LANDCOM

FY18 Sustainability Report

Creating more affordable
and sustainable communities

Message from the CEO

Sustainability is part of our organisation's DNA, and has been for over 15 years. We have embedded it into every aspect of the work we do.

In FY18, we launched our new Sustainable Places Strategy, which sets Landcom's future sustainability direction. Our aim is to create innovative and productive places that demonstrate global standards of liveability, resilience, inclusion, affordability and environmental quality. We want to create a legacy of sustainable places for future generations.

We're well on our way to achieving our goals. In FY18 Landcom was recognised as fourth most sustainable developer globally, and third across Asia Pacific, by the Global Real Estate Sustainability Benchmark (GRESB). GRESB is an independent and international organisation that benchmarks annual sustainability performance across 'environment', 'social' and 'governance' aspects of real asset sector portfolios and assets in public, private and direct sectors worldwide. This year Landcom received maximum scores in both social and governance aspects.

GRESB offers voluntary reporting under three main themes of 'Real Estate', 'Real Estate Debt' and 'Infrastructure' to cater for the diversity across our sector. Landcom continues to be the only government land organisation globally to participate in the GRESB Real Estate 'Developer' assessment, alongside our private sector peers. In FY18, 903 property companies, real estate investment trusts, funds, and developers across 64 countries participated. The cumulative value of these reporting entities was over $3.6 trillion in assets under management.

We also launched our Healthy & Inclusive Places Survey with the aim of measuring residents' satisfaction with quality of life in Landcom communities; adopted our Housing Affordability & Diversity Policy to increase the supply of affordable, sustainable and accessible homes; and developed our Sustainability Rebate to help new home owners reduce their cost of living, to be rolled out in FY19.

John Brogden AM
Chief Executive Officer

FY18 Highlights

Sustainable Places Strategy

Climate Resilient Places

Healthy & Inclusive Places

Productive Places

Accountable & Collaborative Places

New **Sustainable Places Strategy** launched

Awarded **fourth most sustainable developer globally**, in the Global Real Estate Sustainability Benchmark

First **Healthy & Inclusive Places Survey** delivered to measure liveability

Co.Lab event showcased our **collaborative research projects**

Hack for Cities conducted with **over 75 students**

Skills Exchange employment pathway program rolled out at Airds and Claymore

Sustainability rebates developed to **enable sustainable and affordable living**

Partnered with the **Supply Chain Sustainability School**

Climate change and community resilience assessments and planning across projects commenced

About This Report

Our Sustainability Report 2018 is an account of our sustainability performance during the 2018 reporting period (FY18), with limited assurance provided by Point Advisory.

This report includes discussion of our material sustainability issues, and details our performance against our new Sustainable Places Strategy. Where performance against a target has not been achieved (or is not in scope for the reporting period), an explanation is provided.

Our reporting boundaries are explained in the following section. A full summary of all indicators and definitions are included in Appendix 1: Indicator Performance Summary (p. 56).

Reporting Requirements

The *Landcom Corporation Act 2001* (NSW) requires us to report annually against our sustainability performance. The Act states that we must develop sustainability performance indicators that are benchmarked against international best practice.

In December 2016 our draft Sustainable Places Strategy was endorsed by the Board and the Minister for Planning. The draft Strategy was placed on public exhibition, seeking feedback from community and industry, throughout April and May 2017.

The Sustainable Places Strategy was finalised and endorsed by the Landcom Board in November 2017 and took full effect for Landcom during FY18.

Material Issues

This report identifies and discloses the material aspects of our operations, in alignment with the Global Reporting Initiative (GRI) Guidelines. We are in the process of transitioning to reporting against the new GRI Standards.

Materiality is an important process that informs how we do business. It provides insight into what our stakeholders value from our developments, and their expectations of the way we operate our organisation. In 2017, to inform our new Sustainable Places Strategy, we renewed our material issues. These material issues remain current for FY18.

Case studies throughout this report are aligned to our material issues.

Material issue	What this means for Landcom	Where is this material issue addressed in this report?
Community Cohesion	Considering the heritage and history of the land, to embed arts, culture and local heritage in new projects. To integrate existing community networks and facilities, and build upon these to enhance the benefits to residents and workers at our projects (existing and future)	Healthy & Inclusive Places
Community Satisfaction with Design	To optimise the quality of design and place for our communities, including with surrounding infrastructure. This also relates to having infrastructure in place during the planning phase, prior to the development of a community	Healthy & Inclusive Places
Engagement	To collaborate, listen and involve stakeholders to arrive at a shared vision to deliver outcomes for society	Healthy & Inclusive Places
Community Safety & Wellbeing	Collaborate with communities to design places for and promote a culture of health, safety and wellbeing for the community to enable positive interactions	Healthy & Inclusive Places
Social Issues	To reduce instances of social issues that impact communities (e.g. youth unemployment, suicide occurrence, crime etc.)	Healthy & Inclusive Places and Accountable & Collaborative Places
Jobs Creation	To drive the creation of productive cities, enabling jobs for the future	Productive Places
Affordability	To adopt an approach that delivers a high quality of life for community and delivers a broad range of diverse housing options	Productive Places
Governance	To adopt and disclose independent sustainability benchmarking or reporting frameworks to be transparent, uphold reputation, and demonstrate leadership	Accountable & Collaborative Places
Climate Change and Resilience	To embed climate adaptation and resilience into all projects and improve community awareness of impacts	Climate Resilient Places
Innovation	To embrace emerging trends and be at the forefront of initiatives that improve efficiency and/or performance	All Strategy Pillars

Reporting Boundaries

Our Sustainable Places Strategy applies to all new masterplan activity and projects during the 2018 reporting period. As a masterplan developer we use a variety of structures to deliver projects. The key types of project structures that we use are:

· Owner/Master Developer
· Project Delivery Agreement (PDA)
· Reverse Project Delivery Agreement (RPDA)
· Joint Ventures (JV)

Because we use these different approaches, Landcom has different levels of influence over project outcomes. For example, with our *Climate Resilient Places* targets there is variability between what we can influence when acting as the Owner/Master Developer, compared to a Reverse Project Delivery Agreement where we are not the land owner and we may need to negotiate with other project partners before adopting environmental commitments for the project.

Type of project structure	Land ownership	Delivery method	Asset disposal
Owner/Master Developer	We own the land	We are responsible for masterplanning and approvals and undertaking all development works	We sell the land as vacant lots – residential, commercial or industrial
Project Delivery Agreement (PDA)	We own the land	We tender for a partner to project manage and undertake development works (there is a clear delineation of risks and responsibilities between us and our partners)	The successful tenderer acts as a 'super contractor' in return for payment from us on sale of individual lots to third parties
Reverse Project Delivery Agreement (RPDA)	We do not own the land (we develop the land on behalf of another government agency or the private sector land owner)	We generally undertake the planning, construction and/or sales activities	All revenue on sale is paid to the land owner and we invoice the land owner for the reimbursement of costs and fees
Joint Venture (JV)	We sell the land to the JV for a cash payment	We create a separate legal entity that can pay invoices, pay and receive GST and receive sales revenue	We, and the JV partner, contribute equity into the JV equally and receive a profit share equally (not revenue)

The below table summarises which projects are in scope to be reported on for FY18, and are mapped against each pillar of our Sustainable Places Strategy.

In some cases, a project is in scope for *Climate Resilient Places* targets, but not for *Healthy & Inclusive Places*. This is because our environmental work tends to occur earlier in a project's lifecycle, linked largely to construction phases, whereas social sustainability can occur through to completion.

Table key

· **'Y'** refers to Projects which are in scope to be reported against for one or more of the targets under the new Sustainable Places Strategy.
· **'N'** refers to where Projects are out of scope under the new Strategy for all of the targets under a Strategy pillar.
· **'L'** refers to 'Legacy Projects'. Legacy projects are those in our portfolio that were substantially delivered prior to the Sustainable Places Strategy being adopted, and are out of scope for reporting, but have been included as part of baseline figures in some indicators.

CRP = Climate Resilient Places, **HIP** = Healthy & Inclusive Places, **PP** = Productive Places, **ACP** = Accountable & Collaborative Places

Division	Asset	CRP	HIP	PP	ACP	Project overview
Corporate	Operations	N	N	Y	Y	Landcom maintains its head office tenancy at Parramatta.
Construction Unit	Dwellings and public buildings	Y	N	N	N	Construction of social housing on behalf of Land and Housing Corporation at various sites.
West	Edmondson Park	Y	Y	Y	N	Owner/Master Developer. Approximately 4,000 new homes, with train station, town centre with retail, business and commercial space, 150ha regional park with cycleways, and two new schools.
	Thornton	N	Y	Y	N	Originally a Department of Defence site. Landcom works are complete, and enabled approximately 2,000 homes adjacent to Penrith train station. Mix of detached and attached dwellings, Affordable Housing and apartments. Origin of the 21st Century Terrace.
	Riverstone	N	N	N	N	Project is a RPDA consisting of approximately 300 residential lots that were subdivided in 1881, and are currently owned by around 50 landowner groups. Landcom is coordinating the delivery of the project on behalf of the landowners as the 'Relevant Authority' under the Environmental Planning and Amendment (Paper Subdivisions) Regulation 2013.
South West	Macarthur Heights	L	Y	Y	N	RPDA with Western Sydney University, adjacent to the Western Sydney University campus. Located within walking distance from Macarthur train station and Macarthur Square shopping centre, with over 950 residential lots. Includes 42ha of parklands plus sporting fields.
	Macarthur Gardens North	Y	Y	Y	N	PDA with Stockland. Adjacent to the Macarthur Heights community, the project has a direct connection to Macarthur train station through Bow Bowing Creek. This site is in the planning phase.
	Renwick	L	Y	Y	N	RPDA with Family and Community Services. Renwick is a 117ha masterplanned community, located about 2.5km north of Mittagong in the Southern Highlands. It has potential to yield around 600 residential lots, ranging in size from 300m2 'cottage lots' to 4,000m2 'acre lots'. During the reporting period, the project completed civil works for the final stages of the development.
	Oran Park	L	Y	Y	N	RPDA with Greenfields Development Company. Once complete the precinct will provide 6,500 homes, a town centre, new schools, a smart work hub, retirement village and integrated primary care centre.
	Lachlan's Line[1]	L	Y	Y	N	Owner/Master Developer of an inner urban high density community adjacent to the North Ryde train station.
	Wentworth Point	N	N	N	N	RPDA with Roads and Maritime Services to deliver public open space.

1   While Lachlan's Line is a legacy project and has not undergone any masterplanning during the reporting year, we are considering it in-scope as we will be able to influence the sustainability outcomes in line with the new Sustainable Place Strategy through the development of the remaining buildings on site.

Division	Asset	CRP	HIP	PP	ACP	Project overview
South West (continued)	Airds (Newbrook)	L	N	Y	N	RPDA with NSW Land and Housing Corporation. Long term rejuvenation of the Airds Bradbury public housing area, transforming the existing 1,500 lot public housing estate into a masterplanned community of approximately 2,100 homes.
	Bonnyrigg (Newleaf)	L	N	Y	N	RPDA with NSW Land and Housing Corporation. Long term rejuvenation of the Airds Bradbury public housing area, transforming the existing 1,500 lot public housing estate into a masterplanned community of approximately 2,100 homes.
	Claymore (Hillcroft)	L	N	Y	N	RPDA with NSW Land and Housing Corporation to revitalize approximately 1.150 homes at Claymore public housing estate. When complete, Hillcroft will include new housing, parks, playgrounds and community facilities.
North West	Tallawong	Y	Y	Y	N	RPDA with Sydney Metro. Each site is located along the metro line. While Sydney Metro delivers the infrastructure and new stations, Landcom will deliver the communities surrounding each station.
	Kellyville	Y	Y	Y	N	
	Bella Vista	Y	Y	Y	N	
	Norwest	Y	Y	Y	N	
	Showground	Y	Y	Y	N	
	Castle Hill	Y	Y	Y	N	
	Cherrybrook	Y	Y	Y	N	
	Epping	Y	Y	Y	N	
Green Square	Green Square Town Centre	L	Y	Y	N	PDA with Mirvac to provide high density, inner urban living within the City of Sydney Local Government Area.
Complete Projects	Spring Farm	N	Y	N	N	Complete masterplanned community.
	The Ponds	N	Y	N	N	Complete masterplanned community.
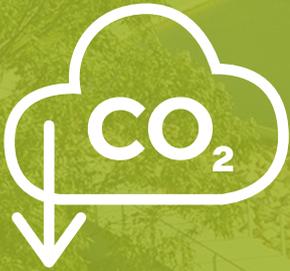
Climate Resilient Places

Leadership Goal

LEADERSHIP OBJECTIVE

To deliver low carbon, resource efficient and environmentally sensitive places.

LEADERSHIP TARGET

To lead environmental performance across Landcom developments by committing to being carbon neutral and water positive, with zero waste and net positive ecological outcomes by 2028.

Climate Resilient Places Pillar Overview

Landcom's Climate Resilient Places pillar is focused on a leadership goal to *'enable carbon neutral, water positive, zero waste and net positive ecological outcomes by 2028'*.

This leadership goal was developed to reflect Landcom's contribution towards the Paris Agreement's[2], long-term goal of keeping the increase in global average temperature well below 2°C, United Nations Sustainable Development Goals[3], reducing the impact of shocks and stresses to communities and infrastructure, as identified by Resilient Sydney[4] (part of the Rockefeller Foundation 100 Resilient Cities Program), such as extreme weather and water crises.

Within this pillar, Landcom focusses on environmental sustainability, and resilience. It encompasses environmental management and the adoption of independent third party rating tools and certifications, engaging with our supply chain, supporting communities to reduce their operational costs of living, and developing our projects in a way that reduce impacts on the environment.

Environmentally sustainable communities are balanced in meeting the needs of the natural, and urban environment. They take into account the needs of people today, and the needs of our future generations. Landcom also believes that the built environment should incorporate green spaces, and retain a connection to our natural habitats for the benefit of the environment, and our communities.

Landcom addresses environmental sustainability through the following focus areas:

· Energy & Emissions
· Water
· Environmental Management
· Climate & Resilience
· Waste & Materials.

Each of these focus areas includes a suite of targets to measure our success.

Management Approach

Energy & Emissions and Water

Every Landcom project is unique, and requires a bespoke approach to environmental sustainability. To identify opportunities to improve our performance for *Energy & Emissions* and *Water* targets, we use the sustainability modelling tool PRECINX.

Landcom commissioned the development of PRECINX in 2009, as a tool for quick, easy and accurate predictive modelling of greenhouse gas emissions, water consumption, transport outcomes and cost of living impacts of development in the built environment. Landcom now licenses the tool, as do many other developers, utilities, and local and state government organisations.

Our approach to *Energy & Emissions* includes influencing the reduction of greenhouse gas (GHG) emissions (stationary and transport) at a precinct scale across our communities, and influencing the onsite production of renewable energy. We approach *Water* in a similar way, by looking at the reduction of potable water use across a precinct, and identifying opportunities for recycling and reuse.

In addition, we also set ourselves targets for maximum stormwater discharge pollutant loads from our sites. This minimises downstream water quality impacts in the communities we develop. Urban stormwater modelling software such as MUSIC[5] is used to measure pollutant loads across our projects.

To see our FY18 performance for *Energy & Emissions*, see *Energy & Emissions Performance Results* (p. 17), or for *Water* see *Water Performance Results* (p. 25).

2   What is the Paris Agreement? (2018) https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement
3   United Nations Sustainable Development Goals (2018) https://www.un.org/sustainabledevelopment/sustainable-development-goals/ for our full alignment to the SDGs see Appendix 4: Sustainable Development Goals Alignment
4   Resilient Sydney, Preliminary Resilience Assessment (2016) https://www.100resilientcities.org/cities/sydney/
5   MUSIC Overview (2018) https://ewater.org.au/products/music/music-overview/

Environmental Management

As part of our Sustainable Places Strategy, we are committed to adopting independent third party rating tools and certifications, or exceeding regulatory requirements. We believe it is important to have independent verification of our sustainability performance. This is aligned to our targets for *Environmental Management*. Our preferred rating tools are outlined below.

Asset type	Rating tool	Rating Tool Provider
Communities at the precinct scale	Green Star Communities	Green Building Council of Australia
Buildings other than residential	Green Star Design & As-Built	Green Building Council of Australia
	NABERS	NSW Office of Environment and Heritage
Residential dwellings	BASIX	NSW Department of Planning and Environment

In some instances, Landcom may also agree to use other rating tools in lieu of, or in addition to, those outlined. This is at the discretion of Landcom.

For our FY18 activities related to *Environmental Management*, see *Environmental Management Performance Results* (p. 20).

Climate & Resilience

Landcom's approach to *Climate & Resilience* includes understanding our risks to climate change and its impacts, ensuring our communities are adaptable to change, addressing known climate risks – such as urban heat island[6] – immediately, and maintaining our commitment to enhancing local biodiversity and ecology.

Extensive work on resilience has been led across Sydney since our city's inclusion in the international 100 Resilient Cities program (100RC). Funded by the Rockefeller Foundation, 100RC is working with 31 cities internationally to enhance their resilience to shocks and stresses. Landcom has collaborated with, and taken guidance from, the work of the Resilient Sydney team. In FY18, we adopted a framework used to assess our projects for exposure to climate change risks. This has been accompanied by the development of a Resilience-In-Design checklist to support project teams and their consultancies. The checklist guides the teams to consider common climate risks during the early phases of a project's design. The assessment framework also feeds into community adaptation plans that are designed to enhance the resilience of our communities in the way they live day to day.

In FY18 we also commenced our Healthy & Inclusive Places Survey, and sought direct feedback from residents of Landcom communities, on their preparedness for an emergency. These insights will support any climate adaptation and community resilience work Landcom may choose to integrate into our Community Development programs (see *Health, Equity & Inclusion*, p. 31).

Landcom is also taking steps to address known risks immediately, which includes reducing the effects of urban heat island across our new communities. As one of Sydney's most significant climate related risks, early design interventions to address urban heat is required in the creation of new communities. To improve industry's ability to understand and measure urban heat, Landcom is also an ongoing partner of the Cooperative Research Centre for Low Carbon Living (CRCLCL) – and actively engaged in the development of an urban heat island mitigation decision support tool[7].

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6   Urban Heat Island Effect (2018) http://www.cityofsydney.nsw.gov.au/vision/towards-2030/sustainability/carbon-reduction/urban-heat-island
7   Urban Heat Island Mitigation Decision Support Tool (2018) http://www.lowcarbonlivingcrc.com.au/research/program-2-low-carbon-precincts/rp2023-microclimate-and-urban-heat-island-mitigation

Finally, Landcom also seeks to address resilience in the natural environment. This is achieved when we maintain strong diversity of our ecological systems. We address this through the use of our Biodiversity Calculator, to measure the quality and quantity of ecological communities beyond any legislative requirements, pre- and post-development — aiming for a net positive outcome at the completion of our projects.

