainability of buildings and communities through Australia's only national, voluntary, holistic rating system – Green Star.
- **Educate** industry and government practitioners and decision-makers and promote green building programs, technologies, design practices and operations.
- **Advocate** for the sustainable transformation of the built environment.

The GBCA represents 600-plus individual companies with a collective annual turnover of more than \$40 billion. Our membership reflects the diversity of Australian business with over 500 small-to-medium enterprises through to 75 companies with annual turnover of more than \$100 million and 24 companies now listed in the ASX200, with a combined market capitalisation of more than \$620 billion.

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Our members include major developers, professional services firms, banks, superannuation funds, product manufacturers, retailers and suppliers. We also have 44 local government, 26 state government departments and land organisations, and 18 university members.

The GBCA has five key policy priorities which advocate a coordinated approach to facilitate the long-term vision of sustainable growth and development of Greater Sydney:

1. Achieving more productive, liveable, sustainable and healthy cities
2. Securing more resilient communities
3. Delivering a low carbon, high performing built environment
4. Raising standards through the National Construction Code
5. Facilitating sustainable utility infrastructure

The GBCA commends the draft Greater Sydney Commission Region Plan, which provides a long-term vision to sustainably manage growth and change by transforming Greater Sydney into a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City.

In this submission, the GBCA encourages the draft Greater Sydney Commission Region Plan to embed the Green Star rating tools as an effective pathway for state agencies and local governments to deliver, measure and evaluate project outcomes that help the Greater Sydney Commission meet its vision for the sustainable transformation of Greater Sydney.

As always, the GBCA welcomes opportunities for further collaboration and consultation. Please do not hesitate to contact me via email at [Jonathan.Cartledge@gbca.org.au](mailto:Jonathan.Cartledge@gbca.org.au) should you require any further information or to discuss any points raised in this submission.

Yours sincerely



Jonathan Cartledge  
Head of Public Affairs

# **Draft Greater Sydney Commission Region Plan**

## **Submission**

**December 2017**

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## INTRODUCTION

The GBCA commends the draft Greater Sydney Commission Region Plan, which provides a long-term vision for the growth and development of Greater Sydney, having regard to economic, social and environmental matters. The plan sets a vision for a global metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City – enabling the majority of people to commute to their nearest city within 30 minutes.

This vision appropriately emphasises the need to prioritise the delivery of economic and employment benefits while also increasing the resilience and liveability of our communities. Leveraging major infrastructure investments, like that through effective integrated strategic planning in the West and Southwest Districts via the Western Sydney Airport will help mitigate geographic and economic inequities, characterised by a concentration of high-wage jobs and services in the CBD.

The draft Greater Sydney Commission Region Plan identifies multiple aspects to the successful implementation and delivery of its vision:

- Using the draft Plan as a decision-making framework to inform district plans, local government plans and provide context for councils' community strategic plans
- Integration with Future Transport 2056 and the State Infrastructure Strategy to align major land use, transport and infrastructure planning
- Private sector investment guided by priorities of the draft Plan to enable building of homes, retail space, office buildings and factories across Greater Sydney
- Regional, district and local planning to inform engagement with the wider community so that plans are co-created with the people of Greater Sydney

Of equal importance is the effectiveness and transparency with which local governments deliver, measure and evaluate concrete outcomes under the framework of productivity, sustainability and liveability.

In this context it is critical that outcomes are measured and communicated, not just strategically, but also at the project level. Strategic outcomes will achieve little if their delivery is not assured through well procured and delivered projects. To that end, the use of independent third party certification as part of procurement processes and as a requirement for projects delivered through the Plan is essential.

In this submission we note how the use of certification can help evidence the delivery of outcomes as sought through the Plan. By mapping the requirements to achieve certification under Green Star against those outcomes sought by this Plan, the benefits of using tools like Green Star are clear. 32 out of the 38 objectives of the draft Plan are clearly aligned with credits from the Green Star rating tools, illustrating its suitability to assist local government deliver project outcomes that are consistent with the directions, priorities and objectives of district and region plans. Tools like Green Star also help build the capability of local government to plan and respond to development in their communities with a clear framework that reflects world's best practice.

