

Committee Secretariat
House of Representatives
Standing Committee on Infrastructure, Transport and Cities
PO Box 6020
Parliament House
CANBERRA ACT 2600

14 August 2017

Dear Committee Secretariat,

**RE: INQUIRY INTO THE AUSTRALIAN GOVERNMENT'S ROLE IN THE
DEVELOPMENT OF CITIES**

The Green Building Council of Australia (GBCA) welcomes the opportunity to make this submission to the House of Representative's Standing Committee on Infrastructure, Transport and Cities Inquiry into the Australian Government's role in the development of cities. The GBCA has long advocated for government leadership on cities. We have been pleased with the bipartisan commitment towards the prioritisation of cities policy, and we are proud to work collaboratively across all levels of government to help ensure more productive, liveable and sustainable cities and communities across Australia. Recognising the considerable overlap across the Terms of Reference issued for this Inquiry, the GBCA is pleased to provide comment on both sub-inquiries:

1. Sustainability transitions in existing cities
2. Growing new and transitioning existing sustainable regional cities and towns.

We are pleased to share with the Committee just some of the case studies from across our members, highlighting the international excellence Australia is now showcasing in cities and communities across the country. In this context we are also grateful for the opportunity to highlight further opportunities for government policy leadership at a national level to continue to grow and leverage the benefits of our cities across policy portfolios.

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 should you require any further information, or to discuss any of the issues raised in this submission.

Yours sincerely



Jonathan Cartledge
Head of Public Affairs



green building council australia

Inquiry into the Australian Government's role in the development of cities

Submission

August 2017



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 - **greenstar**
- Educate industry and government practitioners and decision-makers, and promote green building programs, technologies, design practices and operations
- Advocate policies and programs that support our vision and purpose.

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. 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.

GBCA company members alone employ more than 50,000 staff across Australia. Our professional development program boasts over 1,200 people advancing their careers and building their skills through their membership with the GBCA.

The GBCA has five key policy priorities which advocate a coordinated approach to developing buildings, cities and communities that are productive, liveable, healthy, resilient and sustainable:

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



Launched by the GBCA in 2003, Green Star is Australia's only national, voluntary and holistic rating system for sustainable buildings and communities. Green Star is an internationally recognised built environment rating system developed by the Australian industry 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. Green Star has the proven track record to provide the visionary leadership for all levels of government.

There are over 1460 Green Star-rated projects across Australia:

- 37% of Australia's 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.
- 1.3 million people visit a Green Star-rated shopping centre each day.
- 170,000 people are moving into Green Star communities – this is double the size of Toowoomba, Australia's 13th largest city.

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1.SUSTAINABILITY TRANSITIONS IN EXISTING CITIES

1.1 Identifying how the trajectories of existing cities can be directed towards a more sustainable urban form that enhances urban liveability and quality of life and reduces energy, water, and resource consumption.

Cities all over the world are facing issues of growing populations, decreasing affordability, decreasing liveability, resource constraints and the need to reduce waste and emissions. While there are few simple solutions to solving the problems faced by cities, often the most critical challenge also represents the biggest opportunities.

The terms of reference for this Inquiry rightly identify that with Australia's population expected to double by 2075, it is critical that national policy is developed to foster collaborative and flexible urban planning processes for more sustainable, liveable and resilient cities and towns. The growing populations of our capital cities puts stress on housing supply, infrastructure and resources. However, better planning for an increasing population also provides opportunities to make infrastructure more efficient, provide greater amenity and increase liveability.

The development of bipartisan commitment to the importance of a strong role for the Australian Government in developing cities policy is a welcome development. The GBCA is supportive of the appointment of an Assistant Minister for Cities, and the establishment of a Cities Division within the Department of Prime Minister and Cabinet. The Australian Government's Smart Cities Plan including City Deals, the Smart Cities and Suburbs Program, and the recently released interim National Performance Indicator Framework for Cities, are important developments in the Australian Government's growing capability to influence better cities.

There are communities around Australia that are already looking for ways to solve problems and create more sustainable, liveable and resilient places in which to live and work. A national policy for the development of cities, supported by a strong and clear role for the Australian Government, helps to support this work and establish a vision for Australia's cities and towns, as well as meaningful and ambitious targets for liveability, sustainability, resilience, emissions reduction, economic prosperity, and better governance. The Australian Government should empower state, territory and local government to deliver effective integrated land-use infrastructure planning, services and programs that deliver measurably improved outcomes for communities across the nation.

These outcomes will not be delivered by government alone, but will be contingent on effective collaboration between all levels of government, industry and the community. The GBCA since its inception in 2002, has been a model of that collaboration and now, fifteen years since, we are uniquely positioned to draw on practical examples of world's best practice in sustainable urban development from across Australia. These examples are themselves demonstrative of the broader industry transformation that now sees Australia a global leader in delivering healthier, productive and positive places for people and the natural environment across the country.