For our FY18 performance against our *Climate & Resilience* targets, see *Climate & Resilience Places Performance Results*, p. 13).

Waste & Materials

Landcom's environmental leadership goal for 2028 includes enabling zero waste communities. To do this, we are advocating for responsible use of resources, and diversion from landfill. Landcom has long held a waste diversion from landfill target, which has been maintained in our new Sustainable Places Strategy.

While we are focused on reducing waste within our own offices, it is construction waste that is material to Landcom's operations. As part of our ISO14001 Environmental Management System, Landcom continues to engage with our site superintendents and principal contractors to reduce, reuse or divert waste from landfill. This includes ongoing training and reporting with these key stakeholders.

To advance our commitments further, we have also included the responsible sourcing of timber for all construction works. This target also increases engagement with our supply chain, and supports our work underway within our *Accountable & Collaborative Places* pillar.

For our FY18 performance results against our *Waste & Materials* targets, see *Waste & Materials Performance Results* (p. 24).

Climate & Resilience Places Performance Results

Landcom's Sustainable Places Strategy addresses *Climate & Resilience*. This focus area forms part of our *Climate Resilient Places* pillar and is a representation of our commitment to delivering resilient communities that balance ecological outcomes, reduce climate related stresses and build community resilience.

FY18 Targets and Performance

The below table outlines our FY18 performance against our *Climate & Resilience Targets*.

Indicator	Objective	Target	FY18 Performance
Climate & Resilience	To respect, conserve and regenerate our natural environment and embed adaptation and resilience into all precincts, and expand community awareness.	All new projects to undertake a Climate Resilience Assessment	5 out of 9 complete
		All new projects prepare and implement an effective Climate Adaptation and Community Resilience Plan	2 out of 9 complete
		All new projects enhance the local habitat, biodiversity or ecological communities, compared to the site conditions pre-acquisition or pre-masterplan (Landcom Biodiversity Calculator)	67% make a positive contribution
		Total project site area in plan view comprised of building or landscape elements that reduce the impact of urban heat island effect **Greenfield Projects:** 50% project site area **Renewal or High Density Projects:** 20-50% project site area (calculation in accordance with Green Star Communities)	100% of projects in scope achieved

Climate Change Risk and Community Resilience

In FY18, Landcom collaborated with consulting firm AECOM to enhance our current project portfolio's resilience to climate related risks, and increase our internal capacity to ensure all future projects are resilient. Key actions to enable this included:

1. Completing a climate change risk review of Landcom's current portfolio against the Intergovernmental Panel on Climate Chance Fifth Assessment Report (IPCC AR5) climate projections for 2030 and 2090[8]

2. Based on the above review, identifying and prioritising projects exposed to high risks, for detailed climate change resilience assessments

3. Developing a climate resilience pro forma to assess all future Landcom projects consistently, and testing of the pro forma at the two projects identified in action 2 above

4. Creating a Resilience-in-Design checklist for guiding projects in concept development.

A total of five of the nine new projects and all the legacy Landcom projects were reviewed against the IPCC AR5 climate projections, including Lachlan's Line, Epping, Cherrybrook, Showground, Tallawong, Edmondson Park, Bonnyrigg, Claymore, Airds and Macarthur Heights and Macarthur Gardens North[9]. Across these projects, we saw a trend of exposure to risks of extreme heat, bushfire, extreme rainfall events and flooding.

Extreme heat was rated as an 'extreme risk' at four Landcom communities, which is consistent with the top risks to Sydney identified by Resilient Sydney[10]. This finding further confirms the importance of Landcom's priority to reduce or mitigate the effects of urban heat island, and build community resilience to heat at all new projects.

Tallawong and Edmondson Park were the two projects prioritised to pilot the climate resilience assessment pro forma developed to support Landcom projects. Detailed resilience assessments and community adaptation plans were also developed for both projects during the reporting period.

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8   What is the IPPCC AR5 Assessment Report? https://www.ipcc.ch/report/ar5/
9   Not all projects that participated in the risk review are in scope for FY18 reporting against our climate resilience targets as we sought a spectrum of project types to test the assessment process.
10   City of Sydney Resilient Sydney (2018) http://www.cityofsydney.nsw.gov.au/vision/towards-2030/resilient-sydney

In FY19, we will complete the assessment of the four remaining new projects and finalise detailed resilience and community adaptation plans for the remainder of the project portfolio. As the majority of these projects still have planning and design to undertake, we have a great opportunity to materially reduce the climate risk profile of these future communities through the masterplanning process.

We also developed a Resilience-in-Design Check List, to support projects at the concept development phase. This Check List can be used by teams when briefing their design and engineering consortiums to ensure climate risk mitigation and resilience is embedded into Landcom communities from project inception.

Urban Heat Island Reduction

Heat continues to be a major stress for many cities across Australia, as confirmed by our climate change risk assessments. Landcom's commitment to reduce urban heat island effect (UHI) will contribute to reduced risk of extreme heat at our projects. This will enhance the resilience of our communities, and the residents that live there.

As part of our Sustainable Places Strategy, we have committed to reducing the effects of UHI through the provision of landscape and design elements that mitigate heat retention. This includes requiring appropriate provision of green open spaces within our communities, increasing canopy cover and using materials that reflect (rather than absorb) heat, such as light coloured roofs.

It is important to note Landcom has adopted two separate targets for UHI, related to different development typologies. Our greenfield projects with low density and detached dwellings are required to achieve a much higher UHI mitigation target (50%) compared to high density or infill projects (20%). This distinction has been designed to address the challenges infill or high density projects often experience when responding to existing urban environments, or constrained sites.

In FY18 we undertook a detailed assessment of existing Landcom communities to better understand how our current and past design practices influence UHI effects. It is important to note that all projects reviewed were largely complete or well underway for delivery before Landcom adopted its UHI targets, and therefore most are not in scope for performance reporting in FY18.

Greenfield projects reviewed included Edmondson Park, Oran Park Town, Macarthur Heights, Renwick, Bonnyrigg, Claymore and Airds; while our infill or high density communities were Green Square, Tallawong, Showground and Lachlan's Line[11]. Half of these projects met or exceeded our new UHI targets, despite not having been designed to address UHI. This is largely due to the integration of parks, open spaces and riparian or other protected bushland into the design of our communities.

Our most insightful project reviewed was Oran Park Town, which commenced construction in early 2007. A key priority of landscape design at that time was the use of endemic tree species, especially for street trees. Unfortunately the profile and leaf structure of Australia's native trees can cast limited shade, and make a low contribution to urban canopy cover — despite their many other benefits. Consequently, while Oran Park has a high proportion of street trees, they make little contribution to reducing UHI effects.

Insights like this will support Landcom to approach the future design and delivery of our communities in a way that nurtures our native ecological communities, while addressing the need to reduce UHI effects and building resilience to the stress of extreme heat experienced across NSW.

Biodiversity

FY18 is the first year Landcom will report the contribution we make to biodiversity and ecological systems. To support the business in measuring this, we developed our Biodiversity Calculator, based on the Green Building Council of Australia's change in ecological value calculator provided in Green Star tools.

Landcom's Biodiversity Calculator is designed to measure the change in quality and quantity of biodiversity at a given project site, from pre-development to post development. The calculator goes beyond just assessing high-value and significant biodiversity (which legislation requires to be conserved) and factors a broader spectrum of biodiversity value into the assessment. Depending on the level of quality and quantity change, the calculator determines whether a net positive or net negative impact has been achieved. It is possible to have a net positive outcome in biodiversity, despite a reduction in physical area – if the quality of that area has been significantly improved.

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11 Of the projects analysed, Tallawong, Showground and Edmondson Park are considered in scope for reporting in FY18. All met or exceeded our UHI target.

The scale provided by the calculator is as follows.

Definition	% change in biodiversity index of site from pre to post development
Poor	<0 %
Moderate	0-10%
Good	10-50%
Excellent	>50%

We acknowledge that land development and retention of biodiversity are sometimes at odds. Despite our best efforts to retain existing flora and fauna at all our sites, sometimes this is not possible. However, we do aim to always have a net positive outcome at our projects. Some methods we may use include biodiversity offsets[12], and restoration works – such as improving eroded riparian corridors to full health.

For projects in scope for FY18 reporting (Tallawong, Kellyville, Showground, Epping, Macarthur Gardens North and Edmondson Park), 67% are currently making a net positive biodiversity contribution. Once complete, Edmondson Park and Macarthur Gardens North will both reduce the overall area of onsite biodiversity from pre-development to post-development, but still return net positive outcomes due to the enhancement in biodiversity quality. At each project, significant remnant habitat will be enhanced from poor to good condition — and native habitat offsets will be employed to manage the reduction in habitat area.

The remaining sites assessed form part of the Sydney Metro NorthWest (SMNW) Places program. Each of these sites is co-located at a new metro station, being delivered by Transport for NSW (TfNSW). TfNSW is also the land owner of these projects, and Landcom has been appointed as the master developer for the surrounding communities.

Of the SMNW Places assessed, Showground and Epping are forecast to contribute a moderate (net positive) change in biodiversity value based on the calculator scale above, whereas Tallawong and Kellyville are forecast to have a 'poor' (net negative) change in biodiversity. As Landcom is not the land owner of the SMNW corridor and its associated project sites, management of biodiversity offsets and other approvals is beyond our operational control. Landcom will continue to review opportunities to elevate the performance of sites such as Tallawong and Kellyville through project divestment and delivery strategies.

In FY19, we will leverage the insights gained from our Healthy & Inclusive Places Survey, which showed that 20% of resident satisfaction with the design of their community was related to its connection with the natural environment. This clearly reveals that residents value the contribution local biodiversity and ecology makes to their lives, and supports Landcom in advancing our commitment to achieve net positive biodiversity outcomes across all new projects.

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12 Through schemes such as the NSW Office of Environment and Heritage Biodiversity Offset Scheme and BioBanking Trust.

Case Study: Urban Heat Mitigation Tool

The Urban Heat Island Mitigation Decision Support tool (UHI-DS Tool) is a research project led by the University of New South Wales through the Cooperative Research Centre (CRC) for Low Carbon Living. Landcom is involved in the collaborative research as a member of the project steering committee, and is also making our projects available as test beds for the practical application of the research. The research objectives are:

- To provide governments and built environment industries with a decision-support tool to inform urban policy, development assessment and planning practices related to potential building and urban interventions, used to cool streetscapes and cities, decrease energy consumption, protect the population's vulnerable health-wise, and improve conditions of comfort.

- To integrate scientific models with a range of mitigation techniques to perform urban heat island mitigation analysis across both building and urban scales, such as building coatings and roofs, urban form and density, greenery and infrastructure.

- To develop an Urban Heat Island Mitigation Performance Index to support governments in establishing performance targets for their planning control. The Index will indicate impact on street level temperature, health and mortality, precinct level energy consumption, etc.[13]

The output from the project is critical to Landcom as it will provide a tool enabling us to model and predict the urban heat impacts in our masterplans and adapt the communities to minimise the impacts. Urban heat is a key driver of climate and community resilience through its effect on energy efficiency and greenhouse gas emissions, stress on people and morbidity rates, liveability through walkability and many other facets of what makes a community sustainable.
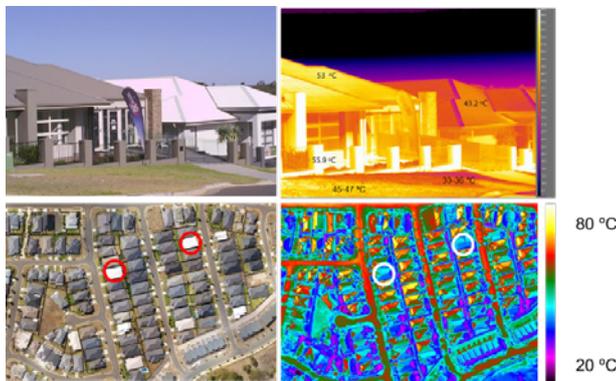
During FY18, we began testing the tool at Green Square Town Centre and Macarthur Heights, which are two very different geographic areas (inner Sydney and greater Sydney), with distinct microclimates and building types, and with differing levels of natural environment surrounding the sites. The testing included site scanning with the 'Energy Bus' and a special drone fitted with sensors and cameras.

Preliminary results from the testing clearly show the dramatic benefits of using reflective surfaces and exposing foliage such as grass and trees. At Macarthur Heights, the difference in roof surface temperature between a light grey and white roof is almost 10 degrees Celsius. The surface temperature of darker roofs at the hottest part of the day can be up to approximately double the temperature of a white roof, as can be seen in the bottom images of Figure 1.

With a model that can predict the surface and air temperatures, Landcom will be able to reflect any environmental improvements realised through direct design interventions within the PRECINX models established for our projects. This will empower teams to predict the reductions in energy usage (and GHG emissions) and cost of living improvements associated with energy use, and plan for improved walkability by knowing where the 'cool routes' are within a community.

The UHI-DS Tool research project will wrap up in FY19, and Landcom is looking forward to sharing the outcomes of the pilot site models. Moving forward we will also develop a strategy for fitting the UHI-DS Tool in our suite of sustainable masterplanning tools.

Figure 1 Preliminary Results showing temperature gradient between different surface types at Macarthur Heights.
Image credit: CRCLCL UHI-DS Tool.
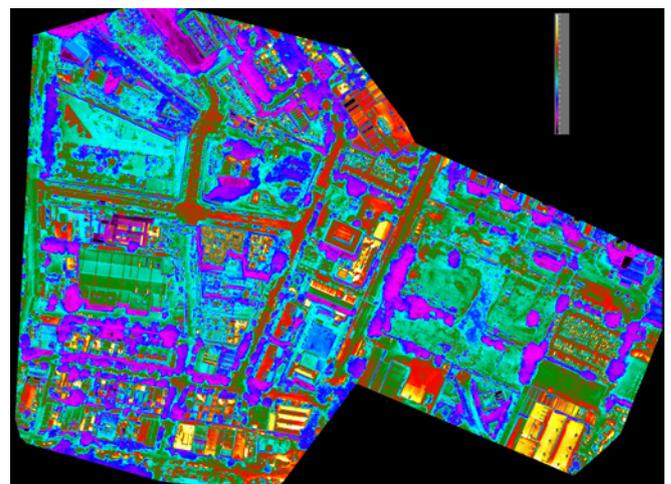
Figure 2 Surface temperature of Green Square Town Centre, data collected by drone and stitched together to create a full map.
Image credit: CRCLCL UHI-DS Tool.

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13 RP2023: Microclimate and Urban Heat Island Mitigation Decision-Support Tool (2018) http://www.lowcarbonlivingcrc.com.au/research/program-2-low-carbon-precincts/rp2023-microclimate-and-urban-heat-island-mitigation

Energy & Emissions Performance Results

Landcom's Sustainable Places Strategy addresses *Energy & Emissions*. This focus area forms part of our *Climate Resilient Places* pillar and is a representation of our commitment to delivering energy efficient communities that reduce greenhouse gas emissions, advance uptake in renewable energy technologies, and reduce the cost of living to residents.

FY18 Targets and Performance

Indicator	Objective	Target	FY18 Performance
Energy & Emissions	To conserve energy and drive energy efficient, low carbon, low emissions precincts for the future.	All new projects modeled to reduce Green House Gas (GHG) emissions at a precinct scale (transport & stationary) by 50% against 2016 reference case (CCAP PRECINX)	46% reduction
		5% of predicted precinct energy demand supplied from onsite renewable energy, where site constraints permit	No new projects in scope[14]

Greenhouse Gas Emissions Reduction

Our emissions reduction target seeks to minimise stationary and transport emissions through the adoption of energy efficient design, renewable energy infrastructure, transport mode split and parking strategies, and incentives to encourage efficient appliances. The emissions reported are the predicted operational emissions of a masterplan at completion and are calculated using the sustainability modelling tool PRECINX.

FY18 is the first time Landcom has adopted a greenhouse gas (GHG) emissions reduction target for projects. New projects, or individual precincts within ongoing projects, that are currently in the planning and design stages are in scope for FY18 reporting[15] and accounts for over half of Landcom's overall predicted emissions (see Figure 3). New projects reported include Tallawong, Showground, Edmondson Park and Lachlan's Line.

The weighted average GHG emission reductions expected across the new projects in scope for FY18 is 46%[16] (see Figure 4). Medium density projects have achieved the highest reductions; for example, the concept schemes at Edmondson Park achieved a 59% reduction with the proposed strategies.

New higher density projects present Landcom with the greatest challenge to meet our targets, due to the reduced site area and roof-space available to incorporate renewable energy technologies in a cost-effective way. Moving forward, Landcom will be focussing on opportunities to increase energy efficiency and reduce the GHG emissions at higher density projects.

Contribution of each portfolio to total predicted emissions

42% 58%

■ Legacy projects ■ New projects
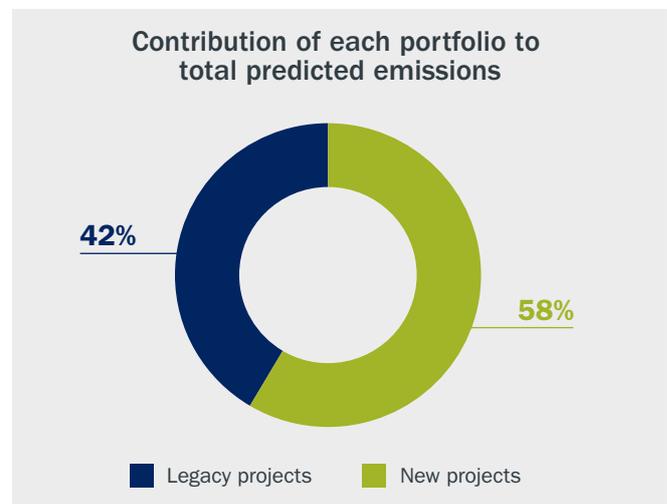
Figure 3 Contribution of each project portfolio to our total predicted emissions, showing that the quantum of emissions from our new project portfolio is more material than our legacy projects, due to the proportional size of each portfolio.

For completeness, we are also reporting the achievements of legacy projects underway before the adoption of the Sustainable Places Strategy (see Figure 4). Of the projects included in our baseline legacy results, the stages at Macarthur Heights currently in delivery are forecast to have the greatest emissions reductions, at 56%. This project is nearing completion, with the majority of civil and community infrastructure delivered, and civil works for the last stage of lot subdivisions remaining to be completed and released for sale in the coming year.