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## 1. DELIVERING OUTCOMES THROUGH GREEN STAR

### 1.1 About Green Star

Launched by the GBCA in 2003, as Australia's only national, voluntary and holistic rating system for sustainable buildings and communities, Green Star is an internationally recognised built environment rating system. The Green Star rating system has been developed by Australian industry and locally adapted to suit the Australian market. From individual buildings to neighbourhoods, precincts and entire communities, Green Star is transforming the way our built environment is designed, constructed and operated. There are over 1460 Green Star-rated projects across Australia:

- 37% of Australia's CBD office space is Green Star certified
- 5% of the workforce head to a green office each day
- 40,000 people live in Green Star-rated apartments
- Over 400,000 people are moving into Green Star communities.
- 1.3 million people visit a Green Star-rated shopping centre each day
- Green Star certified buildings, on average: produce 62% fewer greenhouse gas emissions and use 66% less electricity than the average building; 51% less potable water than minimum industry requirements; and recycle 96% of their construction and demolition waste.

### 1.2 Design & As Built, Interiors, Performance and Communities

Green Star is composed of four distinct sustainability rating tools, each relevant to distinct phases of the built environment.

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

The Green Star – Design & As Built, Interiors and Performance rating system is designed to take a holistic approach within each class and building sector, addressing nine categories in total; Management, Indoor Environment Quality (IEQ), Energy, Water, Materials, Land Use and Ecology, Emissions, Transport and Innovation. A commitment to Green Star certification demonstrates a commitment to healthier, more productive, sustainable and resilient places for people that are also future-proofed and cost less to operate.

The Green Star – Communities rating system established in 2012 as the only holistic, voluntary rating tool for communities and precincts of its kind in Australia, now has a proven track record in delivering concrete outcomes and benefits across a range of projects. The rating tool provides a comprehensive framework to measure the outcomes delivered to local communities. Developed in consultation with industry and all levels of government, the Green Star – Communities rating tool addresses 5 categories in total; Governance, Liveability, Economic Prosperity, Environment and Innovation.

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Each category groups a number of issues related to a certain sustainability impact; these are known as Credits. A Credit addresses an initiative that improves or has the potential to improve a project's sustainability performance; each of these initiatives is a criterion. Credits are weighted in relation with each other by varying the number of points available. Each credit defines a clear outcome that a project must meet. Where the outcome is verified to have been met, a project will be rewarded with the relevant available points. Once all credits are assessed, the total number of points achieved is compared against the available points in the rating tool, and a certified rating is awarded. Projects can be awarded a 4 Star rating ('Best Practice'), a 5 Star rating ('Australian Excellence') or a 6 Star rating ('World Leadership').

### 1.3 The value of Green star

In 2012, the GBCA conducted a study of data from Green Star-certified buildings in order to quantify the overall impact of the rating system on greenhouse gas emissions, operational energy usage, water consumption and construction and demolition waste. The study compared data from 428 Green Star-certified projects with buildings that just meet average or minimum practice standards. The methodology and findings have been peer-reviewed for accuracy by independent consulting firm Net Balance. A copy of the *Value of Green Star: A Decade of Environmental Benefits, Research Key Findings (2013)* report can be found [here](#) for further information.

The higher the Green Star-certified rating of a building the greater the environmental savings across all key areas – greenhouse gas emissions, energy use, water consumption and construction and demolition waste.

In order to dispel the myth that Green Star is too expensive, in 2014 the GBCA launched the Green Star Financial Transparency Innovation Challenge, with the aim of increasing the information available to industry and government on the costs and benefits of sustainable building. On average, developers/building owners are achieving Green Star ratings with 3 per cent of their overall project budgets. The data shows that Green Star projects can be delivered for less than one per cent of the overall project budget. On average, projects are spending an additional:

- 1.5% per square metre to achieve a 4 Star Green Star rating
- 2.7% per square metre to achieve a 5 Star Green Star rating
- 3.2% per square metre to achieve a 6 Star Green Star rating

These additional construction costs are incurred in advance of the raft of whole-of-life and broader benefits delivered from these projects for the owner, tenants and users, and the broader community.