In addition to highlighting these examples of best practice, this submission also outlines the opportunities for the Australian Government to continue to strengthen its work in supporting our cities, through practical recommendations:

- Leveraging the value of infrastructure investments and measuring success.
- Building on the National Cities Performance Framework.
- Delivering City Deals.
- Using cities to help meet our international commitments to reduce emissions.
- Raising minimum standards in the National Construction Code.
- Helping facilitate district based utilities.

All these areas present real opportunities for ongoing government leadership. We look forward to the deliberations of this Committee in the months ahead, and to expanding further on this submission as you consider in more detail the full range of issues raised through this Inquiry.

Leveraging the value of infrastructure investments & measuring success

An integrated view of how we can best use infrastructure to build and grow our communities is essential to supporting the long-term renewal, resilience and sustainability of our urban environments and communities; achieving social licence for transformative projects; and delivering an improved standard of living for the next generation.

Commitments that seek to reposition the Australian Government as an investor in infrastructure rather than a grant distributor should be underpinned by a focus on measuring and understanding the outcomes generated from those investments. An increasing focus on delivering integrated land use and infrastructure planning, support for value capture policies and the use of City Deals to structure governments' infrastructure investments, all rest on the integrity of the data collected, and the breadth of outcomes measured.

Good infrastructure is not an end in itself, but an enabler of better social, economic and environmental outcomes.

*Infrastructure Victoria,
Victoria's 30 Year Infrastructure Strategy, p. 18*

Measurement, and wherever possible certification, of outcomes at a project, precinct, community and city basis will help ensure the credibility of infrastructure investments. Ratings tools, like Green Star, provide a vehicle to capture and effectively communicate outcomes from our infrastructure to affected communities, for example through measuring:

- Increasing employment and economic prosperity
- Health and wellbeing
- Access to health and education facilities
- Transport mode use
- Affordable and diverse housing stock
- Energy and water efficiency
- Waste management and recycling
- Effectively engaged communities
- Resilience & future proofed environments
- More inclusive and diverse communities
- Biodiversity

The collection and communication of data evidencing the achievement of these outcomes better indicates how the benefits of infrastructure are experienced at the human scale. The community's support, or frustration with infrastructure projects and urban renewal, will in part be determined and understood through the extent to which outcomes, like those listed above, are delivered and communicated.

The Australian Government is in a unique position to leverage its purchasing power and infrastructure spend to drive the adoption of measures that measure and deliver better outcomes on projects and for communities.

We recommend the Australian Government commit to achieving and requiring best practice design supported by third party verification, like Green Star on all relevant infrastructure and associated urban renewal projects.

Building on the National Cities Performance Framework

The establishment of a National Cities Performance Framework as outlined in the Preliminary Report released by the Government last month, is an important step towards capturing data like that identified above at a national level for our largest cities.

The National Cities Performance Framework presents a valuable opportunity to begin to build a more comprehensive system of reporting the contextual and success indicators that help us understand our cities. Using the policy priorities identified by the Government to date, this approach should help drive business case development at a local level, and explain to communities the benefits of the Government's investments over the longer-term in the context of their city's own unique characteristics.

The development of this Framework underscores the challenges in what is an ambitious policy agenda. For example, it is clear that not all data and indicators are appropriately measured at a city level. In the medium-term, ongoing investment in the Framework should see a shift from reporting data currently available, to analysing city performance against specific investments, like those facilitated through city deals, over time. Such an approach holds the promise of positioning the Framework as a tool to evaluate specific investments and priorities across all levels of government.

We recommend the metrics and indicators currently outlined in the National Cities Performance Framework are expanded in consultation with industry and expert stakeholders to build a more comprehensive reporting tool. A taxonomy of cities should enable different and broader data to be collected and reported for different types of cities, e.g. major capitals vs. regional hubs.

A more comprehensive framework would create an opportunity to more explicitly inform the design of City Deals, and create a direct connection between the performance of a city, and the projects and investments that help improve that performance against targeted policy priorities over time. The Australian Sustainable Built Environment Council's [Success Indicator Framework for Cities](#) provides a comprehensive list of potential indicators against which to build a more powerful reporting tool through the National Cities Performance Framework. Not all indicators should necessarily be collected across every city. Given the diversity of Australian cities, and the challenges in collecting data across all indicators for every city, it is appropriate to consider a taxonomy of Australian cities that provides a structure for data collection and indicators across different types of cities. For example, the data available for Sydney and Melbourne is likely to be very different than that available for Townsville and Launceston and the contextual issues these different types of cities face will demand different indicators to inform policy development.