In FY18, residential dwellings are our most material

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14 These targets apply to the delivery of new project in FY18; we did not deliver any new projects in FY18 for which this target is relevant.

15 Performance is based on projected performance for all new Landcom projects, until such time as the delivery or divestment strategy for each project is confirmed. At this time, results will become 'actuals'

16 Reduction from the reference case. Landcom chooses to use its PRECINX tool for modelling potable water and Greenhouse Gas emission reductions. 2016 reference case is defined as the normalised relevant metropolitan average applied to a masterplan.

Project GHG Emission Reductions against 2016 Sydney Metro Averages
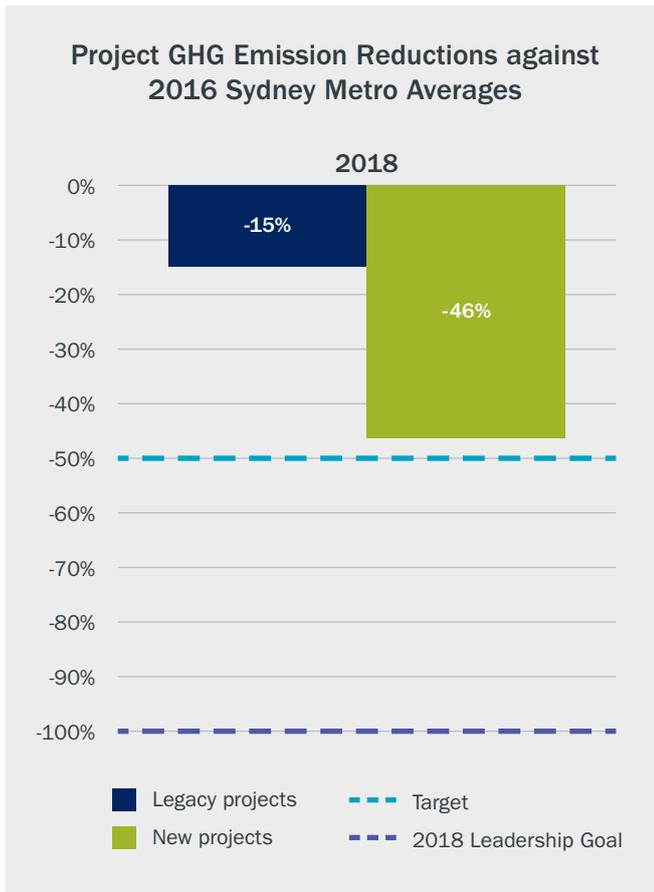
Figure 4 Predicted GHG emissions reductions from Landcom project portfolio, against FY16 baseline, modelled using PRECINX. Results show our 'New' projects which are in scope for reporting during FY18, and for completeness our 'Legacy' projects, which are out of scope for the targets.

emissions source (see Figure 5). Emissions from dwellings were forecast to achieve a 52% reduction across new projects, while transport emissions are the second most material with a predicted reduction of 47%.

Non-residential land uses are expected to achieve an 8% reduction, however this only accounted for 15% of overall emissions across our new project portfolio. In FY19 we will continue to focus on opportunities to further reduce residential and transport emissions.

While our emissions target is designed to address new projects, in FY18 we also workshopped opportunities to make a meaningful impact at projects that have already moved through the planning and design phase. In consultation with the project teams and marketing teams, we concluded that a rebate incentive for residents currently going through a new home build presented the greatest marketable opportunity to lower emissions in established communities at this point in the market cycle (see our *Sustainability Rebate Case Study*, p. 19).

Onsite Renewable Energy

In FY18, Landcom had no projects in scope for reporting the inclusion of onsite renewable energy. This is due to no new projects having been acquired for delivery by Landcom, or sold with agreed contracts of sale to the private sector during the reporting year.

Landcom's onsite renewable energy target is for 5% of total site demand at the precinct scale to be delivered by onsite renewable energy. This extends beyond the inclusion of solar panels on residential homes, and requires a strategic precinct scale response. The intent of this target is to drive innovation and large scale integration of renewable energy sources at the project site.
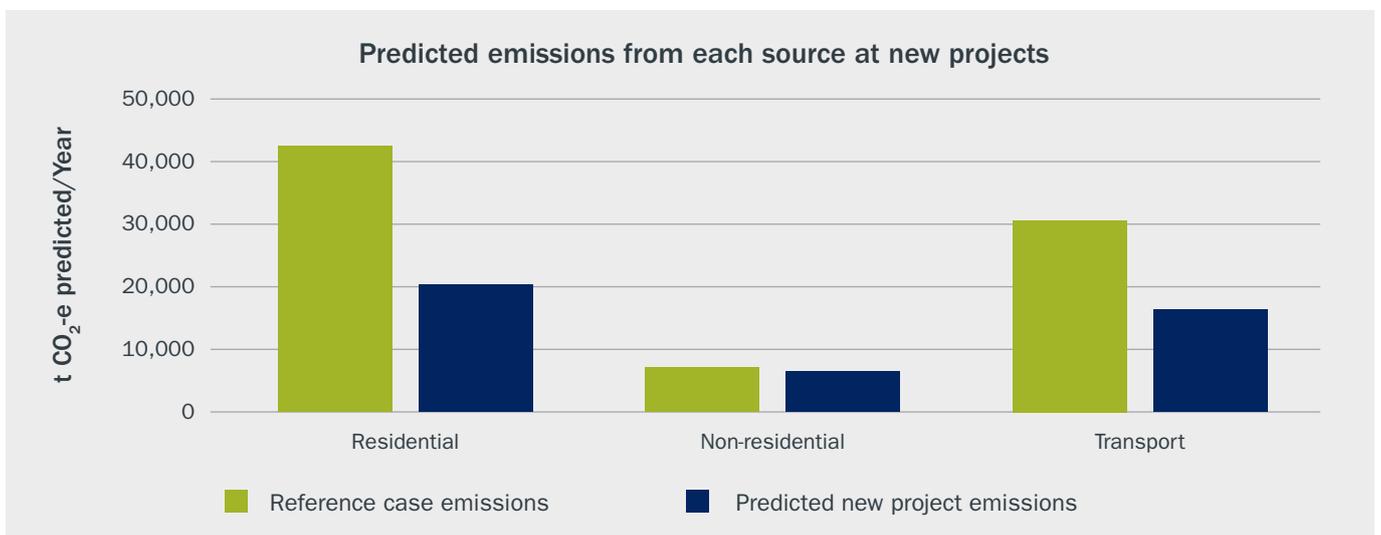
Figure 5 Predicted emission from each source compared to the reference case for each source in our New Project portfolio

Sustainability Rebate Case Study

In FY18 Landcom revised its Rebate Policy to include Sustainability Rebates. This is a new incentive to encourage greater sustainability and resilience of new homes in Landcom communities.

The sustainability rebate supplements Landcom's existing Landscaping and Fencing Rebate, and offers a 'cash back' incentive to buyers who build their homes to meet or exceed Landcom's standards, for example our BASIX targets.

Our Sustainability Rebate was developed in collaboration with the Landcom Sales and Marketing Team and Project Teams. Sales and Marketing undertook a review of the residential market to determine the best financial rebate value, sufficient to attract interest and drive sales leads. The Sustainability Team then worked within the prescribed rebate value to reverse-engineer what type of home interventions would yield the greatest return on investment – both for the home owner, and to accelerate Landcom's performance against our *Energy & Emissions* and *Environmental Management* targets.

Inclusions that will contribute to a residential home meeting Landcom's BASIX targets include:

· LED lighting upgrades
· Solar panels, solar hot water systems and home batteries
· Energy efficient appliances
· Rainwater tanks.

A key consideration was to ensure the Sustainability Rebate was beneficial to new owner occupiers and renters that may choose to live in a new home within a Landcom community. By enhancing the quality and efficiency of a home, its overall value is improved – benefiting owner occupiers and investors. As the rebate also enables operational cost savings for the life of the home, it ensures renters also derive value from it.

Sustainability Rebates will be offered at various Landcom projects from FY19. In order to claim the Rebate, buyers will need to present their BASIX Certificate to Landcom, showing they have met or exceeded the minimum score set by Landcom. BASIX Certificates are required by the Department of Planning and Environment and form part of existing development consent and occupancy certification requirements at the completion of a home build, so there is minimal cost impost for our customers to claim the Rebate.

Through this process, we are one step closer to our net-zero carbon leadership Goal, encouraging low carbon homes.

Environmental Management Performance Results

Landcom's Sustainable Places Strategy addresses *Environmental Management*. This focus area forms part of our *Climate Resilient Places* pillar and is a representation of our commitment to delivering communities that achieve or exceed independent third party rating systems or standards.

FY18 Targets and Performance

Our FY18 performance results are presented below. None of our *Environmental Management* targets were in scope for reporting this year, as no new projects were commenced or delivered to market during the reporting period that would enable these targets to be adopted.

Indicator	Objective	Target	FY18 Performance
Environmental Management	To maintain and enhance a culture of high environmental performance.	All projects will adopt the use industry recognised rating tools at a masterplan and built form scale, achieving not less than 'Australian Best Practice' equivalent (Green Star preferred)	No new projects in scope[17]
		NABERS: Office, Hotel & Retail – Commitment Agreement or designed-to 5 Star Energy and Water	No new projects in scope[17]
		BASIX energy: Detached & Semi - 60; Low-Rise - 55; Mid-Rise - 45; High-Rise - 40 BASIX water: all dwellings - 60	No new projects in scope[17]

Green Star Certification

Green Star, administered by the Green Building Council of Australia, is Landcom's preferred independent and voluntary rating tool for precincts and built form. Landcom is committed to achieving 'Australian Best Practice' project certifications for all new projects. This equates to what is commonly known as a '5 Star Green Star' rating.

Landcom's preferred industry rating tool for our assets is Green Star - Communities, which predominantly assesses all elements of a project beyond the individual lot boundary. This aligns strongly with Landcom's project delivery model, as we generally[18] deliver or enable all subdivision, major infrastructure and landscaping works, leaving the design and construction of the built form to the lot owner.

In some instances Landcom may seek to use, or require the use of, the Green Star Design & As-Built rating tool. This tool assesses the sustainability of built form such as community centres and other community based infrastructure, and commercial buildings.

Green Star is a comprehensive rating system that addresses the sustainability of a project from site acquisition through to construction completion. Landcom's target seeks to incorporate the application of a project rating into the initial due diligence and concept design for a project, to realise the most cost efficient and holistic outcomes.

In FY18, Landcom had no new projects in scope for this target. Throughout the reporting period we did review our existing asset portfolio for any projects that may be suitable to certify a rating, despite having finished due diligence and concept design stages. We will continue to pursue opportunities at our existing projects in 2019.

We also continued to support the City of Sydney to obtain a rating at Green Square Town Centre. Both Landcom and Mirvac are Project Delivery Agreement (PDA) partners for this project, and the City of Sydney is the Applicant for this rating (see our *Case Study: Green Square Town Centre, Green Star Communities Collaboration* (p. 22)).

NABERS Certification

Landcom adopts the National Australian Built Environment Rating System (NABERS)[19] as its preferred independent and voluntary rating system to validate the operational sustainability of eligible non-residential built form. NABERS measures a building's operational energy efficiency, carbon emissions, water consumption and waste production on an annual basis, and awards a star rating out of six.

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17 These targets apply to the delivery of new project in FY18; we did not deliver any new projects in FY18 for which this target is relevant.

18 With the exception of a small number of public facilities and home construction projects we deliver on behalf of other government agencies, such as the NSW Land and Housing Corporation.

19 What is NABERS? (2018) https://www.nabers.gov.au/about/what-nabers

Landcom is committed to requiring a NABERS rating at new projects that include office, retail or hotel built form. A NABERS rating can only be ensured at Landcom projects through collaboration with future building owners and operators, and will be achieved through conditional requirements within contracts of sale to future site owners.

As Landcom had no new projects released to market and sold within the reporting period, this target is not in scope for FY18.

Aligning with the NSW Government Resource Efficiency Policy (see *NSW Government Resource Efficiency Policy (GREP)*, p. 52), Landcom maintains a NABERS rating for our head office tenancy in Parramatta. In FY18, we achieved a 6 Star NABERS Energy Rating, representing a 'Market Leading' performance.

BASIX Certification

We measure the energy and water efficiency of homes built by Landcom in accordance with the *Environment and Planning Assessment Act* Building Sustainability Index (BASIX)[20]. BASIX is administered by the Department of Planning and Environment (DPE), applies to residential developments, and aims to deliver equitable, effective water and greenhouse gas emission reductions across NSW.

> 'BASIX targets are calculated as a percentage savings against the NSW average benchmarks (being the average per-person water consumption and greenhouse gas emissions levels across the state). These percentage savings are then expressed as a target, i.e. BASIX 50 represents a 50% saving against the benchmark. BASIX assesses a proposed dwelling based on these benchmarks, and taking into account regional variations such as soil type, climate, rainfall and evaporation rates.'[21]

Landcom has included BASIX targets in its sustainability commitments since 2005. When adopting our new Sustainable Places Strategy in FY18, we updated our BASIX targets to reflect our new aspiration for leadership in sustainability. As at 1 July 2017, DPE also increased the regulatory minimum BASIX energy requirements, in response to a review of the rating system.

BASIX Certificates are generated in accordance with the design of a new residential development, based on the specifications of that building. A BASIX Certificate must accompany any development application or complying development application, before approval for that building is provided. Once construction is complete, a BASIX completion receipt is issued if an independent certifier confirms the home has been built in accordance with the BASIX specifications. Landcom uses the BASIX completion receipt to validate the percentage of homes within our portfolio designed and delivered in accordance with our targets.

As Landcom only adopted our new BASIX target in November 2017, all homes we constructed in FY18 were designed to comply with our former BASIX targets, and as such are out of scope for this reporting period. However, for completeness we have continued to collect and report the performance of these dwellings.

In FY18, a total of 23 single-dwelling and 14 multi-dwellings were completed by Landcom, yielding a combined weighted average[22] BASIX energy score of 47, and water score of 41. Of those, single dwelling homes performed better in energy (energy score of 51), compared to multi-dwellings (energy score of 41). Across the board, the BASIX water scores for all dwelling types were consistent (between 40 and 42) as none of the sites had access to reticulated recycled water. These performance results are below our former Landcom BASIX targets, which is a direct result of projects that used Integrated Development Assessment (IDA) approval pathways[23].

Where an IDA is sought, the masterplan and *all dwellings* are approved under the one development application. As part of the IDA process, consolidated BASIX certificates were issued per project (or project stage), which averages the BASIX performance across all dwellings and typologies. Multi-dwelling BASIX requirements are lower than those for single-dwellings.

	Dwelling Type	BASIX reg. pre July 17	Previous Landcom BASIX targets	BASIX reg. post July 17	New Landcom BASIX targets
Energy	Detached & Semi-Detached	40	55	50	60
	Low rise (3 storey units)	35	No Target	45	55
	Mid-rise (4-5 storey units)	30	No Target	35	45
	High rise (6+ storey units)	20	No Target	25	40
Water		40	40	40	60

20 What is BASIX? https://www.planningportal.nsw.gov.au/planning-tools/basix
21 https://www.basix.nsw.gov.au/iframe/basix-help-notes/190-target-review/481-what-are-basix-points.html
22 Weighted by occupancy.
23 Integrated Development Assessments (IDA) enabled the approval of a project Masterplan and all dwellings, under one application. This can streamline the development process. IDAs were progressed for a number of projects where Landcom is working on behalf of NSW Land and Housing Corporation.

Therefore, the combined average BASIX certificate is not reflective of the different standards between typologies. Thus, results can be positively or negatively weighted, depending on the make-up of that community.

Of the 14 multi-dwellings presented in our results this year, the majority are subject to IDA BASIX certificates. If we exclude those homes, Landcom's weighted portfolio BASIX energy score rises to an energy score of 56, and water score of 42. This is in line with our recent performance trend, and is reflected in our BASIX historical trend graphs presented below.

During FY18, we also went to market with Expressions of Interest (EOIs) for approximately 1,550 dwellings across our Tallawong and Showground projects, as part of the Sydney Metro NorthWest (SMNW) Places program. Within these EOI, Landcom articulated our commitment to deliver against our Sustainable Places Strategy BASIX targets.

These two sites are expected to settle in FY19 and we will look forward to reporting the outcomes.
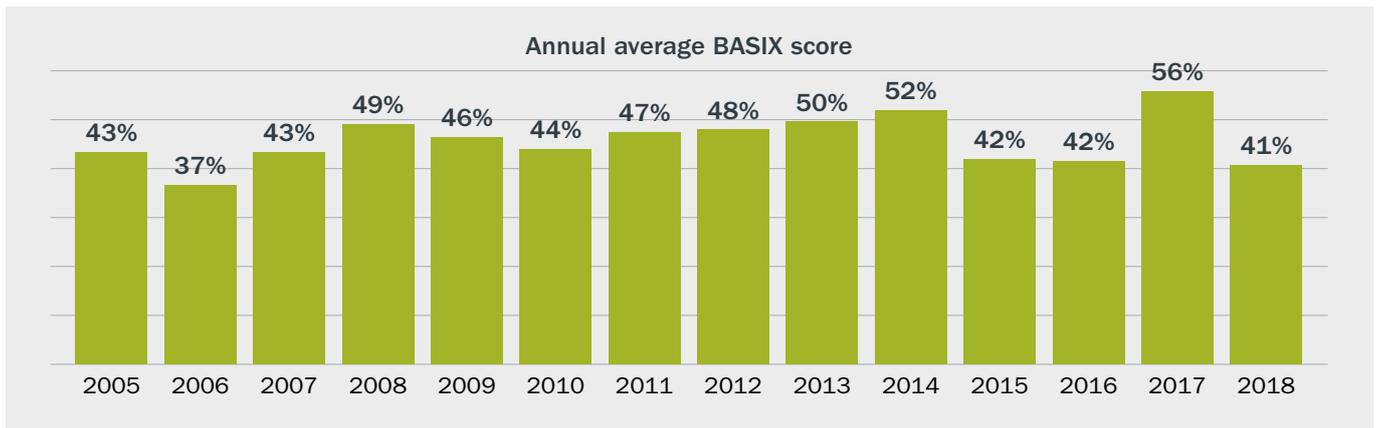
Figure 6 Historic trend for BASIX Water, including Legacy projects
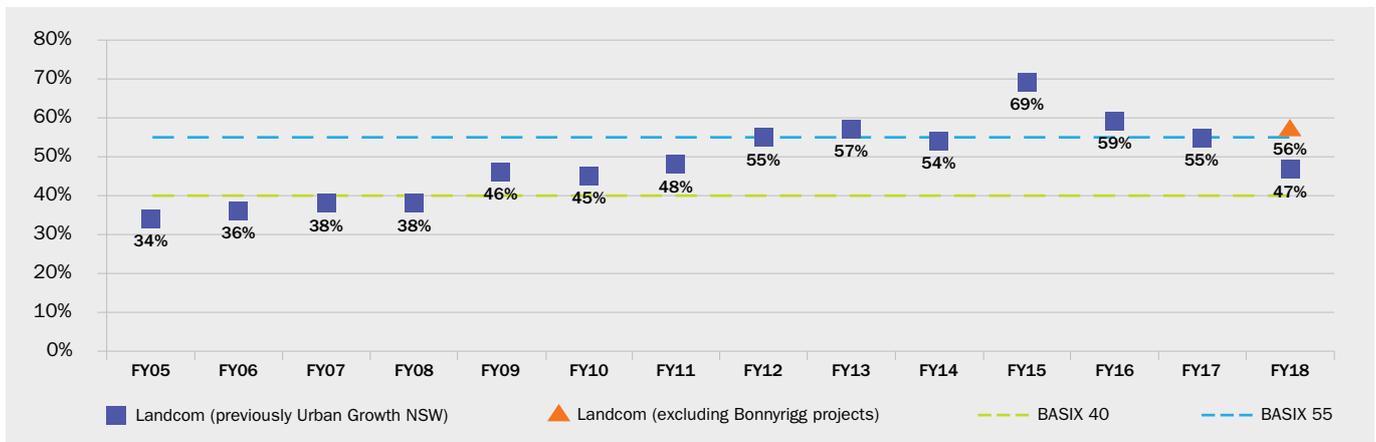
Figure 7 Historic trend for BASIX Energy scores of legacy projects.