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## 2. GREEN STAR AND THE GREAT SYDNEY COMMISSION REGIONAL PLAN

The Draft Greater Sydney Commission Region Plan sets an ambitious vision of creating productive, sustainable and liveable cities in Greater Sydney. Vital to the success of the plan will be the implementation of the objectives outlined in the draft Plan. The GBCA commends the Green Star rating tools and the Green Star – Communities rating tool in particular, as an effective pathway for delivering, measuring and evaluating these objectives for local communities, with the assurance of third-party verification. This is particularly useful as the Greater Sydney Commission pursues actions to maximise the sustainability of developments in government-led urban renewal areas, priority precincts and priority growth areas. Green Star – Communities provides a proven pathway, having been tested in greenfield, brownfield and infill development contexts.

### 2.1 Delivering a city supported by infrastructure and collaboration

As noted in the draft Plan, it is imperative to improve the planning and provision of infrastructure across Greater Sydney as it grows and evolves. The overarching objectives outlines the basis for a collaborative approach to deliver appropriate infrastructure in the right places to support the growing cities. By engaging government, communities and businesses, infrastructure planning and delivery must align with forecasted growth areas, consider adaptability to change and optimise use of existing infrastructure.

The Green Star – Communities rating tool provides a robust framework to assist with delivering a city supported by infrastructure and collaboration. The table below aligns specific credits from the Green Star – Communities rating tool with the strategies and actions outlined in the draft Plan.

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#### Aligning with GSC draft Region Plan directions and objectives

#### Green Star – Communities Credits

##### Direction 1: A city supported by infrastructure

##### Objective 1

Infrastructure supports the three cities

##### Objective 3

Infrastructure adapts to meet future needs

##### Objective 4

Infrastructure use is optimised

##### Credit 27: Sustainable Transport and Movement

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

- Reduce the dependence on single vehicle transport by promoting active movement within the community and use of public transport
  - Create efficient pedestrian, bicycle and vehicles internally and to surrounding urban development
  - Reduce distances from buildings to public transport nodes
  - Considers transport capacity to ensure there is sufficient provision and flexibility for changes to the transport regime overtime
  - Adopts shared, pooled or common use parking
  - Ensures existing or planned public transport within the calculated catchment is frequent and accessible
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**Direction 2: A collaborative city****Objective 5**

Benefits of growth realised by collaboration of governments, community and business

**Credit 03: Engagement**

Encourages and recognises projects that develop and implement a comprehensive, project specific, Stakeholder Engagement Strategy (SES) early in the planning process. Points are awarded where the project has a SES that outlines:

- Commitment to stakeholders
  - Engagement objectives
  - Stakeholder analysis
  - Project-specific stakeholder engagement
  - Implementation plan
  - Strategy evaluation process
  - Community Vision
- 

## 2.2 A city that enhances liveability by focussing on people, housing and creating great places

To sustain liveability over the next 20 years, it is important to provide services and infrastructure to meet the needs of a growing population. The draft Plan notes that the metropolis of three cities will enable great places to meet people's essential housing, transport, employment and social needs. Better access to economic, social, recreational, cultural and creative opportunities – and easier connections with family, friends and the broader community – will assist people to fulfil their potential.

The Green Star – Communities rating tool provides a useful means for delivering and measuring the objectives required to achieve a liveable city. The table below highlights specific credits from the Green Star – Communities rating tool that align with objectives in the region Plan.

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**Aligning with GSC draft Region Plan directions and objectives****Direction 3: A city for people and****Direction 5: A city of great places****Objective 6**

Services and infrastructure meet communities' changing needs

**Objective 7**

Communities are healthy, resilient and socially connected

**Objective 8**

Greater Sydney's communities are culturally rich with diverse neighbourhoods

**Objective 9**

Greater Sydney celebrates the arts and supports creative industries and innovation

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**Green Star – Communities Credits****Credit 09: Healthy and active living**

Encourages and recognises projects that promote healthy and active living. Projects are rewarded points for delivering the following outcomes:

- Footpaths for the safe and convenient movement of pedestrians
- Active lifestyle is promoted through well designed walking paths and cyclist facilities
- Recreational facilities
- Healthy places

**Credit 10: Community development**

Encourages and recognises projects that engage in and facilitate the development of the projector's community. Points awarded for projects for delivering the following outcomes:

- Community development plan
  - Community events (at least one free event every three months)
  - Community information
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**Objective 12**