We recommend the National Cities Performance Framework identify those indicators and data sets that should be gathered at a City Deal and project level to evidence and help communicate improvements in performance at all levels.

Ultimately the Framework should work interdependently with City Deals to collect and report data against specific indicators, and in so doing create a complete picture of a City's performance and the improvements that can be achieved through targeted investments. For example, the challenges of reporting housing supply in a meaningful way at a city level can be augmented by more granular data reported through city deals and projects implemented at a sub-regional level. Similarly indicators reporting how infrastructure assets can be better utilised, may be better informed by data gathered through individual city deals or specific infrastructure projects and investments.

In this context, presenting the Framework additionally as a tool to support City Deal development, it would also be useful for the Framework to provide insights and guidance for governments on the importance of quality data collection and measurement of performance at every level of city development including at the project level. If we have City Deals, but are failing to appropriately measure performance outcomes on projects, then we risk missing a great opportunity.

Delivering city deals

The Government has an unprecedented opportunity to leverage better outcomes for cities through the delivery of the Smart Cities Plan and City Deals program. Australian industry is well positioned to deliver world-class outcomes in buildings and precincts, and City Deals provide an opportunity to catalyse this knowledge and expertise in projects across the country.

The GBCA encourages the Government to commit funding to opportunities that will deliver best practice outcomes and require planning and infrastructure decision-making to deliver positive environmental, social and economic benefits.

We welcome city deals as an important breakthrough in helping deliver integrated strategic planning and coordination across levels of government. In bringing the strategic vision that underpins city deals to reality, effective governance will be critical. The establishment of statutorily independent development corporations to guide development, manage procurement, engage effectively with the community and industry will be beneficial in delivering what are likely to be major, complex infrastructure and urban renewal projects. The success of agencies like the Fisherman's Bend Taskforce, the Barangaroo Delivery Authority and the Sydney Olympic Park Authority are powerful models to consider as mechanisms to drive effective city and economic development and renewal. The creation of the Townsville Development Corporation as part of the Townsville City Deal is a good example of this governance being implemented in the first of the Government's city deals.

We recommend the Australian Government incentivise the creation of independent development corporations to support the delivery of city deals across Australia.

As noted previously, benchmarking and measurement at a project, city deal, precinct and city-level will be vital in ensuring desired outcomes and targets are met across projects. Green Star has been used extensively across Australia for community and precinct-scale developments demonstrating how these projects are delivering not just environmental benefits, but also in improvements in liveability, economic prosperity, governance and innovation. City deals represent a rare opportunity for Australian Government leadership to help build capability within our local communities to deliver better communities and urban design.

We recommend the Australian Government require the use of third party verification, like Green Star, on all relevant projects planned or funded through city deals.

Understanding Green Star Communities

Green Star Communities, established in 2012, assesses the planning, design and construction of large scale development projects at a precinct, neighbourhood and/or community scale. It provides a rigorous and holistic rating across five impact categories: governance, liveability, economic prosperity, environment, and innovation. Green Star Communities provides a vision, a set of principles and aspirations to help guide and support the development of sustainable communities.

The Green Star Communities rating tool assists governments, development project teams, contractors and other interested parties aiming to deliver large scale sustainable developments. The tool includes 32 credits across five categories:

1. Governance
2. Liveability
3. Economic prosperity
4. Environment
5. Innovation

Green Star Communities has already made a significant impact on Australia's built environment. There are now 27 precinct and community-scale projects that have achieved Green Star Communities certification with a further 17 registered projects around Australia. The rating tool is currently influencing the design and delivery of major developments around the country—from Parramatta Square and Fisherman's Bend, some of the largest urban renewal projects in Australia, to Aura on the Sunshine Coast that will be home to 50,000 people.

Green Star Communities provides unique advantages in that it has been nationally developed, is industry-led and provides a government-supported rating system for urban renewal and greenfield development. The credits in the rating tool provide guidance and best practice benchmarks that have been developed after extensive collaboration with industry, academia and government. By referencing Green Star Communities in policies, and encouraging its use for suitable development projects, governments can take advantage of the sustainability benchmarks and common language developed for the rating tool through extensive and ongoing consultation by the GBCA.

Every Green Star Communities certified development looks different. The rating tool doesn't set prescriptive benchmarks around how streets should look or the types of buildings it should contain. What all Green Star rated communities have in common is that during the planning, design and construction phases, considerable thought and effort has been given to delivering best practice governance, urban design, liveability, economic opportunities, environmental sustainability and fostering a culture of innovation.

Tonsley Innovation District, SA

When Tonsley's masterplan was being developed 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. Fast forward to 2015 and Tonsley Innovation District was Australia's first mixed-use urban redevelopment to be awarded 6 Star Green Star Communities certification.