Case Study: Green Square Town Centre, Green Star Communities Collaboration

Landcom is collaborating with our joint venture development partner Mirvac and the City of Sydney to achieve a 6 Star Green Star – Communities Rating at Green Square Town Centre (GSTC). The Green Star rating will be a demonstration of excellence in liveability and sustainability which has been the focus of GSTC since masterplanning began over a decade ago.

The Green Star Communities rating sought for this project is considered ground-breaking in industry due

to the unprecedented number of, and collaboration between, stakeholders that will enable a Green Star rating for GSTC.

City of Sydney, as the certification Applicant, is coordinating the rating with the input of all developers in Green Square Town Centre – including Landcom. It is expected the rating application will be submitted in early FY19, for the final result to be announced later that year.

Case Study: Landcom Sustainability Pattern Book

Landcom is always looking for ways to improve how our communities engage with sustainability. Our aim is to break down the misconception in volume home construction that 'sustainability' is synonymous with 'challenging' or 'expensive'.

Landcom has identified one of the easiest ways to improve the sustainability in our communities is to facilitate higher BASIX ratings for new homes. Not only is this a positive outcome for the environment, but it also has the potential to reduce the cost of living through lower power bills.

The Sustainability Pattern Book focuses on dwelling specifications that deliver high impact, with a preference for low maintenance outcomes. The Book provides an easy-to-access analysis of the capital costs, predicted household savings, and emission and water reductions, based on a sliding scale of achievement. The higher the BASIX rating, the greater the long-term financial and environmental gain.

The Book caters for the typical dwelling types that might be expected in a typical community – including detached or semi-detached houses and apartments. Across each of the dwelling types, the key strategies aim to deliver on five outcomes:

1. Comfortable homes that respond to local climate
2. 'Move-in ready' dwellings with efficient appliances
3. Solar panels to enable residents to generate their own energy
4. Electric vehicle (EV) ready homes that enable residents to transition to electric vehicles
5. Urban greening to create a cooler environment.

Originally developed to support our construction team building homes at Bonnyrigg, Claymore and Airds[24], the Book has quickly evolved to inform a new suite of home owner rebates Landcom intend to offer at select projects in FY19. These rebates will be focused on facilitating higher BASIX ratings for residential homes, where Landcom has not retained governance over the design or build.

The Sustainability Pattern Book is supporting Landcom to reduce emissions and unnecessary potable water consumption across our communities. This is in line with our long-term goal to enable carbon neutral and water positive outcomes across our portfolio. In future, we see great opportunity in making the Sustainability Pattern Book an open source tool for all new home builders to utilise.

Figure 8 Indicative strategies to guide the BASIX outcomes in dwellings at Landcom projects.

Base Case
Estimated Compliance

- 5-star NatHERS
- 5-star A/C
- Gas hot water
- Efficient water fixtures & tap fittings
- 2.5 kL rainwater tank for garden and toilet

BASIX Energy 50
BASIX Water 40

Option A
Landcom Targets

- 5-star NatHERS
- 5-star A/C
- Ceiling Fans
- Gas hot water
- 1 kW solar PV
- Efficient water fixtures & tap fittings
- 5kL raintwater tank for garden, toilet & laundry

BASIX Energy 60
BASIX Water 50

Option B
High Performance

- 6-star NatHERS
- 5-star A/C
- Ceiling Fans
- Gas hot water
- LED lighting
- Efficient dishwasher
- Efficient clothes washer
- 1.5 kW solar PV
- Efficient water fixtures & tap fittings
- 5kL rainwater tank for garden, toilet & laundry

BASIX Energy 75
BASIX Water 60

Option C
Carbon Neutral

- 7-star NatHERS
- 5-star A/C
- Ceiling Fans
- Heat-pump hot water
- LED lighting
- Efficient dishwasher
- Heat pump dryer
- Efficient clothes washer
- Efficient fridge
- 3 kW solar PV
- Efficient water fixtures & tap fittings
- 5kL rainwater tank for garden, toilet & laundry

BASIX Energy 100 (Carbon Neutral)
BASIX Water 60

24 On behalf of the land owner, Land and Housing

Waste & Materials Performance Results

Landcom's Sustainable Places Strategy addresses *Waste & Materials*. This focus area forms part of our *Climate Resilient Places* pillar, and is a representation of our commitment to delivering communities that reduce waste, and source materials responsibly.

These focus areas contribute to our leadership goal to enable zero waste communities by 2028.

FY18 Targets and Performance

The below table outlines our FY18 performance against our *Waste & Materials Targets*.

Indicator	Objective	Target	FY18 Performance
Waste & Materials	To drive innovation in waste reduction, and further enable the use of responsible resources.	All new projects divert minimum 95% construction waste from landfill (excluding contamination or hazardous materials)	No new projects in scope[25]
		100% timber sourced for construction (by cost) is Forest Stewardship Council Certified or agreed equivalent (ie Australian Forestry Standards)	No new projects in scope[25]

Waste

Landcom continues to place a high value on transparently reporting our impact on local environments. We are advancing our approach to focus on how we can achieve net positive environmental outcomes, including zero waste communities.

We have included a waste diversion from landfill target in our sustainability approach for many years. When adopting our Sustainable Places Strategy targets, we chose to carry forward our existing target to divert 95% of construction waste from landfill. However, we have made some adjustments to the way we calculate our waste target, primarily in the exclusion of hazardous waste and contamination volumes from the figures to align more closely with the standards set out in the Green Star rating tools.

In FY18, Landcom had no new projects within scope for reporting against our waste diversion target. Legacy Landcom projects that generated waste in FY18 reported a 92% diversion from landfill. The majority of waste was generated at Bonnyrigg, Oran Park Town and Renwick, with asphalt and concrete, vegetation and fill (soil) being the most significant recycled materials.

As these projects are operating under contracts that pre-date the adoption of our Sustainable Places Strategy, they are technically out of scope, however we are disclosing their waste diversion attainment in FY18 for completeness.

Consistent and accurate waste reporting remains a challenge across the development industry. In FY19 we will continue to work on process improvements for
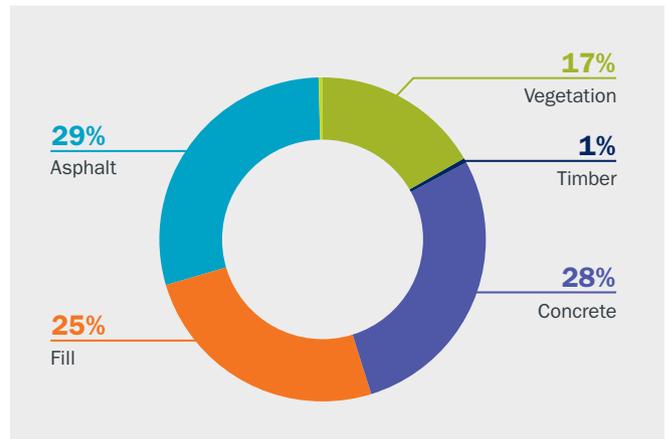
Figure 9 Breakdown of waste streams diverted from landfill

collecting waste data, with a focus on how to increase supporting evidence from contractors. With greater data accuracy, Landcom can improve our focus on material waste streams, increase our reporting accuracy, advance performance against our 95% diversion target and ultimately achieve zero waste communities.

Materials

In FY18, Landcom began including the use of 100% Chain-of-Custody Certified timber as a key opportunity within our EOIs for new projects. As none of these projects sold within the reporting year, there are no projects in scope for this target during FY18.

Landcom will report our performance against this target in FY19.

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25 These targets apply to the delivery of new project in FY18; we did not deliver any new projects in FY18 for which this target is relevant.

Water Performance Results

Landcom's Sustainable Places Strategy addresses Water. This focus area forms part of our Climate Resilient Places pillar, and is a representation of our commitment to delivering communities designed for best practice water sensitive urban design which actively conserve potable water.

These focus areas contribute to our leadership goal to enable water positive communities by 2028.

FY18 Targets and Performance

Indicator	Objective	Target	FY18 Performance
Water	To design our precincts based on best practice Water Sensitive Urban Design principles, and actively conserve potable water.	Water Sensitive Urban Design strategy for all projects, pollutant discharge loads not to exceed Nitrogen 45, Phosphorus 65, Suspended Solids 85, Gross Pollutants 90	No new projects in scope[26]
		All new projects modelled to reduce mains potable water demand by 50% at the precinct scale, against a 2016 reference case (PRECINX)	49% reduction

Water Sensitive Urban Design

Landcom views Water Sensitive Urban Design (WSUD) as integral to the sustainable water cycle management of our projects. WSUD can include the rehabilitation and protection of natural waterways, design elements such as wetlands, rain gardens, water harvesting and storage and efficient fittings, and alternative water sources such as recycled or blackwater.

The intent of our target is to ensure our projects are designed with these opportunities in mind, and to ensure any stormwater runoff from our sites does not exceed our prescribed pollutant loads and impact the sites downstream from our communities.

In FY18 we had no projects in scope for reporting against our WSUD target. According to the MUSIC modelling assessment tool, legacy Landcom projects with WSUD initiatives delivered during FY18 achieved 69% average annual Nitrogen pollution load reduction, compared to developments without WSUD controls. The results of the modelling show that these legacy developments met, and exceeded, Landcom's WSUD target of 45% nitrogen reduction[27].

The Legacy projects reported in FY18 were Oran Park and Renwick, and the assessment highlighted that both had very high total nitrogen reductions of 62.9% and 71.8% respectively, far exceeding the target of 45%. This achievement is significantly higher than previous years, where a broader spectrum of site typologies (for example with more hardscape or less landscaping, with or without stormwater treatment trains etc.) pulled our weighted portfolio performance down.

As part of the EOIs for the sale of both Tallawong and Showground, a commitment to achieve the Landcom WSUD targets was requested from proponents. We will look forward to reporting the final performance commitments made by the successful proponents of these sites in the FY19 report.

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26 These targets apply to the delivery of new projects in FY18; we did not deliver any new projects in FY18 for which this target is relevant.
27 Landcom's former approach to WSUD only measured nitrogen reduction, as is reported for legacy projects above. Our new Sustainable Places Strategy has been updated to include phosphorus, suspended solids and gross pollutants, in line with best practice.
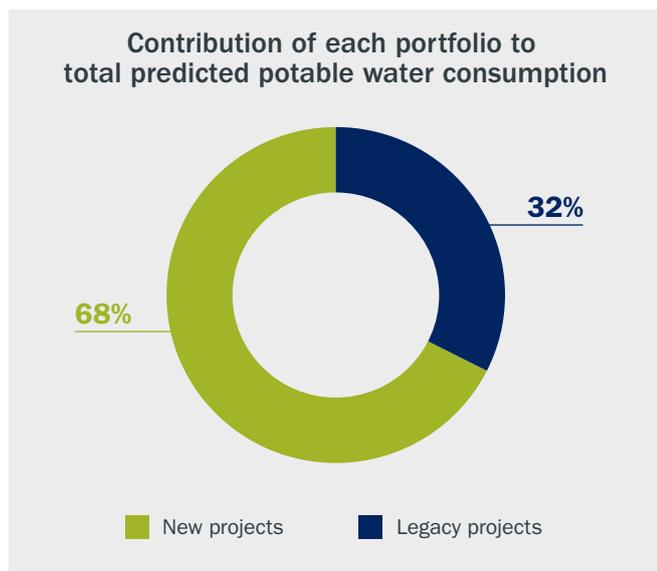
Figure 10 Contribution of each project portfolio to our total predicted potable water consumption, showing that the quantum of consumption from our new project portfolio is more material than our Legacy projects due to the size of each portfolio.

Figure 11 Potable water consumption reduction of Landcom's project portfolio, modelled using PRECINX. Results show our 'New' projects which are in scope for reporting during FY18, and for completeness our 'Legacy' projects, which are out of scope for the targets.

Potable Water Reduction

Our potable water reduction target seeks to reduce the use of unnecessary potable water and improve the efficiency of potable water that is used. The potable water consumption reported is the predicted operational consumption of a masterplan at completion, and is calculated using the sustainability modelling tool PRECINX.

FY18 is the first time our organisation has adopted a potable water reduction target for projects. New projects, and individual precincts within ongoing projects, that are currently in the planning and design stages are in scope for FY18 reporting[28], and accounts for 68% of Landcom's predicted overall consumption (see Figure 10). This includes Tallawong, Showground, Edmondson Park and Lachlan's Line.

Our weighted average potable water consumption reduction projected across new projects in scope for FY18 is 49%[29] (see Figure 11). The typical strategies used to achieve the targets is to maximize the water harvesting, and support this with higher efficiency appliances and fittings.

In FY18, residential dwelling were forecast to achieve 50% potable water reduction, and non-residential water reductions are 14% across our new projects. Despite this, non-residential land uses for new projects account for only 6% of overall potable water use.

New projects without access to recycled water present Landcom with the greatest challenge to meet our targets. Without access to recycled water infrastructure, potable water reductions greater than 50% at the precinct scale become technically challenging, and infrastructure such as private grey and blackwater treatment systems can ultimately have a negative impact on cost of living for our residents. Despite the challenges this presents, there is also opportunities for innovative design, partnership and technology solutions.

For completeness in establishing our baseline data for this target, we have also presented the potable water reductions achieved by our legacy projects that are still in delivery (see Figure 11). These projects include Bonnyrigg, Claymore, Airds, Macarthur Heights, Renwick, Oran Park and Green Square Town Centre. When calculating our performance inclusive of new and legacy projects, Landcom's weighted portfolio is expected or projected to achieve a 46% average potable water reduction.

In FY19, Landcom plans to collaborate more closely with Sydney Water, and other utilities and authorities, to better understand water cycle opportunities for our project portfolio and pursue the solutions which work under existing governance structures. This also supports our aim to improve the cost of living for residents in Landcom communities.

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28 Performance is based on projected performance for all new Landcom projects, until such time as the delivery or divestment strategy for each project is confirmed. At this time, results will become 'actuals'.

29 Reduction from the reference case. Landcom chooses to use its PRECINX tool for modelling potable water and Greenhouse Gas emission reductions. The reference case is defined as the normalised relevant 2016 metropolitan average applied to a masterplan.

Healthy & Inclusive Places

Leadership Goal

LEADERSHIP OBJECTIVE

To deliver healthy and inclusive places founded on equity for people of all ages and abilities.

LEADERSHIP TARGET

To enhance Landcom's international status for delivering world class liveable places founded on equity, affordability and inclusion.

Residents report overall 90% satisfaction with quality of life.

Healthy & Inclusive Places Pillar Overview

Landcom's *Healthy & Inclusive Places* pillar is focused on a leadership goal to 'enhance Landcom's international status for delivering world class liveable places, founded on equity, affordability and inclusion by 2036'.

This leadership goal was developed to reflect commitment for meaningful contribution to the United Nations Sustainable Development Goals[30], and reducing the impact of shocks and stresses to communities and infrastructure, such as social cohesion and affordable housing, as identified by Resilient Sydney[31] (part of the Rockefeller Foundation 100 Resilient Cities Program).

Within this pillar, Landcom focusses on how well a place delivers quality of life to its communities and the resilience of those communities. It encompasses economic prosperity and affordability, social stability and equity, accessibility, education, health and wellbeing, and integration of culture and heritage.

Liveable communities are healthy and inclusive. A well-designed community takes into account the needs of people today, and the needs of our future generations. We consider where people will work, learn, spend their leisure time and how they move from place to place. Landcom also believes that the built environment should incorporate green spaces, and retain a connection to our natural habitats for the benefit of the environment and our communities.

Landcom addresses liveability through the following focus areas:

- Health, Equity & Inclusion
- Community Connection
- Affordability & Diversity
- Safety
- Design through Engagement.

Each of these focus areas includes a suite of targets to measure our success.

Health, Equity & Inclusion, Community Connection & Safety

Landcom's *Healthy & Inclusive Places* survey is a community engagement tool used to gather data from residents of Landcom communities. The survey uses stated satisfaction with questions related to design, community connection, safety, community wellbeing and housing affordability and diversity, based on the residents' lived experience.

To benchmark Landcom's results against industry standards, the survey also incorporates the Personal Wellbeing Index (PWI), a joint initiative by Australian Unity, Deakin University and the Centre for Social and Early Emotional Development[32]. The PWI is designed to measure satisfaction with quality of life across seven domains: standard of living, health, life achievement, relationships, safety, community-connectedness and future security. Landcom uses the PWI result to measure our success against our leadership goal of 'enhance Landcom's international status for delivering world class liveable places, founded on equity, affordability and inclusion by 2036'.

FY18 was the first year Landcom ran the *Healthy & Inclusive Places* survey, open for participation from March to May 2018. The survey was hosted online, and conducted via random telephone survey. A total of 501 qualifying responses[33] were received from participating projects, including Edmondson Park, Renwick, Oran Park, Thornton, The Ponds, Macarthur Heights, Spring Farm and Ebsworth (Green Square).