Great places that bring people together

**Objective 13**

Environmental heritage is conserved and enhanced

**Credit 12: Culture, heritage and identity**

To encourage and recognise projects that celebrate and incorporate the heritage, culture and historical context of the project site. Points are awarded to projects that achieve the following:

- Understand the culture, heritage and identity of the project site
- Enhance community culture, heritage and identity

**Credit 13: Walkable access to amenities**

To encourage and recognise projects that have walkable access to a diverse number of amenities. Points are awarded to projects that deliver the following outcomes:

- All habitable buildings on the project site have walkable access to a diverse number of amenities

**Credit 15: Safe places**

To recognise projects in which the activity of planning and detailed design for land use, development and redevelopment takes into consideration designing out crime principles. Points are awarded to projects that deliver the following outcomes:

- End-to-end visibility for all tunnels
- All public areas (playgrounds, skate parks, community food gardens) must be visible from at least one street
- Crime risk assessment is undertaken
- Design of the project site considers designing out crime principles

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**Credit 17: Affordability**

To encourage and recognise projects that deliver affordability strategies for or as part of housing and/or business premises. Points are awarded to projects that deliver the following outcomes:

- Implement at least two residential affordable strategies for a proportion of the total residential area delivered as part of the project

**Direction 4: Housing the city****Objective 11**

Housing is more diverse and affordable

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### **Willowdale: Connected, sustainable, affordable**

Willowdale, a case study in Western Sydney<sup>1</sup>, provides a prime example having been awarded a 6 Star Green Star – Communities rating.

Willowdale is providing a range of housing options to appeal to a diverse range of buyers, and making a marked impact on affordability in Sydney by providing home sites and new townhouses below the comparable median prices of surrounding suburbs. Willowdale is also providing residents with convenient access to new and existing infrastructure, such as nearby schools, numerous local retail, dining, entertainment and employment precincts outside the community, and the new Leppington Train Station, which is located less than 1.5 kilometres away via a shared walkway and cycleway. Construction will soon commence on Willowdale neighbourhood shopping centre and there is a proposal for a state primary school to be developed within the 350 hectare community.

“Willowdale’s proximity to the new Leppington Train Station scored well in the Green Star – Communities rating tool because it will offer residents an easy commute into Liverpool, Parramatta and the Sydney CBD,” says Gavin Tonnet, Stockland’s General Manager Residential NSW. “It makes it viable and affordable for people to live in a home that offers a more predictable commute, which means residents will spend less time in traffic and more time with their families.

## **2.3 Boosting productivity by creating a well-connected city that supports growth in jobs and skills**

As noted in the draft Plan, polycentric development is required to maximise economic growth with a growing population in Greater Sydney. The vision for a metropolis of three cities will require a well-connected Greater Sydney with new jobs, shops and services in well-located centres with efficient transport connections and safe convenient walking and cycling routes. Altogether, this creates a 30-minute city where most people can travel to their nearest metropolitan city centre by public transport within 30 minutes.

The Green Star – Communities rating tool can assist the Greater Sydney Commission deliver its vision of a 30-minute city that supports growth in jobs and skills. The table below outlines specific Green Star – Communities credits that align with the GSC’s directions, strategies and actions.

### **Aligning with GSC draft Region Plan directions and objectives**

#### **Direction 6: A well connected city**

##### **Objective 14**

A metropolis of three cities – integrated land use and transport creates walkable and 30-minute cities

### **Green Star - Communities Credits**

#### **Credit 27: Sustainable transport and movement**

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

- Reduce the dependence on single vehicle transport by promoting active movement within the community and use of public transport
- Create efficient pedestrian, bicycle and vehicles internally and to surrounding urban development

<sup>1</sup> [https://www.propertycouncil.com.au/Web/Content/News/National/2016/Sustainable\\_showcase\\_in\\_south\\_west\\_Sydney.aspx](https://www.propertycouncil.com.au/Web/Content/News/National/2016/Sustainable_showcase_in_south_west_Sydney.aspx)

- Reduce distances from buildings to public transport nodes
- Considers transport capacity to ensure there is sufficient provision and flexibility for changes to the transport regime overtime
- Adopts shared, pooled or common use parking
- Ensures existing or planned public transport within the calculated catchment is frequent and accessible