To achieve these goals, Tonsley needed to incorporate the right mix of uses, and to facilitate connections between people, businesses and educational institutions. Adaptive reuse of existing infrastructure helped to do this by creating a central hub of activity for the community and plenty of opportunities for social and commercial interaction.

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) was retained and re-purposed, preventing the loss of approximately 90,000 tonnes of carbon emissions in its original construction. Once complete the MAB will house a range of flexible modular pod tenancies occupied by small to medium businesses from the high-value manufacturing sector while incorporating retail outlets, meeting areas, education spaces and a number of forests and plazas. Education and research are true cornerstones of the Tonsley Innovation District masterplan, with Flinders University and TAFE SA signing up as anchor partners in the development. Tonsley's masterplan also incorporates approximately 11 hectares of residential space which will eventually be home to around 1,200 people. Creating homes will ensure the district remains active outside of business hours, and give the opportunity for those who work or study at Tonsley to live close by. The train station is at the doorstep of the residential area, with new electric trains meaning faster, more frequent and cleaner journeys to the city. The result? Fewer transport emissions and a cohesive community identity.

Over the coming years, Tonsley will become firmly established as an economic growth engine for South Australia as the district reaches a critical mass of industry, research, education and commercial activity collocated on the site.

Green Star Communities & City Deals

Due to the holistic nature of its credits, the Green Star Communities rating system provides established metrics to measure and communicate the outcomes sought at a community and project level through City Deals. The table below summarises each of the five principles underpinning Green Star – Communities as they align with the City Deals model:

Category	Metric for City Deals
Visionary Leadership and Governance	<p>Recognises developers and developments that demonstrate:</p> <ul style="list-style-type: none"> • sectoral leadership by establishing and maintaining strong governance practices • engagement, transparency, and community and industry capacity building.
Liveability	<p>Recognises developments that deliver:</p> <ul style="list-style-type: none"> • safe, accessible and culturally-rich communities • healthy and active lifestyles • high level of amenity, activity and inclusiveness
Economic Prosperity	<p>Recognises developments that promote:</p> <ul style="list-style-type: none"> • prosperity and productivity • affordable living and housing • investment in education and skills development • facilitation of community-capacity building • greater productivity via emerging opportunities in the digital economy
Environment Responsibility	<p>Recognises developments that promote:</p> <ul style="list-style-type: none"> • reduced negative impacts on sensitive ecosystems and the natural environment (land, water and atmosphere) • resource management and efficiency by promoting infrastructure, transport, and buildings • reduced ecological footprints
Design Excellence & Innovation	<p>Recognises developments that encourage:</p> <ul style="list-style-type: none"> • spread of innovative practices, processes and strategies that promote sustainable communities and cities

*Adapted from the Australian Government's Smart Cities Plan

The Australian Government has an unprecedented opportunity to leverage sustainable outcomes in regional cities and towns through alternative funding mechanisms, such as the City Deals program. By referencing Green Star Communities in policy, such as requirements within City Deal proposals, and encouraging the use of the rating tool for suitable development projects, governments can take advantage of the sustainability benchmarks and common language developed for the rating tool through extensive and ongoing consultation coordinated by the GBCA. The Australian industry knows how to deliver world-class outcomes in buildings and precincts, and City Deals provide an opportunity to catalyse this knowledge and expertise in large-scale projects across the country.

Using cities to help meet our international commitments to reduce emissions

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 cities and 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.

The GBCA notes that improvements and adjustments to current climate policies are necessary to enable and encourage industry to fully deliver on the potential of the built environment. The GBCA is pleased to be a member of the Australian Sustainable Built Environment Council (ASBEC), the peak body for organisations committed to a sustainable built environment. ASBEC's members bring a united industry voice and a wealth of expertise to creating solutions to policy challenges. ASBEC's report, *Low Carbon, High Performance*, authored by ClimateWorks Australia, details the extent of the built environment's potential and makes 32 recommendations for this potential to be realised. These can be summarised into five key areas:

1. A national plan with supporting policy frameworks and governance arrangements, including long-term and interim targets, clear responsibility at a ministerial level, coordination of action across different levels of government and different government departments and agencies and public reporting requirements
2. Mandatory minimum standards for buildings, equipment and appliances with a future trajectory aligned with the long-term goal of net zero emissions
3. Targeted incentives and programs to motivate and support higher performance in the short- to medium-term, including incentives, the use of government market power and targeted programs and support
4. Energy market reforms to ensure that the energy market supports roll-out of cost-effective energy efficiency and distributed energy improvements
5. A range of supporting data, information, training and education measures to enable informed consumer choice, and support innovation, commercialisation and deployment of new technologies and business models.