For our FY18 targets performance measured by results from our *Healthy & Inclusive Places survey*, see *Health, Equity & Inclusion, Community Connection, & Safety* (p. 28).

Affordability & Diversity

In FY18, we adopted our Housing Affordability & Diversity Policy, to drive the delivery of diverse, affordable and accessible homes. The Policy is a clear reflection of Landcom's commitment to create more affordable and sustainable communities.

It is Landcom's intent to undertake strategic projects in Sydney and other parts of the state, demonstrating different housing solutions. New developments should include a mix of housing types, tenures, and price points to support the range of housing needs across communities. This includes Affordable Housing managed or owned by Community Housing Providers.

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30 United Nations Sustainable Development Goals (2018) https://www.un.org/sustainabledevelopment/sustainable-development-goals/ to see our full alignment to the SDGs see Appendix 4: Sustainable Development Goals Alignment
31 Resilient Sydney (2018) https://www.100resilientcities.org/cities/sydney/
32 Australian Centre on Quality of Life (2018) http://www.acqol.com.au/instruments
33 Survey data was cleaned for non-qualifying responses, as outlined in the Terms & Conditions of participation. Responses omitted from the overall results included incomplete or duplicates, and non-residents of the participating communities.

As a government organisation, we also believe it's our role to take a leadership position in helping others facilitate affordable and diverse housing outcomes. In FY18, Landcom and the Department of Finance and Services launched the Community Housing Provider prequalification scheme, hosted on the NSW Government's ProcurePoint website. This scheme gathers information from registered Community Housing Providers and makes it available to interested parties across government and the private sector in one cohesive platform. This initiative is focused on supporting government and industry to quickly and easily locate providers suited to their specific project needs.

For our FY18 performance against our *Affordability & Diversity* targets, see *Affordability & Diversity Performance Results* (p. 33).

Design

As a state owned corporation, we maintain a commitment to excellence in design and meaningful stakeholder participation from all those who have a stake in the evolution of our cities, including the communities which know them best.

In FY18, Landcom commenced the creation of its Design Advisory Panel, which will be launched in early FY19. The Panel provides advice to Landcom on design strategies to achieve architectural design excellence and quality of urban design outcomes across our project portfolio. The Panel is comprised of industry experts with experience across design and environmental consultancies, government entities and the development sector. The objectives of the Panel are to support Landcom project teams with a critical design review process, and provide access to industry experts for guidance and support.

Landcom's aim is that this robust process will ensure enhanced design outcomes for the communities we deliver. As the Panel is due to commence its services in early FY19, our target related to design review was not in scope for reporting during FY18.

Engagement

In FY18 we also launched our Join In framework, which outlines our approach to stakeholder engagement. The framework has been developed in accordance with the International Association for Public Participation (IAP2) principles, which seeks to 'promote and improve the practice of public participation or community and stakeholder engagement, incorporating individuals, governments, institutions and other entities that affect the public interest throughout the world'[34].

Our approach to engaging stakeholders is underpinned by five principles: collaborative, purposeful, proactive, accountable and inclusive.

For our FY18 performance against our *Design through Engagement* targets, see *Design through Engagement Performance Results* (p. 36).

Our Future Priorities

Landcom is reviewing a number of initiatives as future opportunities to enhance our Health, Equity and Inclusion and Community Connection focus areas. Throughout FY18 we have evaluated development options where we can demonstrate new models of housing affordability and diversity, and in FY19 we anticipate announcing a number of future projects. We will also look to enhance partnership opportunities with Community Housing Providers.

We also commenced our collaboration with Sustainability Advantage to review leading mode shift opportunities, aimed at reducing car dependence and advancing technology (see *Exploring Opportunities for Electric Vehicles* on (p. 42).

In June 2018, Landcom and the NSW Department of Education signed a Memorandum of Understanding (MoU) to explore opportunities to work together on potential joint land use projects. This is the first step for Landcom in addressing our priority to advance innovative solutions in the delivery of education, health and wellbeing infrastructure to communities, based on shared value approaches. Over the coming year we will continue to advance our efforts here.

In FY19 we intend to adopt a Diversity & Inclusion Policy, and review how we can positively impact the health and wellbeing of Landcom staff.

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34 International Association for Public Participation Australasia (2018) https://www.iap2.org.au/Home

Health, Equity & Inclusion, Community Connection, & Safety Performance Results

Landcom's Sustainable Places Strategy addresses *Health, Equity & Inclusion*, *Community Connection* and *Safety*. These focus areas form part of our *Healthy & Inclusive Places* pillar and represent our social sustainability commitments.

FY18 Targets and Performance

In FY18, Landcom commenced its first *Healthy & Inclusive Places Survey*, seeking to understand how residents of our communities perceive their quality of life.

Participating projects were deliberately selected for FY18, as Landcom sets its baseline data for these targets. These projects provide a diversity of project typologies, sizes, locations and stage of completion, ensuring robust baseline data outcomes.

A total of 501 qualifying responses[35] were received from participating projects, including Edmondson Park, Renwick, Oran Park, Thornton, The Ponds, Macarthur Heights, Spring Farm and Ebsworth (Green Square).

Results reported represent Landcom's portfolio wide, weighted performance. Weighting was determined based on the participating projects' respective scale, and the percentage of project population that participated in the survey.

Indicator	Objective	Target	FY18 Performance (weighted)
Health, Equity & Inclusion	To deliver healthy and inclusive places founded on equity for people of all ages and abilities.	2036 Goal: Residents report overall 90% satisfaction with quality of life	76%
		90% residents report high quality public, active and sustainable transport options to key amenities, services, public transport and employment	72%
		90% residents report high physical and mental health, reflecting project design, programs or events that encourage active, social and healthy eating lifestyles	89%
Community Connection	To nurture wellbeing and connection for all that live, work and recreate in our communities.	90% resident overall satisfaction with the integration of culture and heritage into all new projects	46%
		90% resident reported community cohesion across all new projects, by fostering the integration of community networks and facilities into our projects	68%
Safety & Wellbeing	To promote a culture of health, safety and wellbeing.	Achieve a culture of safety throughout our organisation and on all Landcom projects, striving to achieve 90% overall community safety score at our projects	82%

As illustrated by our FY18 Performance, Landcom projects set a positive baseline for our 2036 Goal for overall satisfaction with quality of life, achieving a score of 76.5%. This result is on par with the National Personal Wellbeing Index[36], which is our referenced independent benchmark.

Strong results are also reported for access to transport and walkability (72%), physical and mental health (89%) and safety (82%). However, we have lower performance baselines for integrating culture and heritage across our projects (46%), and community cohesion (68%).

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35 Survey data was cleaned for non-qualifying responses, as outlined in the Terms & Conditions of participation. Responses omitted from the overall results included incomplete or duplicates, and non-residents of the participating communities.

36 Personal Wellbeing Index, Deakin University & Australian Unity (2017) australianunity.com.au/.../wellbeing%20index/wellbeing%20index%2020

In FY19, Landcom will seek to improve our performance related to the integration of culture and heritage into our projects, and enhancing residents' satisfaction with community cohesion. As part of this process, we will be undertaking a review of our Community Development and Welcome Program, to evaluate past successes and determine areas of opportunity and action.

Health, Equity & Inclusion

As part of our efforts to enhance health, safety, equity and inclusion throughout FY18, Landcom participated in an expert advisory panel for the development of Everyone Can Play[37] – a new toolkit for creating playspaces where children of all ages and abilities can participate in play. The guidelines have been created to 'meet the needs of playspace planners, designers and creators', and are centred on three key questions:

- Can I get there?
- Can I play?
- Can I stay?

The toolkit also includes an evaluation checklist intended to support the design of playspaces. Landcom has already commenced using the guidelines to support our projects, inform new playspaces currently in design and complete an audit across our existing projects to determine how 'inclusive' our existing assets are.

Community Connection

Landcom's established Community Development (CD) and Welcome Program (WP) is how we contribute to connecting people and places. The CD/WP has been in place for over 10 years, with a suite of programs and events rolled out across our communities each year.

In FY18, seven of our communities included CD/WP activities, events or programs — and Landcom delivered these initiatives at five of the projects; these included Macarthur Heights, Thornton, Spring Farm, Sanctuary and Newbrook. Our total investment amounted to $446,364. Other communities with ongoing CD/WPs included Green Square and Oran Park Town. In both instances, activities, programs or events are delivered by others[38], as part of our development agreements.

Wherever possible we aim to align our CD/WP activities with our Strategy focus areas. In FY18 we delivered[39]:

- **Health, Equity & Inclusion** – nine programs, events or activities
- **Community Connection** – 13 programs, events or activities
- **Engagement** – 23 programs, events or activities.

Examples of this work include the following.

- At Macarthur Heights a community reference group has been established to assist our community facilitator in planning and running local events and activities, such as a sustainable living expo that was held earlier in the year.
- At Spring Farm the Community Development program has established a playgroup which is meeting in the Spring Farm Public School. The playgroup is currently working in collaboration with Macarthur Centre for Sustainable Living to run a series of mini-workshops teaching children about food chains, plants, insects and gardening.
- At Newbrook community members volunteered in Clean Up Australia Day and together, as part of the greater Airds region event, removed 4.5 tonnes of waste from the surrounding bushland.

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37 Everyone Can Play (2018) http://planning.nsw.gov.au/~/media/Files/DPE/Guidelines/everyone-can-play-draft-for-exhibition-guideline-2018-08.ashx

38 Green Square is a joint-venture project with Mirvac, where CD/WP initiatives are funded by Mirvac. In some instances, Landcom does contribute either via Voluntary Planning Agreement contributions or in-kind time from our staff. Oran Park Town CD/WP initiatives are delivered by Greenfields, the project land owner.

39 This data does not include Sanctuary. Sanctuary is a complete project and does not appear within the reporting boundaries for any other Sustainable Places target.

With the adoption of our Sustainable Places Strategy, Landcom is also measuring the success of our CD/WP initiatives by adopting a measurable target for community cohesion. This is particularly relevant for our contribution to the Sustainable Development Goals, and the Resilient Sydney finding that social cohesion is decreasing across Sydney, while social isolation is on the rise — contributing to chronic stresses that amplify the impacts of shock events[40].

In response to these findings, Landcom has partnered with the Welcome Dinner Project (WDP), aimed at reducing social isolation within and across communities which exhibit high cultural diversity. WDP was established in 2013, and brings new and established Australians together over dinner. The broad intent is to reduce social isolation, connect people and increase cross-cultural respect. Dinners are held in homes or community spaces, and attended by approximately 12 people, with an equal portion of established and new Australians, along with a trained facilitator.

The WDP encourages those who have attended a dinner to become a facilitator themselves, thus establishing a sustainable model that can be continued.

Landcom's partnership with the WDP will see several dinners occur in our projects throughout FY19.

Safety

Landcom is committed to ensuring our communities are safe places for people to live, work and play. This includes actual and perceived safety.

In previous years, Landcom has addressed safety via our Work Health and Safety Policy and Environmental Management System. This addresses safety within our organisation and at our project sites. We also engage professional urban designers and landscape architects across our projects to ensure Crime Prevention Through Environmental Design (CPTED) is addressed.

In FY18, we have expanded our interest in safety to the lived experience of residents in our communities. We are seeking to ensure that actual and perceived safety is high, representing the successful application of CPTED principles in the design and delivery of our projects.

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40 Resilient Sydney, A Strategy for City Resilience 2018 (2018), http://www.cityofsydney.nsw.gov.au/__data/assets/pdf_file/0013/303700/Resilient-Sydney-A-strategy-for-city-resilience-2018.pdf

Affordability & Diversity Performance Results

Landcom's Sustainable Places Strategy addresses *Affordability & Diversity*. This focus area forms part of our *Healthy & Inclusive Places* pillar, and is a representation of our commitment to delivering affordable and sustainable communities.

In FY18, we released our [Housing Affordability & Diversity Policy](#), to drive the delivery of diverse, affordable and accessible homes. It's important that housing types and tenures meet local demographic diversity and affordability needs. We must also ensure the housing we deliver to market remains current, and reflects the changing needs of communities and household compositions.

During this reporting period, none of our projects were in scope for reporting against our new *Housing Affordability & Diversity* targets, however we have presented our work in progress to enable reporting in FY19.

FY18 Targets and Performance

In FY18, our targets related to Affordable Housing and Livable Housing Certification had no projects in scope for reporting. These targets are only applicable to new projects within Landcom's project portfolio from the date of the Policy's adoption (November 2017).

Indicator	Objective	Target	FY18 Performance
Affordability & Diversity	Deliver on Landcom's commitments for affordable, diverse and sustainable homes.	Deliver 5-10% Affordable Housing across the Landcom portfolio	No new projects in scope[41]
		20% of medium to high density dwellings within all new projects achieve Livable Housing Australia Silver Certification (or equivalent)	No new projects in scope[41]

Affordability and Diversity in our Communities

In FY18 we have undertaken a range of research and resource development activities to help us better understand housing affordability and diversity in our communities, and enable us to achieve our targets.

As part of our *Healthy & Inclusive Places* survey (see *Healthy & Inclusive Places Pillar Overview* (p. 28) we asked residents in Landcom communities about their satisfaction with access to reasonable quality housing for rent or purchase, diversity of housing options, and if they would look for a new home within their existing community should their housing needs change. We also sought to understand the housing stress of residents, by their ability to raise $2000 in an emergency[42]. The data collected from this survey provides Landcom with a more granular level of detail regarding satisfaction with key housing metrics than we can obtain from other sources, such as the Australian Bureau of Statistics.

Our results highlighted the following findings:

- 52% of residents felt there was access to reasonable quality housing to rent or buy in their area; this highlighted that many residents (36%) didn't think this was the case and that some (12%) weren't sure.
- 73% of residents felt that there were a broad range of homes of different sizes, types and prices in their area.
- 35% of residents didn't think, or weren't sure, whether they would look for another home within their existing community should their needs change.
- 38% of residents would be unable or would struggle to raise $2000 in an emergency. This figure was highest for those with a mortgage (versus renters and outright owners).

We also worked with .id, a specialist demographics consultancy, to develop a suite of Housing Indicators for 29 Local Government Areas across Greater Sydney and Regional NSW. This work will assist us in understanding the specific housing needs of an area, including the affordability, diversity, suitability and availability of housing.

In FY19 we will focus on working with the project teams to build their awareness and knowledge of housing affordability and diversity through a range of training opportunities and access to resources and toolkits.

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41 These targets apply to the delivery of new projects in FY18; we did not deliver any new projects in FY18 for which this target is relevant.
42 The ability to raise $2000 in case of an emergency is a standard Australian Bureau of Statistics method of capturing and measuring mortgage stress; 'Household Income, living standards and financial stress', Australian ABS: http://www.abs.gov.au/Ausstats/abs@.nsf/0/793D1402EE51BA8BCA256A5D0004F5D5?Open

Affordable Housing

Landcom defines Affordable Housing as dwellings managed or owned by a Community Housing Provider (CHP). CHPs are not-for-profit organisations that build and/or manage housing for eligible people on very low, low and moderate incomes or who are unable to access appropriate housing in the private market. The community housing sector in NSW is regulated by the Registrar of Community Housing[43].

Landcom's Housing Affordability & Diversity Policy requires 5%-10% of housing in our projects to be provided as Affordable Rental Housing, owned or management by a CHP. The CHP may build the homes, and will manage eligibility and waiting lists, tenant's services and property maintenance.

In FY18 we had no new projects in scope for reporting against our Affordable Housing targets. While Showground and Tallawong had EOIs released to market, neither site had been awarded to a successful proponent during the reporting year.

Since the adoption of this target in November 2017, Landcom has sought to establish our baseline datasets, and tools that will support our organisation to advance the delivery of Affordable Housing. This has included taking stock of any Affordable Housing already delivered within our current portfolio, embedding the provision of Affordable Housing in feasibilities for new projects, and working with project teams to identify opportunities to include Affordable Housing within future stages of existing projects.

Diverse Housing

Landcom's Housing Affordability & Diversity Policy identifies a 'Corporate Commitment [to] include Housing Diversity Pilot Projects to demonstrate new models where appropriate"[44]. Since the adoption of the Policy, we have decided to establish a numeric target for housing diversity. This is currently under development.

In FY18, we have laid the groundwork for reporting against this new target from FY19 onwards. This has included a review of Landcom's existing projects, including their intended housing type composition (almost 25,000 dwellings) and types of tenure or management.

This included development of the Landcom Housing Monitor, an Excel tool designed to collect detailed housing typology information from project teams on an ongoing basis. Updating the Housing Monitor is now a key component of our annual business planning process, and includes the ability to forecast future development stages — allowing Landcom to have a clear view of whether we are on track to meet our Housing targets for the life of a project.

In FY19, we anticipate Showground and Tallawong to be our first projects in scope for reporting against our Housing targets. As these projects are being released to market via a competitive tender process, Landcom hopes to see positive uptake and engagement from industry.

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43 http://www.rch.nsw.gov.au/
44 https://www.landcom.com.au/assets/Our-approach/1711-Landcom-Housing-Policy.pdf

Universal Housing

Landcom has a long history of influencing positive outcomes for accessibility within the residential sector. In 2009 Landcom developed the Universal Housing Guidelines. These Guidelines were then used to inform the Livable Housing Australia (LHA) Guideline, launched in 2010 and now in its fourth edition.

To support the intent of Landcom's Housing Affordability & Diversity Policy, our Sustainable Places Strategy incorporates a target of 20% of all new medium and high density dwellings, to be LHA Silver Level Certified[45]. LHA Silver performance level incorporates seven core design elements that focus on the key structural and spatial elements that are critical to ensure future flexibility and adaptability of the home. Incorporating these features avoids costly home modifications, if required at a later date.

In FY18 we had no new projects in scope for reporting against our Livable Housing target. While Showground and Tallawong had EOIs released to market, neither site has been awarded to a developer at the time of reporting.

However, throughout the year we also worked with project teams to determine Landcom's internal comprehension of LHA, and other forms of accessible housing. We determined that there is significant opportunity to upskill our development and construction teams in the various types of housing accessibility features and certifications. To progress this, we are continuing to work with an industry expert to create staff training materials, and identify the greatest opportunities and threats in the development cycle when integrating design accessibility features and certifications into assets.

Case Study:
Community Housing Provider Prequalification Scheme
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In 2018, Landcom and the Department of Finance and Services collaborated to develop the Community Housing Provider Prequalification Scheme, in response to the growing demand to enable affordable rental housing in NSW.