## Direction 7: Jobs and skills for the city

### Objective 18

Harbour CBD is stronger and more competitive

### Objective 19

Greater Parramatta is stronger and more competitive

### Objective 20

Western Sydney Airport and Badgerys Creek Aerotropolis are economic catalysts for Western Parkland City

### Objective 21

Internationally competitive health, education, research and innovation precincts

### Objective 22

Investment and business activity in centres

### Objective 23

Investment and business activity in centres

### Objective 24

Economic sectors are targeted for more success

### Credit 16: Community investment

To encourage and recognise those projects that make optional investments in infrastructure for the benefit of the community. Points are awarded to projects that deliver the following outcome:

- Community infrastructure investment – facilities and/or programs and services relating to art, history and cultural development, youth development, sport, community identity, senior's involvement in the local community

### Credit 18: Employment and economic resilience

To encourage and recognise projects with local and diverse employment opportunities. Points are awarded to projects that deliver the following outcomes:

- Increase jobs in local areas
- Diverse offering of employment with at least 15% of jobs in the local area from Type A and no more than 50% of all jobs in the local area from Type B (*see Appendix*).
- Proximity to a major city (within 5km of the boundary of the Central Business District (CBD) or Commercial Core of a major city.
- National Construction Code (NCC) Class mix (no Class 1, 2, 3, or 4 dwellings included)

### Credit 19: Education and skills development

To encourage and recognise projects that have access to further education and/or provide skills and industry capacity development opportunities. Points are awarded to projects that deliver the following outcomes:

- Higher education facilities – at least two qualifying higher education facilities located within 10km of the geographic centre of the project site
- Skills development programs – delivered two at least two nominated stakeholder groups within a school, university, TAFE or Registered Training Organisation (RTO)

## Tonsley, South Australia

Tonsley was Australia's first mixed-use urban redevelopment to be awarded a 6 Star Green Star – Communities rating. When Tonsley's masterplan was being developed back in 2012, the South Australian Government set a clear brief for the site. The former manufacturing park was to become a sustainable centre for innovation and productivity, drawing workers, developing high-value industries and contributing to the state's economic success.

While planning Tonsley, the project team created a Site Wide Built Form Development Manual and site-specific Urban Design Protocol to ensure all buildings adhere to the sustainability and liveability vision for the site – and in doing so has set new benchmarks for sustainable urban renewal in Australia.

The former Mitsubishi Main Assembly Building (MAB) has been retained as the central town square. In addition to providing an activated hub at the heart of the community, retaining the MAB ensures that around 90,000 tonnes of embodied carbon emissions have been saved – the equivalent of removing 25,000 cars from the road for a year. Within the MAB, internal forests will provide beautiful natural spaces for members of the community to enjoy, while at the same time capturing carbon and purifying the air. The MAB's expansive roof also supports an extensive 3MW photovoltaic array.

## 2.4 Planning for sustainability through environmental protection and conservation, efficiency and resilience

To plan for sustainability, the communities within Greater Sydney require targeted responses to climate change, focusing on the design of neighbourhoods and managing land use, infrastructure and transport. This supports the use of renewable energy, reduces consumption of energy and water, reduce waste and greenhouse gas emissions and helps to deliver a more sustainable, efficient and resilient city.

The Green Star – Communities rating tool provides a useful means for delivering and measuring the draft Plan's objectives to plan for a sustainable region. The table below highlights specific credits from the Green Star – Communities rating tool that align with objectives in the region Plan.

### Aligning with GSC draft Region Plan directions and objectives

#### Direction 8: A city in its landscape

##### Objective 25

The coast and waterways are protected and healthier

##### Objective 26

A cool and green parkland city in the South Creek corridor

##### Objective 27

Biodiversity is protected, urban bushland and remnant vegetation is enhanced

##### Objective 28

### Green Star – Communities Credits

#### Credit 28: Sustainable sites

To encourage projects that avoid or minimise impacts on environmentally sensitive sites while recognising projects that reuse previously developed land and reclaim contaminated land using best practice remediation. Points are rewarded to projects that deliver the following outcomes or processes:

- Must be granted approval under the Environmental Protection and biodiversity Conservation Act 1999 (EPBC Act)
- 75% of project site comprises a previously developed land
- Best practice site decontamination

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Scenic and cultural landscapes are protected

**Objective 29**

Environmental, social and economic values in rural areas are maintained and protected