As well as making recommendations for new policies and initiatives to seize opportunities, *Low Carbon, High Performance* details ways in which current policies can be improved and enhanced, particularly in regard to the Emissions Reduction Fund (ERF), National Energy Productivity Plan (NEPP), raising minimum standards and distributed energy policy. For more information about the recommendations in the *Low Carbon, High Performance* report, please see www.asbec.asn.au/publications.

Commonwealth Bank Place, NSW

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.

1.2 Considering what regulation and barriers exist that the Commonwealth could influence, and opportunities to cut red tape

Raising minimum standards in the National Construction Code

Australia is fortunate to have a National Construction Code (NCC) which allows a consistent and nation-wide approach to construction regulation. While safety is the primary focus of the NCC, the opportunity to improve energy efficiency in buildings is invaluable.

While energy efficient design and technology continues to improve – with many buildings in Australia now energy neutral or energy positive – the minimum standards prescribed in the NCC have not been updated since their introduction in 2010. The gap between minimum practice outlined in the NCC and best practice grows wider by the year. Lifting minimum standards for energy efficiency in the NCC will ensure that new buildings in Australia do not miss opportunities for emissions reduction, as well as creating opportunities to reduce running costs over the life of buildings.

The GBCA is supporting ASBEC in its work with the Australian Building Codes Board to increase stringency for commercial buildings in the 2019 update to the NCC. To ensure future updates to the NCC occur regularly, a trajectory should be established for future energy provisions in the NCC. A shared ultimate goal of net zero emissions for the NCC supported by a trajectory of planned updates over time will encourage innovation and regular upskilling of industry, and deliver more high performing buildings.

We recommend the Australian Government's support to implement long term targets and a net-zero trajectory for minimum energy performance requirements in the National Construction Code.

Facilitating district-based utilities

It is widely acknowledged that Australia's complex utility market and regulatory environment imposes barriers to innovation and alternative utility infrastructure and supply. For example, the recent draft ruling by IPART on prices for wholesale water and sewerage services risks destroying a nascent and highly innovative water services industry in NSW. This is due to a blinkered regulatory focus that fails to account for broader social and environmental benefits associated with new technology and services.

Energy efficiency can reduce energy consumption in buildings by more than half by 2050, while fuel switching can eliminate most non-electric energy consumption. Remaining emissions from electricity consumption in buildings can be eliminated through the production of zero emissions electricity.

If Australia is to meet its international commitments to achieve zero net emissions, a transformation of the electricity supply sector will be required. This means that achieving zero emissions buildings is likely to involve a combination of distributed solar PV [...], as well as decarbonisation of grid-supplied electricity.¹

The Finkel Review recognises the value of distributed generation in helping improve security and affordability in the National Electricity Market. Through the COAG Energy Council we recommend the Australian Government's support for all the Finkel recommendations, and note in this context the specific recommendation directing the Australian Energy Market Commission to review the regulatory framework for power system security in respect of distributed energy resources participation, and to look at measures to better incentive that participation.

The Australian Government's role in driving recommendations like these is important in helping deliver greater value from investments in distributed utilities across our cities, and realise the potential of smart investments in our cities to build resilience across our utility infrastructure.

We recommend the removal of market barriers to district-based utilities and call for a fair tariff structure and value for distributed utility solutions across our cities.

The GBCA is proud to be working across industry to establish a stronger industry voice for district-based utilities representing energy, telecommunications and shared services alongside prosumers. The GBCA looks forward to engaging with all spheres of government on these issues to identify and realise opportunities for removing barriers and implementing innovative solutions.

¹ ASBEC Low Carbon, High Performance, ClimateWorks Australia, 2016

Central Park, NSW

The Central Park development on the edge of Sydney's CBD is set to become one of Australia's largest developments powered by its own tri-generation energy plant, as well as hosting one of the biggest membrane bioreactor recycled water facilities in the world. This facility is realising the benefits of a precinct-scale approach to utilities, with more than 5,000 residents halving their usage of drinking water, while also saving money and valuable resources.

Central Park will also have its own low-carbon natural gas power plant to provide heating and cooling for the community. This system has the potential to reduce greenhouse gas emissions by up to 190,000 tonnes over the 25 years. While the opportunities to reduce resource use within the precinct are significant, efforts to export energy offsite to other buildings in the area to gain further efficiencies have been blocked by regulatory restrictions.

1.3 Examining the national benefits of being a global 'best practice' leader in sustainable urban development.

In many instances Australia is already benefiting from being a global 'best practice' leader in sustainable urban development. In addition to demonstrating how we are proactively working to meet the UN Sustainable Development Goals, the case studies highlighted throughout this submission are examples of the economic, health, social and environmental benefits that are delivered through better and more sustainable development across our cities, regions and suburbs. Ultimately, the benefits are felt across cities and communities that deliver greater productivity, increased resilience, reduced impact on our environment and a higher and more equitable standard of living for all Australians.