The Scheme is an online tool hosted by the NSW Government's e-Tendering and ProcurePoint websites that allows CHPs to share information about their services, expertise and projects. From this platform, any private or government organisations wanting to procure Affordable Housing development and/or management services can easily filter for CHPs by geographic location, scale and type of development, in order to find providers that align with their objectives.

The scheme helps the development industry, agencies, councils and Landcom streamline the procurement process by connecting CHPs with developers, councils or other organisations that may require their services. This also supports CHPs by linking them directly to specific tender opportunities.

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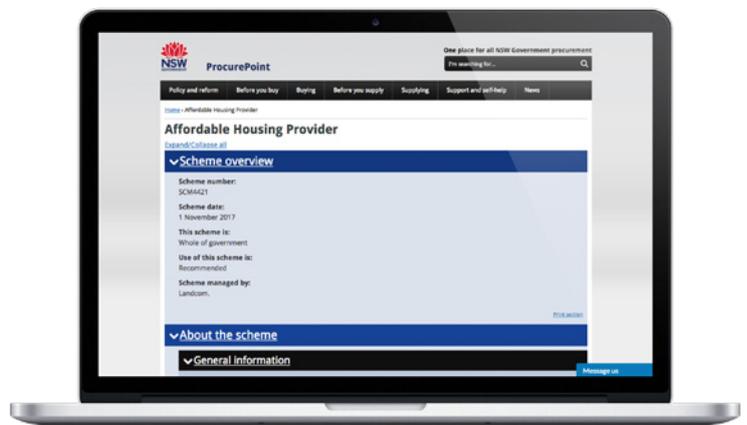
45 Alternate certifications or design standards will be accepted, provided they materially meet the design features and intent established by LHA.

Design through Engagement Performance Results

Landcom's Sustainable Places Strategy addresses *Community Engagement and Design*. These focus areas form part of our *Healthy & Inclusive Places* pillar, and is a representation of our social sustainability commitments to excellence in design and meaningful engagement with our stakeholders.

FY18 Targets and Performance

In FY18, Landcom released the Join In framework as part of our commitment to engagement, and began to establish its Design Advisory Panel to address design excellence. However, our targets are not in scope for reporting during FY18.

Indicator	Objective	Target	FY18 Performance
Design through engagement	To optimise the quality of design and place, and drive strong engagement with our communities and stakeholders.	All new projects to undergo peer review through the Landcom Design Advisory Panel, or equivalent Design Review Panel	Indicator not in scope[46]
		All new projects to apply stakeholder engagement framework Join In, aligned to industry best practice	Indicator not in scope[47]

Community Engagement

In FY18, we launched our Join In framework. The framework sets out Landcom's approach to stakeholder engagement, and from FY19 onwards we have set ourselves a target that all projects will apply it. The approach is aligned with the International Association for Public Participation (IAP2) principles, 'which seeks to promote and improve the practice of public participation or community and stakeholder engagement, incorporating individuals, governments, institutions and other entities that affect the public interest throughout the world'[48]. Our approach to engaging stakeholders is underpinned by five principles: collaborative, purposeful, proactive, accountable and inclusive.

Join In was finalised and adopted in FY18, and we commenced its implementation with an assessment of current projects to review:

- Specific statutory requirements for engagement
- Stakeholders, their needs, interests and views, and their expectations for engagement
- Existing or future contracts with communications and engagement scope, and
- Opportunities for communication and engagement to support and inform project delivery.

As the majority of Landcom's current projects are in the later stages of delivery, there is limited scope to actively engage communities and other stakeholders in project planning. The focus for these projects is routine communications to ensure stakeholders are kept informed and notified of civil works, settlement dates and delivery of public benefits.

However, several projects were identified as a priority for communications and engagement planning. These include Sydney Metro Northwest Places, Wentworth Point, Edmondson Park and Lachlan's Line. Across these projects, Landcom intends to focus on:

- Partnering with Transport for NSW to support place planning and activation around new stations as part of the Sydney Metro Northwest Places Program
- Infrastructure works at Lachlan's Line, including the widening of Delhi Road and the new pedestrian bridge connecting to North Ryde Station
- Partnering with Roads and Maritime Services to support design and delivery of a large new riverside park in Wentworth Point
- Planning for the town centre to the north of Edmondson Park Station and future uses of heritage buildings at Bardia Barracks
- Subdivision works at Riverstone to unlock developable land on behalf of landowners.

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46 Landcom's Design Advisory Panel was not established within the FY18 reporting year. Landcom will commence reporting against this indicator in FY19.
47 Landcom's Join In framework was drafted and finalised in FY18. Projects have commenced its adoption, however the Framework will not come into full effect for reporting until FY19.
48 International Association for Public Participation Australasia (2018) https://www.iap2.org.au/Home

To meet these needs, in FY18 we commenced preparation of communication and engagement strategies and plans for these priority projects – in line with our Join In framework. We also commenced a process to review and update our corporate website as a more effective communication platform for updates on priority projects.

In FY18 we also strengthened our organisation's capacity by creating new learning and development programs for staff. The focus of these programs is to support our staff in maintaining healthy working relationships with local councils and key agencies with whom we partner to deliver projects.

In FY19 the focus will be on further embedding the Join In framework across the organisation through staff training, and on new projects, as well as on developing an approach to measuring the efficacy and value of our community engagement.

Design

In FY18, Landcom commenced the creation of its Design Advisory Panel, which will be launched in early FY19.

Case Study: A New Life for Bardia Barracks

Our Edmondson Park project includes Bardia Barracks, a heritage listed site that has played an important role in Australia's military history. Until closing in 2002 it was a training centre for thousands of military service recruits for World War II, Vietnam and later international conflicts.

The site sits in the middle of one of Sydney's fastest growing urban areas. Landcom developed a concept plan, which was approved in 2011, to guide development over the 423 hectare area. The concept plan shows the Barracks as a heritage site. We are committed to identifying how to best reuse the buildings and showcase the heritage significance of the site.

In late 2017 we undertook a needs analysis and spoke with the local councils, the local school, community groups with a connection to the site's military history, and developers building new housing in the area to understand the needs of the current and future community. This shaped ideas for the Barracks to be restored as an exciting neighbourhood hub with a mix of community facilities and complementary small-scale commercial uses to attract people to the site and generate funds for its ongoing maintenance.

In early 2018 we took a proposal for a café and contemporary exhibition space in one of the buildings to the community and sought their feedback. We also invited ideas for how to best reuse other buildings. Through the consultation, stakeholders agreed that it was critically important to retain the military history of the Barracks and open up the site to be more accessible for the local community. There is support for the site to become a destination for residents, with a mix of facilities that respect and celebrate the site's history and support the needs of the area's growing population.

However, there was mixed support for the café proposal. We realised we needed to do further technical studies to determine the feasibility of a café and to understand Liverpool Council's needs for the site over the long term. We also identified an opportunity to do more work with military groups to shape plans for how to tell the stories of the site in compelling and engaging ways.

We are now proceeding to undertake further studies and consultation to shape our plans for this unique local site, and to take a more holistic approach in terms of the role it can play in supporting place making outcomes.

Productive Places

Leadership Goal

LEADERSHIP OBJECTIVE

Drive the delivery of productive places, and enable jobs for the future.

LEADERSHIP TARGET

To contribute to a global innovation economy by enabling 30,000 enduring jobs for the future by 2036.

Productive Places Overview

Landcom's *Productive Places* pillar is focused on a leadership goal to 'contribute to the global innovation economy by enabling over 30,000 new jobs by 2036'. This is our economic pillar, committed to delivering places that will be productive and engaging for those that live there.

This leadership goal was developed to reflect Landcom's commitment to economic development, strengthening technology infrastructure and advancing equitable opportunities for skills development and education.

Landcom addresses the enablement of jobs and innovation through the following focus areas:

· Innovation

· Training and employment.

Each of these focus areas includes a suite of targets to measure our success. Our leadership goal to enable 30,000 jobs across our communities by 2036 is in direct response to the broader NSW government objectives. As at 2036, the Greater Sydney Commission (GSC) forecasts the Sydney region alone will need 817,000 new jobs. As part of Landcom's mandate, we support these targets by developing great places and mixed-use communities where people can work, live and play.

In August 2017, our Economic Development Working Group[49] released an approach for overcoming the challenge of consistently and effectively calculating our efforts in growing jobs. A new policy, and an easy-to-use Jobs Calculator tool, were created to support Landcom in calculating job consistently across our projects.

As a member of the NSW Government's Common Planning Assumptions Group (CPAG), we are now advocating for the same assumptions embedded in our Jobs Calculator to be adopted by industry.

For Landcom's FY18 performance for enabling jobs, see *Productive Places Overview* (p. 39).

University Roundtable

In 2016 we established a University Framework Agreement, which formalised a collaboration between the NSW Government and eight leading universities across NSW. As part of this agreement the Landcom University Roundtable and Communities of Practice were created.

The Roundtable aims to drive innovative approaches to long-term engagement between government and the universities. It is comprised of senior academics from each partner institution. The Roundtable meets several times a year to review research proposals in areas of urban innovation, as well as to explore new areas for partnership and research.

The Communities of Practice is a channel through which members of the academic community and government can collaborate on research, student engagement opportunities and learning events. Participants represent the diversity of academia — including planning, architecture, urban design, public administration, construction practice, sustainability, data analytics, law, engineering, business and social sciences — and create and contribute to unique research projects as well as report learning outcomes back to their institutions.

For our FY18 targets performance related to the University Round Table, see *Innovation Performance Results* (p. 41) and *Training & Employment Performance Results* (p. 43).
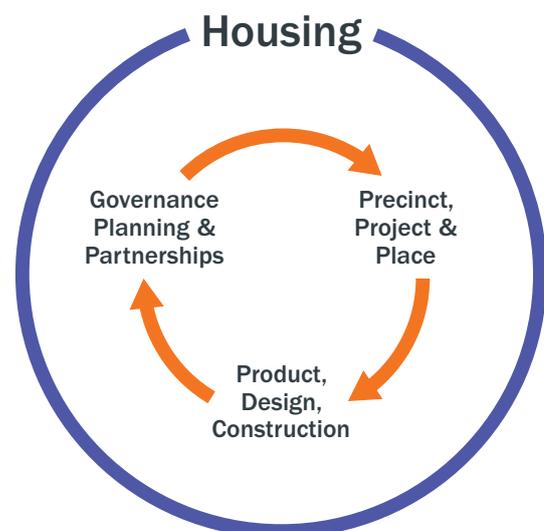
Our three Communities of Practice

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49 The Economic Development Working Group was established during our operations as Landcom trading as 'UrbanGrowth NSW'.

Emerging Technologies

Landcom addresses emerging technologies in our Innovation focus area. Currently we are seeking to roll out smart technology to our new communities, in the form of electric vehicle (EV) rapid charge stations, and ensuring all homes have access to high speed internet, while increasing the provision of free Wi-Fi in public places. We see these initiatives as future-proofing communities, reducing inequalities in access to information and ensuring early adoption of future transport technologies.

Ultimately, the provision of EV chargers throughout Landcom communities will improve a community's overall resilience, reduce its greenhouse gas emissions, and improve transport related cost of living expenses for residents. These targets also contribute to Landcom's low-carbon transport approach, which includes accessibility to public transport, walkable and cycling-friendly neighbourhoods (see *Health, Equity & Inclusion* on p. 31).

For our FY18 activities related to information accessibility and electric vehicles, see *Exploring Opportunities for Electric Vehicles* (p. 42).

Education & Skills Development

Landcom is committed to advancing access to education and skills development, for the communities we deliver – now, and into the future. We work with TAFE NSW to develop programs that address the specific skills requirements of a local area, and provide education and training opportunities and employment pathways for locals that may have experienced low or long-term unemployment. We also collaborate with schools and other educational institutions to deliver learning and youth engagement programs that are aligned with the NSW primary and secondary curriculum topics of urban and regional planning studies.

For our FY18 targets performance related to education and skills development, see *Training & Employment Performance Results* (p. 43).

Measuring Impact

In FY18 we invested in the Australian Social Value Bank (ASVB)[50] tool to help us to better understand and communicate the impact of our sustainability programs and initiatives. In FY18 we commenced using the tool to measure the value of our TAFE and Schools programs. The ASVB contains 62 different social values related to all aspects of Australian life, which have been derived using a cutting-edge approach called Wellbeing Valuation.

The main advantage of Wellbeing Valuation is that the values are consistent and robust. The consistency means that while we may be examining values of different types of outcomes, we are still comparing like with like. This means we can compare the value of our training program against the value of our mental health program, for example.

Wellbeing Valuation is used to calculate the primary benefits to individuals, such as improved self-esteem or stopping smoking, and these values can be used within any Social Return on Investment or Cost-Benefit type analysis or within the ASVB Value Calculator. The ASVB also measures secondary benefits, which includes impacts like cost savings to government via reduced Centrelink payments or increased tax revenue.

To read how we are applying the ASVB and measuring impact, see *Training & Employment Performance Results* (p. 43).

Our Future Priorities

In FY19 we plan to release our Reconciliation Action Plan, a draft of which is currently being validated by Landcom's Future Leaders program participants. Landcom's Future Leaders program is a cross-divisional talent and development program. Participants are invited to apply to the program, where a business critical project is presented for their recommendations to the Landcom Board. The cohort is supported by a range of training and development opportunities, including a skills development workshop, project mentorship and ongoing individual coaching sessions. For FY18/19 the Future Leaders' project is focused on how Landcom can better partner with Aboriginal Land Councils.

Additionally, we will review opportunities to advance our approach to Smart Cities, and staff volunteering.

50 Australian Social Value Bank (2018) https://asvb.com.au/

Innovation Performance Results

Landcom's Sustainable Places Strategy addresses *Innovation*. This focus area forms part of our Productive Places pillar, and is a representation of our commitment to advancing innovation through our business, and to our communities.

To support this ambition, the Landcom Board has an endorsed commitment to research and learning, which recognises that education and innovation are a core element of our business approach. By collaborating on learning initiatives, our projects offer a unique educational legacy which can help expand innovation, skills and knowledge in urban development.

In FY18, we continued to invest in a range of innovative research through our Landcom University Roundtable and Communities of Practice, as well as started the work to embed innovative technologies such as Electric Vehicle infrastructure into our projects.

FY18 Targets and Performance

Indicator	Objective	Target	FY18 Performance
Innovation	To pioneer new ideas and foster opportunities within our innovation economy.	Measure and report annual investment in research and development supporting our strategy principles of fostering a sustainable environment, driving social equity, enabling an innovative economy and advancing responsible governance	$875,289
		Greenfield/regional: all new communities provide electric vehicle chargers to service a minimum 10% total dwellings (as either publicly accessible or private use)	No new projects in scope[51]
		Urban Renewal/High Density: provide a minimum 10% parking yield, per parking lot, as EV Charge Station 'turn-key' ready at development completion	
		All homes to have access to high-speed broadband (20Mb+)	Commitment fulfilled by NBN. Target to be retired.
		Key open spaces to provide free Wi-Fi access	No new projects in scope[51]

Our Investment in Research and Learning

In FY18, Landcom contributed $875,289 total investment value into collaborative research led by participants of the University Roundtable; this is in addition to significant in-kind contribution from both Landcom and university employees[52]. This is based on agreements executed at or before 30 June 2018. Many projects undertaken by the University Roundtable include long-term research outcomes, and as such may be included across multiple reporting years.

In FY18, active research projects related to Landcom operations included:

- Cooling the Commons — examining urban heat island impacts in Western Sydney
- Co.Built 4.0 — collaborative robotics
- Valuing Creative Placemaking

- Sustainable Food Production
- Healthy Higher Density Living
- From Suburban to Urban, and
- Community Engagement 4.0.

In FY19 new projects focused on New Worker Spaces, Creating the City We Want and Bio-shelters will be commencing.

An independent evaluation of Landcom's University Roundtable is currently being conducted by the Australia and New Zealand School of Government. Results will help Landcom understand the value and impact of the Roundtable to date, and how it might be more effective in future.

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51 These targets apply to new projects commenced in FY18; we did not commence any new projects in FY18 for which this target is relevant.

52 The University Roundtable and Communities of Practice is a joint partnership between Landcom, UrbanGrowth NSW Development Corporation and Hunter Development Corporation; data included in this report is focused on Landcom's contribution only. Due to the organisational restructure during FY18 we are unable to accurately reflect the in-kind contribution of Landcom employees only; we intend to reintroduce this reporting in FY19.

Exploring Opportunities for Electric Vehicles

In FY18 Landcom had no projects in scope for our targets related to the provision of electric vehicle (EV) rapid charge stations or shared charging points. This target relates to new Landcom communities, for which we had none in scope this reporting year.

However, during FY18 we partnered with Sustainability Advantage (NSW Office of Environment and Heritage), to identify ways we can advance the provision of EVs across our existing projects, and drive the uptake of EVs by residents of our communities. Through this collaboration, Landcom will have access to information and data sets that support us in communicating the costs, and benefits of providing EVs to future development partners, and residents. This includes a benchmark review of best practice EV adoption in the development sector. Our aim is to drive the uptake of low-carbon transport usage across Landcom communities, using evidence and data. Landcom will also use this data to inform the return on investment of transitioning our own fleet vehicles to EVs.

In FY19 we will communicate the results of this collaborative project.

Providing Equitable Access to Information

Landcom is committed to providing residents of our communities with equitable access to information. We believe it's important that everyone can access the internet, and all the benefits connectivity brings.

As part of the Australian Government's commitment to rolling out the National Broadband Network, all current Landcom communities have or will have access to high speed broadband. Landcom's target for all homes to have access to high speed internet is now redundant, and will be retired this year.

However, access to free Wi-Fi in key public spaces remains an ongoing ambition for our organisation, and we will continue to champion this for all new projects. There were no new projects in scope for this target during the reporting period.

Case Study: Co.Lab: Collaborative Research in Action

In October 2017, Landcom launched our inaugural Co.Lab event at the Australian Technology Park, with 230 people participating. It was a diverse gathering of government bodies, universities from across NSW, TAFE NSW, schools, industry and the community, brought together to innovate, learn and collaborate on city-shaping urban research. Hosting Co.Lab is a requirement of our landmark University Framework Agreement, which we signed in April 2016.

The one day public forum showcased 11 cross-institutional, multi-disciplinary research projects that were co-created between academics and staff from Landcom, the UrbanGrowth NSW Development Corporation and Hunter Development Corporation, as part of Landcom's University Roundtable. Some of the research presentations included autonomous vehicles, phytoremediation, sustainable food production, valuing creative placemaking, adaptive heritage reuse and the use of data analytics in city-shaping.