**Objective 30**

Urban tree canopy cover is increased

**Objective 31**

Public open space is accessible, protected and enhanced

**Credit 29: Ecological value**

To encourage and recognise projects that enhance the ecological value or biodiversity of the project site. Points are rewarded to projects that deliver the following outcomes or processes:

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

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**Credit 24: Integrated Water Cycle**

To encourage and recognise best practice sustainable urban water management. Points are awarded to projects that deliver the following outcomes:

- Water sensitive urban design – minimum requirement for stormwater discharge is met, potable water consumption is reduced
- Water management – best practice water management for alternative water sources and stormwater

**Direction 9: An efficient city**

**Objective 33**

A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change

**Objective 34**

Energy and water flows are captured, used and re-used

**Objective 35**

More waste is re-used and recycled to support the development of a circular economy

**Credit 25: Greenhouse gas strategy**

To encourage and recognise projects that include a greenhouse gas strategy that reduces greenhouse gas (GHG) emissions due to energy use on the project site. Points are awarded to projects that deliver the following outcomes:

- Reduction of GHG emissions from predicted energy use on the project site
- Reduction of GHG emissions from predicted energy demand by employing 'best practice' attributes such as infrastructure lighting, renewable energy production, district heating and cooling

**Credit 30: Waste management**

To encourage and recognise projects that reduce the environmental impact of waste. Points are awarded to projects that deliver the following outcomes:

- Waste Management Plan is developed and more than 60% of construction and demolition waste associated with the project site has been recycled or reused.
  - Reduction of operational waste via public place recycling scheme, residential recycling scheme, hazardous waste collection or disposable services, pay as
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you throw scheme, composting or green waste scheme

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**Direction 10: A resilient city**

**Objective 36**

People and places adapt to climate change and future shocks and stresses

**Objective 38**

Heatwaves and extreme heat are managed

**Credit 31: Heat island effect**

To encourage and recognise projects that implement measures to reduce heat island effect. Points are awarded to projects that deliver the following outcomes:

- At least 50% of total project site area comprises building or landscaping elements that reduce the impact of heat island effect

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**Aura**

The case study of Aura in Caloundra South Queensland<sup>2</sup> is a prime example that demonstrates how Green Star – Communities promotes climate resilience. It exemplifies that we can create healthy and productive communities while respecting, protecting and restoring the environmental systems upon which we rely. At Aura, more than 700 hectares, nearly one-third of the site, will be rehabilitated from decades of use as a former pine plantation and designated as a conservation area. Furthermore, Aura will feature the most advanced water reticulation, filtration, storage and treatment system ever installed in any Australian community. This will recycle water, minimise run-off and ensure the protection of the nearby Pumicestone Passage. Notably, while protecting the environment, Aura will provide housing to approximately 50,000 people and will be the largest mixed-use development ever undertaken under single ownership in Australia.

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**Barangaroo**

Barangaroo South, developed by Lendlease, achieved a 6 Star Green Star – Communities rating representing 'world-leadership' in the design and delivery of sustainable communities. Barangaroo South is targeted to become Australia's first large scale carbon neutral community. Barangaroo is one of only 17 projects globally to be part of the C40 Cities-Clinton Climate Initiative's Climate Positive Development Program.

The precinct is capable of being water positive, with an on-site blackwater treatment plant capable of supplying one million litres of recycled water a day to the precinct and surrounding suburbs. Barangaroo is also targeting zero net waste to landfill by 2020.

Upon completion, Barangaroo South will become home to around 1,500 residents, there will be next generation office space for 23,000 workers, more than 80 new retail outlets and over 50 per cent of the precinct will be open public spaces for everyone to enjoy.

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<sup>2</sup> <http://new.gbca.org.au/showcase/projects/aura/>

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### 2.4.1 Leveraging the built environment to plan for sustainability

Since its inception in 2002, the GBCA has been driving and showcasing the potential of the built environment to deliver emissions reductions, while driving down costs and improving a range of social, environmental and health outcomes. The role of the built environment in an economy-wide approach to meeting Australia's emissions targets cannot be understated:

- Buildings currently account for almost 25 per cent of our national emissions
- Using existing technologies, buildings could contribute up to one tenth of our 2030 emissions target through energy efficiency measures and contribute more than a quarter of our 2030 emissions target with high levels of uptake of distributed energy.
- Buildings could contribute to meeting more than half of our energy productivity target.