It is important to note that the best practice highlighted through this submission is a market-led solution. The Green Building Council of Australia is an industry association and Green Star has been developed by industry and is used by industry as a tool to deliver world-class outcomes and competitive advantage. The national benefits are clear, and while there is sometimes an assumption that 'best practice' costs more, in reality that is often not the case, and 'best practice' is simply a smarter choice. In parallel, from an investor perspective 'best practice' is increasingly sought after to manage risks and provide assurance across portfolios. In this context there is value in best practice, not just for the community, but also for industry, and in attracting investment into our cities and communities. This value is set out in further detail below, and in response to the issue of attracting private investment at 2.3.

Barangaroo South, NSW

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.

Australia is already demonstrating global ‘best practice’ in a number of sustainable urban developments across the country, with the following projects already achieving Green Star Communities certification:

- Alkimos Beach, WA, by Lendlease and Landcorp
- Curtin Master Plan, WA, by Curtin University
- Waterbank, WA by Lendlease
- Calleya, WA by Stockland
- Greenwood, WA by Frasers Property Australia
- Aurora, VIC, by Lendlease
- Burwood East, Vic by Frasers Property Australia
- University of Melbourne Parkville Campus, Vic by The University of Melbourne
- Victoria Harbour, Vic by Lendlease
- Cloverton, Vic by Stockland
- The Grove, Vic by Stockland
- Harpley, Vic by Lendlease
- Brisbane Airport, QLD, by Brisbane Airport Corporation
- Aura, QLD, by Stockland
- Ecco Ripley, QLD, by Sekisui House Australia
- Bahrs Scrub, Qld by Frasers Property Australia
- Queens Wharf Brisbane, Qld by Destination Brisbane Consortium
- Parklands, Qld by Grocon
- Newport, Qld by Stockland
- Tonsley Innovation District, SA, by Renewal SA
- Bowden, SA by Renewal SA
- Fairwater, NSW, by Frasers Property Group
- Googong Township, NSW, by Googong Township Pty
- Barangaroo South, NSW by Lendlease
- Darling Harbour Regeneration Project, NSW by Lendlease
- Fairwater, NSW by Frasers Property Australia
- Altrove, NSW by Stockland
- Willowdale, NSW by Stockland
- Ginninderry, ACT by Riverview Developments and Land Development Agency

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.

2. GROWING NEW AND TRANSITIONING EXISTING SUSTAINABLE REGIONAL CITIES AND TOWNS

2.1 Promoting the development of regional centres, including promoting master planning of regional communities

Regional cities and towns and growth areas compete with capital cities and other regional centres for talent and investment. Encouraging and empowering regional centres to demonstrate leadership in sustainable development and master planning provides an opportunity to attract, people, companies and investment, while establishing liveable, affordable economic centres that can ease the pressure on our capital cities.

Master planning of regional communities provides an opportunity to consider and include all the elements of a successful and thriving urban centres. The opportunities identified already in this submission to catalyse better urban environments through the Australian Government leveraging infrastructure investment, urban renewal and city deals applies across communities, and includes regional centres.

Working with 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), 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.

Parramatta Square, NSW

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.

Aura, QLD

Aura on the Sunshine Coast is the largest mixed-use development ever undertaken under single ownership in Australia. Over the next three decades, Aura will grow to a similar size and scale to Maroochydore, Hervey Bay or Gladstone and will be home to around 50,000 people.

At Aura 700 hectares, or nearly one-third of the site, will be rehabilitated and designated for conservation and environmental protection. Aura will also include its own Central Park of more than 120 hectares. Stockland will also build 10 separate sporting grounds, and create parks and playgrounds within easy walking distance of every home.

Stockland will dedicate serviced land for the provision of more than 20 schools and education centres, while also providing land for 25 community facilities. The City Centre will cover 200 hectares and accommodate more than 5,000 dwellings. It will comprise 100,000 square metres of retail and 50,000 square metres of commercial floor space.

Aura will have more cycling pathways than Copenhagen, with its interconnected cycle and pedestrian path network linking residential areas to local employment precincts, schools, the city centre and local neighbourhood retail centres.

2.2 Promoting private investment in regional centres and regional infrastructure.

Ratings & ESG reporting to support investment

The opportunities to attract and promote private investment through sustainable development are of course not limited to regional centres and regional infrastructure. The use of independent third party ratings to support investment decisions and provide assurance for investors must be considered by governments across Australia as they seek to leverage private investment in infrastructure and urban renewal.