We also highlighted our work with primary and secondary teachers exploring issues associated with urban transformation.

Co.Lab will be held again in November 2019.

Training & Employment Performance Results

Landcom's Sustainable Places Strategy addresses *Training & Employment*. This focus area forms part of our *Productive Cities* pillar, and is a representation of our commitment to advancing needs based education, skills and training to our communities.

In FY18 we focused on refining our approach to measuring jobs through further development of Landcom's Job Calculator, and saw a range of ongoing

and new work delivered through our Research & Learning area. Highlights included the inaugural Skills Exchange program and Hack4Cities initiative.

We also invested in a calculator provided by the Australian Social Value Bank, to help us articulate the social and economic impact of our TAFE program. Over time this tool will also be expanded to our *Climate Resilient Places* and *Healthy & Inclusive Places* pillars.

FY18 Targets and Performance

In FY18, all targets for reporting against our *Training & Employment*, and Innovation commitments were in scope. Our results are presented below.

Indicator	Objective	Target	FY18 Performance
Training & Employment	To provide opportunities for skills development, education and employment that will support our communities to thrive	To contribute to a global innovation economy by enabling 30,000 enduring jobs for the future by 2036	In FY18 we achieved 4,884 direct jobs (cumulative), and are on track to achieve our 2036 goal (16% of target achieved to date; 99% of target projected to be achieved before 2036)
		All Project Teams engage in the University Roundtable Communities of Practice, in partnership with leading Australian institutions (run by the Research and Learning team), supporting student and staff engagement, research and learning outcomes	In FY18 20 Landcom employees across our Corporate and Project teams participated in Communities of Practice; 4 Landcom projects were actively involved[53]
		Projects to engage and foster education, learning or employment outcomes via actives or initiatives, based on identified needs of the local and regional community	In FY18 we delivered our first Skills Exchange program, worked with over 70 schools and engaged with over 4,000 students

Enabling 30,000 Enduring Jobs

In FY17 Landcom adopted its Jobs Calculator, to advance accurate and consistent calculations of jobs enabled by our operations.

Proxy employment ratios, developed through detailed research and benchmarking, are attributed to various land uses, based on m2 gross floor area. Examples of land uses included are commercial, retail, industrial, community, cultural, tourism, health services, education, storage, hotel, serviced apartment, student housing and residential.

As jobs creation is a long-term goal for Landcom, we report our performance based on the FY actuals, and forecast jobs created for the life of a project. This gives us a clear indication of whether we are on track to meet our 2036 target.

As at FY18, Landcom continues to be on track to meet our commitment to enable 30,000 enduring jobs by 2036.

Skills Exchange

In FY18 we launched our first Skills Exchange program for residents in our Airds and Claymore communities. These communities have an identified need for employment pathways for young people and the long-term unemployed[54].

Across the program, 13 participants commenced the eight week program, with a total of 10 completions. Participants that completed the program obtained a Certificate II in Resources and Infrastructure Work Preparation, and secured a pathway into full time employment within the construction industry.

While three participants did not complete the program, anecdotal evidence from program organisers noted improved self-esteem and confidence. The projected net benefits of the Skills

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53 Landcom's Research and Learning Team maintain a Service Level Agreement with the UrbanGrowth NSW Development Corporation. This enables the Corporation to draw on skills and resources from Landcom, for use at their projects such as White Bay Power Station, Airds (Claymore), Green Square, Macarthur Heights and Sydney Metro North West Places.

54 Airds: 26% unemployment rate: https://profile.id.com.au/campbelltown/employment-status?WebID=100; Claymore: 27% unemployment rate: https://profile.id.com.au/campbelltown/employment-status?WebID=100

Progress towards leadership goal: enabling 30,000 enduring jobs for the future by 2036

	FY18	FY19	FY35	FY35+
Contracted/sold/built (cumulative)	0	4884		
Projected		4885	29642	
Target	30000	30000	30000	30000
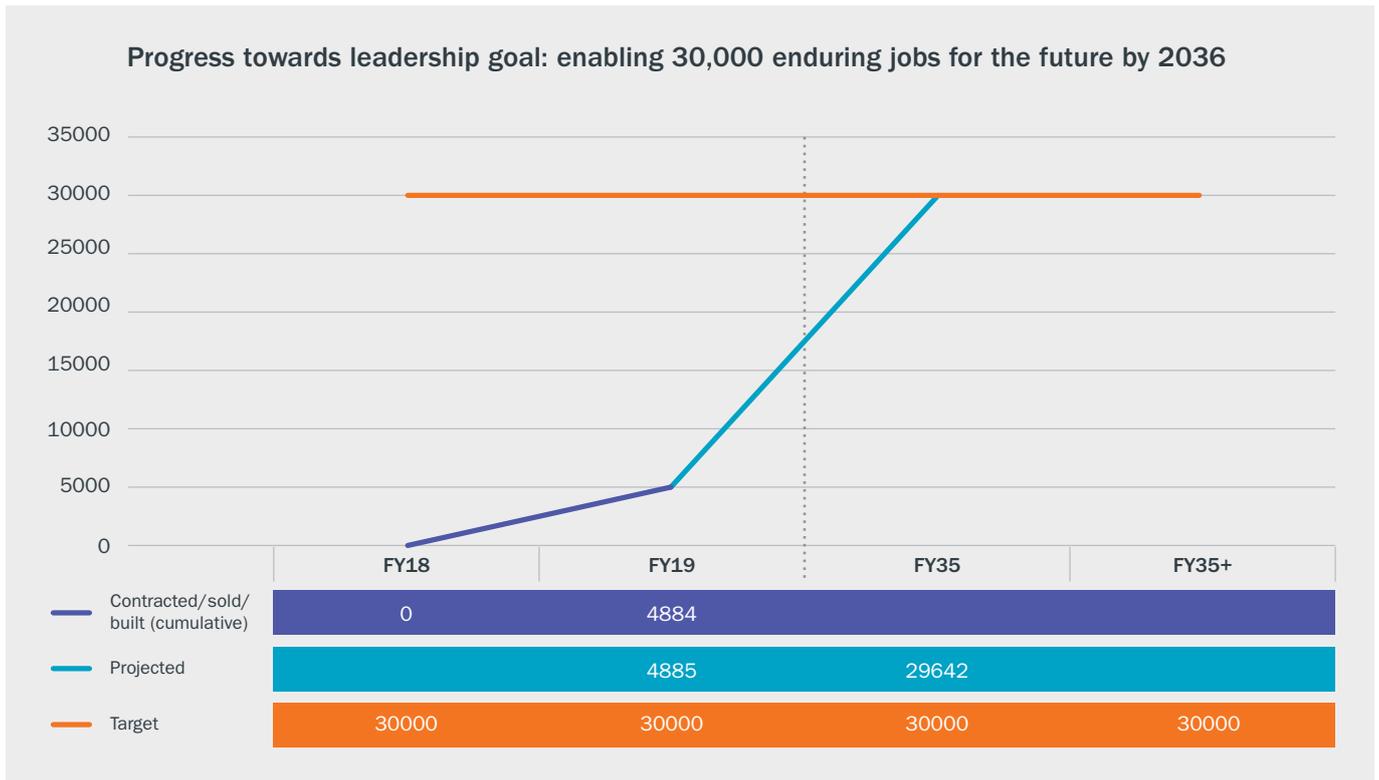
Figure 12 Progress towards achieving our commitment to enable 30,000 enduring jobs is seen to advance quickly from FY19 onwards. This is due to new projects, such as those in the Sydney Metro North West Places program, coming online.

Exchange program[55] total $288,954, representing a cost benefit ratio of 8.43:1. The net benefit per participant is assumed to be $22,227.

To further validate the impact of this program, Landcom will check back with program participants at six months post program completion to gather further insights into the impact of the program, and how we can improve participant experiences in future.

Macarthur Heights will be the site for the next Landcom Skills Exchange program in late 2018, followed by a program in early 2019 at Bonnyrigg.

Schools Programs

In FY18 Landcom, together with UrbanGrowth NSW Development Corporation, delivered the inaugural Hack4Cities schools event at Western Sydney University on 28 June 2018. The Hack4Cities event engaged over 75 secondary students from public and independent schools in Western Sydney to explore solutions to community-based problems around the future of work.

This unique learning experience was designed to develop students' critical thinking skills, and instil a collaborative approach to problem-solving to equip them to deal with challenges facing Western Sydney over the next 20 years.

We also ran a Youth Eco Summit for primary and secondary students, a sustainability festival which showcased one of our research projects, Urban Pinboard, and interactive workshops built around the Sydney Metro Northwest Places project.

Landcom also continued to facilitate schools excursion programs at Green Square, White Bay Power Station[56], Edmondson Park and Oran Park Town. Through this program we worked with over 70 schools and engaged with over 4,000 students. Excursions are aligned to the high school curriculum for Year 9 and 12 Geography, including Changing Places, Australia's Urban Future and Building Better Cities modules.

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55 Using the Australian Value Bank Calculator, adopted by Landcom for social return on investment calculations. Calculations assume an initial net benefit of six months directly attributed to the program.

56 Landcom's Research and Learning Team maintain a Service Level Agreement with the UrbanGrowth NSW Development Corporation. This enables the Corporation to draw on skills and resources from Landcom, for use at their projects, such as White Bay Power Station.

Vocational Education and Training Program

In FY19 we will commence our first Vocational Education and Training (VET) in Schools program. VET in Schools refers to students enrolled in Higher School Certificate (HSC) industry-recognised courses. These VET courses may be delivered by the school or by an External VET provider such as TAFE NSW.

As part of their course, students are required to complete 70 hours of workplace learning over Years 11 and 12. This enables students to gain practical experience, informs their career choices, and builds their employment skills. Employers supervise the students as they practise and extend the specific industry skills they have learned in their course work.

Landcom will host VET Construction course students from Bonnyrigg High School at our Bonnyrigg site commencing late September. Three of our contractors on site will supervise the students.

It is anticipated that the program will be rolled out to other project sites and schools in future.

Case Study: Landcom's Big Thinkers Shine at Smart Seeds

In addition to our investments through Research & Learning, Landcom also participates in a range of industry innovation programs, for example the Smart Seeds program. Smart Seeds is a global innovation program powered by GHD and partners, to connect young talent with industry leaders. With a focus on cross-collaboration, capacity building and design thinking, the program ignites a new approach to tackling complex infrastructure challenges.

Driving the program were seven complex infrastructure challenges, each collaboratively defined by industry and community leaders from participating organisations across government and private industry. The ideas pitched by participants in response gave the judges and audience plenty to consider when selecting the most innovative, engaging and persuasive.

During FY18, six of Landcom's employees presented their innovative solutions to some of infrastructure's biggest problems at the Smart Seeds Sydney 2018 event, with a Landcom mentored team taking out the People's Choice Award.

Accountable & Collaborative Places

Priorities

Accountability & Collaboration is our governance principle.

Our aim is to deliver accountability and performance along our value chain.

To advance our business approach to delivering productive cities, our current and short term priorities are outlined below. Future targets and measures will be adopted over time, where appropriate.

INDICATOR	PRIORITY
Accountability	· Participate in Global Real Estate Sustainability Benchmarking to independently verify our sustainability performance · Continue to report sustainability performance in line with Global Reporting Initiative Guidelines · Develop an approach to Human Rights with consideration for Modern Slavery
Supply Chain Collaboration	· Seek to broaden our approach to include industry partnerships in support of reducing instances of social issues that impact the development and construction industry (e.g. suicide) · Work with industry to upskill the supply chain on sustainability issues (e.g. through partnership with Supply Chain Sustainability School)

Accountable & Collaborative Places Overview

Landcom's *Accountable & Collaborative Places* pillar is focused on a leadership goal to 'drive accountability and performance along our value chain'. This leadership goal was developed to reflect Landcom's commitment to robust governance collaboration within our organisation and supply chain.

Accountability means creating a system with a level playing field in which decisions are made for the betterment and benefit of all stakeholders. Performance means seeking ever greater improvements in efficiency and outcomes. Our value chain refers to all organisations that we deal with in operations. By championing better ways to approach business, we seek to lead the industry in trust, transparency, governance and efficiency of outcomes.

Landcom addresses accountability and collaboration through the following focus areas:

- Accountability
- Supply Chain

Each of these focus areas includes a suite of priorities or actions to measure our success. While this pillar includes individual priorities for achievement, it also has a broad governance reach across Landcom's entire Sustainable Places Strategy.

International Frameworks and Commitments

Alignment to international frameworks and commitments was fundamental to the development of Landcom's Sustainable Places Strategy. Urban development and the property sector makes a material contribution to global emissions, the quality of life experienced by citizens and the resilience of our built and natural environments. Therefore, Landcom believes it is critical to align with, and report our contribution towards the achievement of, the Sustainable Development Goals, Resilient Sydney Strategic Directions and COP21 Paris Agreement.

FY18 is the first time Landcom has mapped our reporting to the Sustainable Development Goals, and detailed how we are supporting the Resilient Sydney Strategic Directions and COP21 Paris Agreement.

Sustainable Development Goals

Landcom is committed to supporting international agreements, protocols and targets to help ensure our planet and communities thrive into the future. As part of this commitment, in FY18 we have commenced reporting our contribution to the United Nations Sustainable Development Goals (SDGs)[57].

The SDGs were adopted by many countries internationally on 25 September 2015, to 'set a goal to end poverty, protect the planet and ensure prosperity for all… each goal has specific targets to be achieved over the next 15 years'[58].

There are 17 SDGs in total, and many targets that underpin each goal. During the creation of our Sustainable Places Strategy (FY17), Landcom made a conscious effort to address each of the Goals wherever possible, either via our own sustainability targets and priorities, or actions we may take as an organisation. In FY18, we are reporting this alignment, and note any activities complete or underway to support meeting the SDG targets and goals.

For the alignment of Landcom's targets and our FY18 activities that support the achievement of the SDGs, see *Appendix 4: Sustainable Development Goals Alignment* (p. 63).

Resilient Sydney

Extensive work on resilience has been led across Sydney since our city's inclusion in the international 100 Resilient Cities program (100RC). Funded by the Rockefeller Foundation, 100RC is working with 31 cities internationally to enhance their resilience to shocks and stresses. Landcom has collaborated with, and taken guidance from, the work of the Resilient Sydney team.

To see how Landcom has contributed to resilience in FY18, refer to *Climate & Resilience Places Performance Results* (p. 13).

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57 United Nations Sustainable Development Goals (2018) https://www.un.org/sustainabledevelopment/sustainable-development-goals/
58 United Nations Sustainable Development Goals (2018) https://www.un.org/sustainabledevelopment/sustainable-development-goals/

COP21 Paris Agreement

The Paris Agreement is:

'[an international] agreement to combat climate change and to accelerate and intensity the actions and investments needed for a sustainable low carbon future. The Paris Agreement's central aim is the strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further by 1.5 degrees Celsius.[59]'

Across Landcom's portfolio, we will do our part to hold average temperature increase to well below 2°C, and build resilience within the built environment and our communities to climate change in accordance with the Paris Agreement. Our environmental leadership goal is to 'enable carbon neutral outcomes at communities by 2028'.

Urban development contributes up to 30% of global emissions, and 40% of all energy use[60]. Reducing our environmental footprint, and embedding sustainable and efficient technology, will establish more resilient, less energy-intensive communities for the future.

To see how Landcom has contributed to resilience in FY18, refer to *Greenhouse Gas Emissions Reduction* (p. 17) and *Urban Heat Island Reduction* (p. 14).

International Benchmarks

Landcom voluntarily participates in the Global Real Estate Sustainability Benchmark (GRESB) Developer Assessment.

GRESB assesses the sustainability performance of real estate and infrastructure portfolios and assets worldwide. The Assessments are guided by what investors and the industry consider to be material issues in the sustainability performance of real asset investments and are aligned with international reporting frameworks such as Global Reporting Initiative and Principles for Responsible Investment.

The Developer Assessment is designed for organisations that develop projects, or acquire development projects, with the aim of selling the projects at completion. It evaluates the environmental, social and governance (ESG) performance of companies, organisations and fund managers that focus on development activities, rather than the management of standing investments.

Assessment participants receive comparative business intelligence on where they stand against their peers, a roadmap with the actions they can take to improve their ESG performance, and a communication platform to engage with stakeholders.

For Landcom, participation in GRESB ensures we are independently benchmarking our performance to international best practice, which is a key aspiration of our Sustainable Places Strategy.

For Landcom's FY18 GRESB performance results, see *Global Real Estate Sustainability Benchmark* (p. 51).

Independent Frameworks & Business Operations

As a government organisation, Landcom is committed to upholding business practices for our own operations that are aligned with recognised standards. We do this by adopting and reporting our overall sustainability performance in line with the GRI and against the NSW Government Resource Efficiency Policy (GREP), which guides our approach to energy, water and waste efficiency in our corporate operations; and helps demonstrates Landcom's alignment with the NSW State Government's sustainability goals[61].

Landcom also continues to maintain ISO14001 Environmental Management System certification. This ensures the way we manage our projects and onsite development operations are validated and consistent with international standards.

For our FY18 performance against the GREP and details of our FY18 ISO14001 recertification, see *Accountability Performance Results* (p. 50).

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59 What is the Paris Agreement? https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement
60 What is the Paris Agreement? https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement
61 As outlined in *NSW 2021: A Plan to Make NSW Number One* which aims to drive resource efficiency by NSW Government agencies in three main areas — energy, water and waste — and to reduce harmful air emissions from government operations.

Partnerships

We believe in the value of partnering with industry organisations that share the same values and aspirations as Landcom. In FY17, we formalised our partnership with the Australian Supply Chain School, which is committed to advancing skills and education within the property sector.

As part of our Sustainable Places Strategy, Landcom also identified an interest in partnering with others to reduce the instances of social issues impacting the development and construction industry, such as suicide. Research suggests that construction workers are six times more likely to die from suicide than in a work accident. This is a pressing issue for our industry, and one that Landcom is reviewing opportunities to make a positive difference.

For more about the benefits of our Supply Chain School partnership, see *Upskill Our Supply Chain* (p. 54).

Emerging Issues

In FY17, Landcom presented a draft of our Sustainable Places Strategy to the community and industry, for review and comment. Through this process, we received clear feedback that our Strategy should address the emerging theme of human rights and modern slavery. We have since integrated a commitment to adopt an approach to human rights and modern slavery as part of our *Accountable & Collaborative Places* pillar.

Globally, sectors with the highest exposure to human rights and modern slavery risks are characterised by labour-intensive, temporary and irregular work conditions. The property and construction sector is considered a high risk sector[62].