To meet sustainability outcomes, the Green Star – Design & As Built and Performance rating tools contains specific credits to help the Greater Sydney Commission meets its vision of an efficient and resilience city. The Green Star rating system addresses nine categories in total; Management, Indoor Environment Quality (IEQ), Energy, Water, Materials, Land Use and Ecology, Emissions, Transport and Innovation. A commitment to Green Star certification demonstrates a commitment to healthier, more productive, sustainable and resilient places for people that are also future-proofed and cost less to operate.

*The Value of Green Star: A decade of environmental benefits (2013)* report found that Green Star certified buildings produce 62% fewer greenhouse gas emissions, use 66% less electricity and consume 51% less potable water than average Australian buildings.

#### **Commonwealth Bank Place**

Commonwealth Bank Place at Sydney's Darling Quarter, is an outstanding showcase – both domestically and internationally – for social, environmental and economic sustainability. Commonwealth Bank Place has achieved 6 Star Green Star World Leadership ratings for design, construction, interior fitout and performance. It scored 81 points out of a possible 100 in its Green Star – Performance assessment, confirming that Lendlease's design and construction intentions have translated into a building that is efficient in operation.

The building generates 50 per cent less greenhouse gas emissions than an average commercial office building and consumes 80 per cent less drinking water. This is equivalent to taking 680 cars off the road and saving 13 Olympic swimming pools of water each year.

Sustainability initiatives include a high-performance façade, energy-efficient lighting, heating, ventilation and air-conditioning, rainwater harvesting and re-use, as well as trigeneration and onsite blackwater treatment systems.

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## 3. IMPLEMENTATION OF THE GREATER SYDNEY COMMISSION REGION PLAN

### 3.1 Embedding Green Star on a project level

The draft Greater Sydney Commission Region Plan identifies multiple aspects to the successful implementation and delivery of its vision:

- Using the draft Plan as a decision-making framework to inform district plans, local government plans and provide context for councils' community strategic plans
- Integration with Future Transport 2056 and the State Infrastructure Strategy to align major land use, transport and infrastructure planning
- Private sector investment guided by priorities of the draft Plan to enable building of homes, retail space, office buildings and factories across Greater Sydney
- Regional, district and local planning to inform engagement with the wider community so that plans are co-created with the people of Greater Sydney

As such, the draft Plan identifies the need for the Greater Sydney Commission to work with the NSW Department of Planning and Environment to develop its role in peer reviewing key land use and infrastructure plans prepared by NSW Department of Planning and Environment. This will inform district plan priorities and actions. Together, the region and district plans inform the preparation and assessment of local environmental plans and planning proposals. The draft Plan identifies the need for councils to implement the region and district plans over a two-year or three-year time frame after the district plans have been finalised. The need to monitor and report on the delivery of the Plan is also a vital step.

Also critical to delivering the vision and aspirations set in the draft Plan is implementing key strategies and actions on a project level. The analysis in the section above aligns 32 out of the 38 objectives of the draft Plan with credits from the Green Star rating tools, illustrating its suitability to assist local government deliver project outcomes that are consistent with the directions, priorities and objectives of district and region plans. The GBCA encourages the Greater Sydney Commission to embed the Green Star rating tools as a means for local government to deliver and measure sustainable outcomes, setting the Greater Sydney Commission on a trajectory to realise the sustainable growth of Greater Sydney.

### 3.2 Leading by example

As previously mentioned, there are now more than 1700 Green Star-certified projects across Australia. Of these, over 140 projects, nearly 10 per cent, have been led by governments. These projects, and the policies that support them help deliver not just value for money outcomes, but also the longer-term sustainable transformation of our built environment. The GBCA's 650 member organisations choose to deliver environmentally sustainable projects, not just because it is the right thing to do, but because environmentally sustainable buildings and communities deliver cost benefits, mitigate and reduce exposure to the risks of a changing climate, contribute to national and global emissions reduction targets and deliver social and health benefits to occupants and users. Government cannot afford not to do the same.