The 2016 Global Real Estate Sustainability Benchmark (GRESB) - which assessed 759 real estate companies and funds (representing 66,000 assets and \$3.7 trillion in gross asset value) – ranked Australia the world's most sustainable real estate market for the sixth year in a row.

GBCA members such as Stockland, DEXUS, ISPT and Lendlease are regularly ranked as sector leaders. Despite growing international competition, the average score of Australian companies and funds continues to increase, extending Australia's leadership position and making Australia's property market an increasingly attractive investment option.

Globally, an increasing focus by investors on the environmental, social and governance (ESG) performance of assets highlights the pressing need for best practice independent certification to support private investment opportunities.

The strength of GRESB as a tool to evaluate ESG performance in 2016 grew to also provide a benchmark report for sustainability reporting in infrastructure. The establishment of global benchmarking, like GRESB Infrastructure, alongside the UN Principles for Responsible Investment and associated Guidelines for Direct Infrastructure Investment, reflects the appetite of global institutional investors to assess the ESG performance of infrastructure assets in the same way as global real estate assets have been assessed to date.

For investors, global benchmarking, like that facilitated through GRESB Infrastructure, helps manage risk (in particular those risks associated with climate and social licence), supports better governance and provides accountability for outcomes and reporting.

52% of institutional investors, such as banks, insurance companies, pension funds, and sovereign wealth funds, now consider ESG factors when investing in infrastructure funds, a higher percentage than for private equity, real estate or investments in natural resources.

GRESB Infrastructure: 2016 Report, p. 3

Initiatives like GRESB Infrastructure will help drive new investment, and Australia's success in accessing this investment will be aided through best practice development and the use of tools like Green Star across major infrastructure and urban renewal projects.

2.4 Examining ways urbanisation can be re-directed to achieve more balanced regional development.

Effective infrastructure planning and prioritisation supported by integrated strategic development will support more balanced city and regional development. Long-term infrastructure plans are beneficial not just to support business confidence, but also to facilitate plans that better connect our communities and our cities. The GBCA supports the recommendations of the Australian Sustainable Built Environment Council [Investing in Cities](#) platform:

We recommend Infrastructure Australia lead the development of a transparently evaluated 30 year infrastructure plan, through effective engagement with state, territory and local governments, community and business.

A 30 year infrastructure plan would be implemented through effective engagement, planning, decision-making, funding and execution across electoral cycles with support from the community and industry. A National Spatial Masterplan could further augment the Infrastructure Plan and in parallel outline a new vision for the infrastructure needs of the nation, transparently identifying key growth areas and infrastructure priorities in line with the roles and responsibilities of the Federal Government and in collaboration with the state and territories.

2.5 Identifying the infrastructure requirements for reliable and affordable transport, clean energy, water and waste in a new settlement of reasonable size, located away from existing infrastructure.

Almost one in every five people in Australia live in a fast-growing outer suburb. Such rapid population growth creates numerous challenges as infrastructure and essential services are stretched beyond their limits. Increasing disconnection in population growth hotspots and their unrealised potential is an issue of national significance.

Mayor Glenn Docherty, Chair, National Growth Areas Alliance

Energy, water and waste infrastructure

As identified throughout this submission, innovative clean energy, water and waste infrastructure is already being developed and implemented in developments across Australia. Developers, state, territory and local governments, as well as people from the communities themselves, are investing in alternative infrastructure to reduce resource consumption, reduce reliance on traditional infrastructure, reduce emissions and ultimately reduce costs.

As noted already in this submission, the Australian Government can support the development of innovative clean energy, water and waste infrastructure by championing the removal of regulatory barriers and by setting strong climate and energy policy that drive demand for clean, alternative infrastructure solutions.

Alkimos Beach, WA

Alkimos Beach in Perth's northern coastal corridor is set to become the most significant coastal redevelopment north of Perth in over 50 years. The master-planned community is being developed by Landcorp and Lendlease and achieved 6 Star Green Star – Communities certification.

The 224 hectare master-planned community upon completion will deliver more than 2,000 homes and be home to 6,000 residents. The project site will eventually host 3.6 hectares of playing fields, six hectares of conservation reserves and 41 hectares of dune and foreshore reserves.

All homes will be within 800 metres of both the local centre and transport links. Thirty per cent of the site will be reserved for open space; no home will be more than 200 metres from a park, and walking and cycle paths will link the beach, the town centre and the train station. Wi-Fi will be provided in major public spaces to foster economic and social opportunities.

Key sustainability innovations at Alkimos Beach currently include:

- Mandatory solar panels and gas boosted solar hot water systems as well as other energy-efficient appliances, supported by a financial incentive package from the Alkimos Beach development partners that range from \$4,500 to \$6,000 are expected to reduce home energy bills by up to 50%
- Smart water initiatives are planned throughout the site including stormwater retention, bore water irrigation and water efficient appliances in each home
- Fibre-to-the-Premises internet connectivity is being provided throughout the development to encourage the notion of working from home
- Australia's first community energy storage trial, that will see more than 100 homes in the Escarpment Village connected virtually to innovative solar energy storage as part of a development-wide initiative to reduce peak electricity demand.

Delivering accessibility, sustainability and liveability in regional communities

A connected city is an equitable city. Many of our capital cities have a myriad of transport options: from trains, trams and buses to bike share systems. But while capital city inner suburbs may enjoy living in a place with 'walkscores' in the 90s – meaning most activities can be undertaken on foot – those living out on the fringes, or in smaller towns, are more dependent on cars.

A report conducted by the Heart Foundation identified that public transport users in metropolitan Melbourne average 28 minutes walking to and from public transport each day, plus six minutes walking for other purposes. In contrast, car travellers average only six minutes in total. Just 2,000 steps a day can lead to an eight per cent reduction in cardiovascular disease. 4,000 steps a day can lead to an 18 per cent reduction making those extra minutes very valuable.

Another decade-long study from the University of Melbourne has found that residents of new housing developments increased their exercise and their wellbeing when they had more access to shops and parks.

The Heart Foundation points to a US study which has calculated every additional hour a day spent in a car translates into a six per cent increase in obesity risk, while every additional kilometre walked translates into a 4.8 per cent reduction in the likelihood of being obese.

The Green Star Communities 'Healthy & Active Living' credit rewards projects that provide footpaths and bicycle paths, spaces for bicycle parking at train stations and major bus stops. It also rewards projects that feature parks and sporting facilities. The 'Walkable Access to Amenities' credit encourages and recognises projects that have walkable access to diverse number of amenities that reflect the predicted demographic of the projects whilst the 'Sustainable Transport and Movement' credit encourages and recognises integrated responses to transport and movement that encourage a people-focussed hierarchy.

Ginninderry, ACT/NSW

A joint venture between the ACT Government and Riverview Developments, Ginninderry is the first community in the ACT and the capital region to achieve a 6 Star Green Star Communities certification.

Ginninderry is a community with a difference, designed to cater to Canberra's needs as a growing city. It will extend across the ACT / NSW border (subject to rezoning approval) and will eventually have around 11,500 homes, accommodating up to 30,000 people.

Bounded by the Murrumbidgee River and Ginninderra Creek, Ginninderry will be an industry leader in water sensitive urban design. Through a network of bio retention swales, wetlands and basins to capture, cleanse, recycle and infiltrate water created on site, the development aims to not adversely impact those existing waterways.

New technologies are being explored that will help householders reduce the amount of energy they use. Solar panels are being mandated for all homes and demand management systems installed to help educate new residents on how they can more efficiently use power within their homes. Battery storage has also been incorporated within the design of Ginninderry – futureproofing the development for advancements in networked community energy systems. Integrated design has been paramount in the design of Ginninderry through master planning for 30-40 years of development. This has led to a logical and holistic view for better connectivity, transport, conservation and infrastructure planning.

Community development and cultural planning continue to be a catalyst for the activation of shared spaces within Ginninderry. Through engagement programs such as festivals, markets, community arts, cultural, environmental and sporting activities a sense of ownership is developed and reinforced. Strong connections and a sense of belonging are enhanced by providing the community with hands-on experiences in the planning, design and building of shared spaces.

3. THE COST OF GETTING IT WRONG

There is a wealth of evidence to support the fact that the severity of many of our greatest policy challenges could have been reduced with better and more integrated infrastructure and land-use planning across our cities. When we look at issues associated with housing affordability and diversity, energy security, the physical and mental health of our communities and increasing levels of obesity, heart disease and diabetes, the overwhelming costs of traffic congestion, access to critical services like child-care and education, and the damage inflicted on our cities from severe weather events, we know from our own experience that better urban design and infrastructure planning and prioritisation would have reduced the cost and impact of these issues.

As our cities grow we learn better ways to develop a built environment that helps respond to the myriad of challenges our communities face. This means we must continue to evolve and learn from past mistakes, leverage best practice and ensure that we maximise value across generations. A reluctance to maintain the status quo, to not incentivise better cities, or seek to raise minimum standard risks locking in costs for the future.

Many of the most significant costs and challenges faced by policy makers today are due to commitments and decisions made about how our cities were shaped and planned decades ago. The cost of a project must not be measured just in terms of the cost of construction, but measured against whole-of-life costs for the city and community that will benefit or pay for it in the generations to come.

The GBCA looks forward to continuing to support the Australian Government in the development of more sustainable, liveable and resilient cities and towns and we welcome opportunities for further collaboration and consultation as this Inquiry progresses in the coming months.