Industry continually finds ways to reduce costs throughout the whole procurement process and supply chain, while delivering high quality outcomes. In the 15 years since the GBCA was established, its members have driven change that has led to many products and practices that

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were virtually unheard of then, to now be commonly and cost-effectively available. Many of those early leaders and adopters have been governments; federal, state and local. The impact of visionary government leadership on driving change cannot be underestimated.

### 3.3 Building local government capability: Green Star – Communities Guide for Local Government

The GBCA's own work with our 43 local government members to help build their capacity to deliver best practice is a great example of how the Australian Government can work collaboratively across levels of government and with industry to deliver better outcomes for communities.

Our [Green Star Communities Guide for Local Government](#), released this year at the National General Assembly of Local Government is designed to help local governments of all shapes and sizes across Australia plan and deliver more productive, liveable, sustainable and healthy communities. The Guide helps build knowledge and expertise within local government, provides a reference point for decision making and prioritisation, and assists planning and project management. Working in parallel with the National Urban Design Protocol, Creating Places for People ([www.urbandesign.org.au](http://www.urbandesign.org.au)), this guide aims to help ensure we get the most out of our cities at every stage of their development.

*'The Green Star Communities rating will give residents, businesses and investors independent proof that Parramatta Square will deliver environmental, economic and social sustainability for decades to come.'*

Greg Dyer, Chief Executive Officer, City of Parramatta

The guide explains how councils can use the five principles underpinning the Green Star – Communities rating tool to help tackle their local challenges, deliver and communicate better outcomes for their constituents, and multiply the value of their investments. Additionally, as local governments build their capability and look for opportunities to deliver more for their communities, this Guide provides a pathway through which local governments can use Green Star Communities certification to demonstrate best practice, showcase Australian excellence, or even deliver world leadership through their built environments. Green Star Communities is already widely used in regional development projects by governments and developers that want to demonstrate that these communities are going to be the most liveable, sustainable, resilient and desirable places to live and work.

We urge the Greater Sydney Commission to consider tools like Green Star and Guides like that outlined above, developed collaboratively between government and industry, to help support local government in the delivery of the vision outlined in the Plan.

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## Parramatta Square

Parramatta Square is one of the largest urban renewal projects in Australia. The three hectare mixed-use urban renewal project will provide the foundation for growth in the city and create a future based on good urban design that is environmentally sustainable, has vibrant, beautiful public spaces and an effective public transport system.

Parramatta Square will incorporate a new civic building with public library, a vertical university campus, as well as commercial, residential and retail developments. A minimum 5 Star Green Star - Design & As Built target has been set for all buildings within the precinct.

City of Parramatta's objectives for Parramatta Square are:

- To showcase design excellence and environmental sustainability
- To provide opportunities for future employment growth
- To provide a gathering space and ceremonial centre for public use as well as civic events and recurrent cultural and community events
- To contribute to the City's identity and its social and cultural life by becoming a showcase for innovative design in the heart of Parramatta CBD.

Targeting a Green Star Communities rating for the development provides an independent benchmark for residents, businesses and investors to ensure that Parramatta Square delivers economic, social and environmental sustainability.

## 4. WORKING WITH THE GBCA

The GBCA commends the Greater Sydney Commission on its Greater Sydney Region Plan, providing an effective and comprehensive plan for the sustainable management of future growth in Greater Sydney. We encourage the Greater Sydney Commission to work collaboratively with us to assist with achieving the sustainable vision embodied in these plans. Please do not hesitate to contact me by phone on (02) 8239 6200, or via email at [jonathan.cartledge@gbca.org.au](mailto:jonathan.cartledge@gbca.org.au) for further information.

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## APPENDIX

**Table 18.2A Type A and Type B industry sectors**

Type A Sectors	Type B Sectors
A - Agriculture, Forestry and Fishing	B - Mining
D - Electricity, Gas, Water and Waste Services	C - Manufacturing
O - Public Administration and Safety	E - Construction
P - Education and Training	F - Wholesale Trade
Q - Health Care and Social Assistance	G - Retail Trade
	H - Accommodation and Food Services
	I - Transport, Postal and Warehousing
	J - Information Media and Telecommunications
	K - Financial and Insurance Services
	L - Rental, Hiring and Real Estate Services
	M - Professional, Scientific and Technical Services
	N - Administrative and Support Services
	R - Arts and Recreation Services
	S - Other Services