Human rights and modern slavery risks generally cover:

· Forced Labour

· Child Labour

· Human Trafficking

· Bonded Labour.

On 6 June 2018, the NSW Legislative Assembly passed the NSW Modern Slavery Bill, which identified reporting and disclosure requirements for organisations across NSW that meet certain criteria. Landcom will be a reporting entity in future.

'It is estimated that 30 million people worldwide currently suffer under some form of slavery, in which their individual liberty is deprived for the commercial or financial gain of another. According to International Labour Organisation (ILO) estimates, approximately 68 per cent of enslaved people are subject to forced labour, generating illicit profits of around $150 billion per year.[63]'

To see Landcom's FY18 progress, refer to *Human Rights & Modern Slavery* (p. 53).

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62 http://www.supplychainschool.org.au/documents/Newsletter/Modern%20Slavery%20report%202018%20FINAL.pdf

63 Human Rights, professional wrongs, EY (2018) https://www.ey.com/au/en/services/specialty-services/climate-change-and-sustainability-services/ey-lets-talk-sustainability-issue-6-human-rights-professional-wrongs

Accountability Performance Results

Landcom's Sustainable Places Strategy addresses *Accountability*. This focus area forms part of our *Accountable & Collaborative Places* pillar and is a representation of our commitment to robust governance and performance, both within our own organisation and in our supply chain.

Our Annual and Sustainability reporting continues to be an important part of how we transparently share our organisational performance with our stakeholders.

Meeting the Sustainable Development Goals

In FY18, Landcom commenced reporting our alignment and contribution to achieving the Sustainable Development Goals (SDGs).

Landcom's Sustainable Places Strategy is aligned to all of the SDGs. Each year we will continue to track our progress against meeting the SDGs and their respective targets relevant to Landcom and our operations.

Sustainable Places Strategy Pillar	Sustainable Development Goals
Climate Resilience Places	1 NO POVERTY · 2 ZERO HUNGER · 6 CLEAN WATER AND SANITATION · 7 AFFORDABLE AND CLEAN ENERGY · 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE · 11 SUSTAINABLE CITIES AND COMMUNITIES · 12 RESPONSIBLE CONSUMPTION AND PRODUCTION · 13 CLIMATE ACTION · 14 LIFE BELOW WATER · 15 LIFE ON LAND
Healthy & Inclusive Places	1 NO POVERTY · 2 ZERO HUNGER · 3 GOOD HEALTH AND WELL-BEING · 5 GENDER EQUALITY · 10 REDUCED INEQUALITIES · 11 SUSTAINABLE CITIES AND COMMUNITIES · 16 PEACE, JUSTICE AND STRONG INSTITUTIONS · 17 PARTNERSHIPS FOR THE GOALS
Productive Places	4 QUALITY EDUCATION · 8 DECENT WORK AND ECONOMIC GROWTH
Accountable & Collaborative Places	8 DECENT WORK AND ECONOMIC GROWTH · 15 LIFE ON LAND

To see our full alignment against the SDGs, and our targets and actions in FY18 to address them, refer to Appendix 4: Sustainable Development Goals Alignment (p. 63).

Global Real Estate Sustainability Benchmark

In FY18 Landcom participated in the Global Real Estate Sustainability Benchmark (GRESB) Developer Assessment. This was our second year participating in GRESB. During FY17 we participated for the first time, under the trading name UrbanGrowth NSW[64].

We achieved a score of 90/100, accompanied by a Green Star rating representative of Landcom's performance within the top 20% of all participants. This result is an improvement on our FY17 performance, of 76/100. Overall our performance positions Landcom as third most sustainable developer in the Asia Pacific,

and fourth globally, compared to other participants using the Developer reporting module.

Landcom continues to perform strongly for Management and Policy compared to our peer group. This is highly reflective of our efforts to maintain a high level of governance and probity over our operations. This year Landcom improved upon our Implementation and Measurement score compared to FY17.

Landcom continues to be the only government land organisation globally that submits to GRESB. The following table summarises our results and benchmarking.

FY17		FY18	
Overall score		**Overall score**	
76	**59** GRESB average **63** Peer average	**90**	**64** GRESB average **67** Peer average
Peer comparison		**Peer comparison**	
5th out of **16** Developer/Asia Pacific	**7**th Globally	**3**rd out of **18** Developer/Asia Pacific	**4**th Globally
Implementation and measurement		**Implementation and measurement**	
63/100		**87/100**	
56 GRESB average **57** Peer average		**60** GRESB average **64** Peer average	
Management and policy		**Management and policy**	
84/100		**93/100**	
61 GRESB average **66** Peer average		**67** GRESB average **69** Peer average	
GRESB Green Star		**GRESB Green Star**	
★★★★☆		★★★★★	

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64 UrbanGrowth NSW was dissolved during the reporting period, and the organisation restructured as Landcom, and UrbanGrowth NSW Development Corporation which is now an agency within the Department of Premier and Cabinet. All documentation submitted to GRESB as part of our FY17 participation is consistent with Landcom projects and operations.

Reporting Frameworks & Certifications

Global Reporting Initiative (GRI)

Landcom identifies and discloses our material aspects in line with the Global Reporting Initiative (see Appendix 5: Global Reporting Initiative, p. 67), as represented in our annual Sustainability Report (this report). Our financial performance is detailed in our Annual Report (link to Annual Report).

Landcom renewed its material issues in 2017 (see *Material Issues*, p. 5). This is an important process to inform how we do business. It provides insights into what our stakeholders value with regards to our developments, and their expectations for the way we operate our organisation.

Environmental Management System (EMS)

In FY18 we successfully recertified our ISO14001 Environmental Management System (EMS) to the 2015 standard. This certification expires in 2021. Key actions in FY18 included the following.

· EMS training delivered to site superintendents and civil works contractors as a refresh on what Landcom required from our contractors. We also updated our site superintendents and civil works contractors of any of Landcom's new sustainability targets that may be relevant to their activities in the future, such as the use of sustainability sourced timber.

· The Landcom Board adopted a Risk Appetite Statement, which references Landcom's zero level of tolerance for decisions that do not consider long-term environmental impacts.

· To improve our operational efficiencies, day-to-day management of the EMS was transferred from the Sustainability Team to the Risk & Safety Team during the reporting period.

NSW Government Resource Efficiency Policy (GREP)

Throughout the reporting period, Landcom continued to voluntarily adopt the NSW Government Resource Efficiency Policy (GREP). The GREP helps the NSW Government to set an example in addressing the challenge of rising resource costs, and reducing impacts on our economy, environment and community.

The GREP guides Landcom's approach to energy, water and waste efficiency in our corporate operations, and helps us align with the State Government's sustainability goals[65]. Key activities in the reporting year related to the GREP include:

· Purchased and retired 18.98 tonnes of CO2-e carbon credits, to offset all FY17 fleet vehicle emissions

· Purchased a new petrol Mitsubishi Outlander SUV, to replace a diesel Holden Colorado ute. (the NSW Government Procurement Policy identifies the maximum emissions permitted by vehicles, procured by government organisations (medium SUV 218gCO2/km). The Mitsubishi Outlander maximum emissions are below the government's threshold of 211gCO2/km)

· Maintained 100% Green Power for the operations of our Parramatta Office

· Maintained our 6 Star NABERS Energy Rating for our Parramatta Office.

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65 As outlined in *NSW 2021: A plan to Make NSW Number One*, which aims to drive resource efficiency by NSW Government agencies in three main areas — energy, water and waste — and also reduce harmful air emissions from government operations.

Human Rights & Modern Slavery

In FY18 we commenced a review of Landcom's human rights and modern slavery risks and opportunities. Once complete, this work will also support Landcom in meeting the newly adopted NSW Modern Slavery Bill, passed by the NSW Legislative Assembly on 6 June 2018. In future, Landcom will be required to make annual public statements which:

· Report against our organisation structure and supply chain

· Disclose the due diligence process in relation to modern slavery

· Identify areas of the business where there is a risk of modern slavery taking place, and the steps taken to assess and manage the risk, and

· Report any training and upskilling provided to staff in relation to modern slavery

Landcom is committed to undertaking robust due diligence for human rights and modern slavery risks across our operations and supply chain. This work will continue throughout FY19, and include collaboration from senior staff members, stakeholder engagement with key staff throughout the organisation, and the development of an action plan to address, reduce and mitigate Landcom's risks.

Supply Chain Performance Results

Landcom's Sustainable Places Strategy addresses *Supply Chain*. This focus area forms part of our *Accountable & Collaborative Places* pillar, and is a representation of our commitment to robust performance, both within our own organisation and in our supply chain.

Upskill Our Supply Chain

We believe partnering with industry organisations that share the same values and aspirations as Landcom. As part of driving accountability and performance along our value chain, in FY18 Landcom established a partnership with the Australian Supply Chain Sustainability School.

Launched in Australia in 2015, the School works to develop the sustainability skills and knowledge of those working in complex property and construction supply chains. Through self-assessment tools and free resources, it helps organisations of all sizes address issues such as modern slavery, sustainable procurement and materials innovation.

Research from the School's 2018 Member Survey[66] shows that growing sustainability knowledge in construction and infrastructure supply chains is helping to minimise risk, and improving how business is done, leading to higher quality outcomes with no additional cost.

Findings reveal that sustainability knowledge is growing in importance, with 63% (up 11 percentage points from 2017) of survey participants reporting that sustainability has become more important to their businesses in the last year. Over half (54%, up 5 percentage points from 2017) have begun to engage suppliers earlier, and most organisations (83%) now have a sustainability program or plan in place.

In addition, 46% of School members report having seen economic, environmental or social benefits resulting from improved supply chains. Benefits include increased awareness of risks, priorities and objectives, enhanced competitiveness in tenders, greater spend with local and diverse suppliers and reduced waste.

A key way Landcom is driving the uptake of the School's content with our suppliers is through contractual obligations. In FY18 we began requiring developers who purchase land from us, and their suppliers, to become members of the School. We are currently in the process of testing the successful uptake of this requirement, and will report on progress again in FY19. We are also exploring how to expand this requirement to major works contracts such as civil construction and landscaping.

During FY18 we also updated our pre-approved Builder Contractor Panel through an Expression of Interest (EOI) process. The Builder Panel joins our existing suite of contractor panels, including Civil Works and Landscaping — both of which were updated to reflect our new sustainability mandate in mid-2017.

The EOI evaluation gave a high weighting to proponents' sustainability credentials and also, importantly, their ambition and commitment to become more sustainable in their operations. We assessed the contractors' policies, systems, reporting and innovation approach to determine which of them was best aligned with our sustainability direction.

The contractor panels provide us with an aligned set of commercial partners who we can continue to engage with for improved sustainability approaches, including through Sustainable Places Strategy briefings, EMS training and leveraging the Supply Chain Sustainability School partnership.

In FY19 we will continue to explore opportunities for supplier engagement, and further embed the resources provided by the Supply Chain School into training modules for Landcom staff and our supply chain.

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66 http://www.supplychainschool.org.au/about/news/110/Smarter-supply-chains-lead-to-better-risk-management-sustainable-projects-and-business-opportunities-confirms-new-research; http://www.supplychainschool.org.au/about/news/132/Results-of-the-Schools-2018-Annual-Member-Survey

Social Issues in the Development and Construction Industry

Landcom is yet to progress our work related to identifying social issues within the construction industry, and determine opportunities to make a meaningful and positive impact. We will commence a review of these opportunities in FY19.

Case Study: Building Sustainability Capability in our Staff

To help deliver against our Sustainable Places Strategy, and to influence our supply chain, we need to support our staff to understand material and emerging sustainability issues, such as climate resilience and modern slavery. This includes being supported by frameworks and tools to embed our response to these issues across our organisation.

For example, in FY18 we:

· Offered Climate Change Risk and Community Resilience training to our project teams: this training, delivered with our consulting partner AECOM, focused on building capacity across the project teams to understand the need to assess climate and community resilience, and provided an overview of the approach Landcom has developed to assessing these strategic focus areas within our projects

· Invited all staff to a briefing on the Sustainability Supply Chain School, the application of Green Star Communities, and innovative industry developments including Mirvac's House With No Bills initiative, delivered by guests from the Supply Chain Sustainability School, Green Building Council of Australia and Mirvac

· Made available detailed Green Star Communities training for staff from both Project and Corporate teams, delivered by the Green Building Council of Australia.

Appendix 1: Indicator Performance Summary

Indicator	FY18 Scope	Performance Result
CLIMATE RESILIENT PLACES		
Energy & Emissions		
All new projects modelled to reduce Green House Gas (GHG) emissions at a precinct scale (transport & stationary) by 50% against 2016 reference case	In Scope	46%
5% of predicted project energy demand supplied from onsite renewable energy, where site constraints permit	No new projects in scope	NA
Climate & Resilience		
All new projects to undertake a Climate Resilience Assessment	In scope	5 out of 9 complete
All new projects to prepare and implement an effective Climate Change Adaptation Plan and Community Resilience Plan	In Scope	2 out of 9 complete
All new projects enhance the local habitat, biodiversity or ecological communities, compared to the site conditions pre-acquisition or pre-masterplan (Landcom Biodiversity Calculator)	In Scope	67% make a positive contribution
20-50% of the total project site area, in plan-view, is comprised of building or landscape elements that reduce the impact of urban heat island effect	In Scope	100% of projects in scope achieved the targets
Water		
All new projects to embed Water Sensitive Urban Design or other water sensitive strategies to reduce storm water pollutant loads to minimise discharge from project sites (pollutant discharge loads not to exceed Nitrogen 45, Phosphorus 65, Suspended Solids 85 and Gross Pollutants 90)	No new projects in scope	(Legacy projects achieved 45% nitrogen reduction)
All new projects modelled to reduce mains potable water demand by 50% at the precinct scale, against a 2016 reference case	In scope	49% reduction
Waste & Materials		
All new projects divert minimum 95% construction waste from landfill (excl. contamination or hazardous materials)	No new projects in scope	(Legacy projects achieved 92% diversion)
100% timber sourced for construction (by cost) is Forest Stewardship Council Certified or agreed equivalent (i.e. Australian Forestry Standards)	No new projects in scope	NA

Environmental Management

All new projects will adopt the use of industry recognised rating tools at a masterplan and built form scale, achieving not less than 'Australian Best Practice' equivalent (Green Star preferred)	No new projects in scope	NA
NABERS: Office, Hotel & Retail – Commitment Agreement or designed to 5 Star Energy and Water	No new projects in scope	NA
BASIX Energy: Detached and semi: 60; Low Rise:55; Mid-Rise 45; High Rise 40 BASIX water: all dwellings: 60	No new projects in scope	NA

HEALTHY & INCLUSIVE PLACES

Health, Equity & Inclusion

2036 Goal: Residents report overall 90% satisfaction with quality of life	In scope	76%
90% residents report high physical and mental health, reflecting project design, programs or events that encourage active, social and healthy eating lifestyles	In scope	89%
90% residents report high quality public, active and sustainable transport options to key amenities, services, public transport and employment	In scope	72%
Enable 5-10% of all new homes as Affordable Housing across our portfolio	No new projects in scope	NA
20% of all new medium and high density dwellings, to be LHA Silver Level Certified	No new projects in scope	NA

Community Connection

90% resident overall satisfaction with the integration of culture and heritage into all new projects	In scope	46%
90% resident reported community cohesion across all new projects, by fostering the integration of community networks and facilities into our projects	In scope	68%

Design Through Engagement

All new projects to undergo peer review through a Design Review Panel or equivalent	Indicator not in scope	NA
All new projects apply the stakeholder engagement framework Join In, aligned to industry best practice	Indicator not in scope	NA

Safety & Wellbeing

Achieve a culture and priority of safety throughout our organisation and on all Landcom projects, achieve 90% overall community safety score at our projects	In scope	82%

PRODUCTIVE PLACES		
Innovation		
Measure and report annual investment in research and development supporting our strategy principles of fostering a sustainable environment, driving social equity, enabling an innovative economy and advancing responsible governance	In scope	$875,289
Greenfield/regional: all new communities provide electric vehicle chargers to service a minimum 10% total dwellings (as either publicly accessible or private use) Urban Renewal/High Density: provide a minimum 10% parking yield, per parking lot, as EV Charge Station 'turn-key' ready at development completion	No new projects in scope	NA
All homes to have access to high-speed broadband (20Mb+)	In scope	Commitment fulfilled by NBN. Target to be retired.
Key open spaces to provide free Wi-Fi access	No new projects in scope	NA
Training & Employment		
To contribute to a global innovation economy by enabling 30,000 enduring jobs for the future by 2036	In scope	16% of target achieved to date; 99% of target projected to be achieved before 2036
Project Teams engage in the Universities Roundtable Communities of Practice, in partnership with leading Australian institutions (run by the Collaborative Learning team), supporting student and staff engagement, research and learning outcomes	In scope	20 Landcom employees across our Corporate and Project teams participated in Communities of Practice; 4 Landcom projects were actively involved
Projects to engage and foster education, learning or employment outcomes via actives or initiatives, based on identified needs of the local and regional community	In scope	Delivered our first Skills Exchange program, worked with over 70 schools and engaged with over 4,000 students

Appendix 2: Summary of Stakeholder Issues

Stakeholders	Consultation method	Issues
State MPs	Presentations and briefings Site visits and tours	Priorities and coordination Timeframes Program milestones
Federal MPs and agencies, including: Department of Environment, Department of Foreign Affairs	Telephone and emails Site visits and tours Presentations and briefings	Environment Protection and Biodiversity Conservation conditions Management of Military Heritage Precinct
State agencies, including: Department of Premier and Cabinet Greater Sydney Commission NSW Treasury Department of Planning and Environment Office of Environment and Heritage Transport for NSW Roads and Maritime Services Heritage Council Office of Strategic Lands Hunter Development Corporation Trade and Investment Office of the Government Architect NSW Department of Education Property NSW Infrastructure NSW TAFE NSW Utilities	Meetings and briefings Workshops Telephone and emails Seminars Ongoing project liaison including through Multi-Agency Steering Groups, Program Advisory Boards, Program Control Groups and working groups Industry forums Site tours and meetings CEOs Reference Group	Whole of government coordination of investment decisions and delivery Development of plans for precinct Sustainability Strategy development and adoptions Collaboration in accordance with agreed frameworks Access to buildings/land Leases and engagement with tenants Repurposing of heritage buildings Coordinate transport management and infrastructure Specific discussion of projects, components and progress against milestones and objectives Voluntary Planning Agreement and modifications to existing approvals Regional Park embellishment and use Provide service crossings to service land Title production
Councillors and local government staff	Meetings, briefings and presentations Telephone, emails and letters Workshops Ongoing project liaison including through Project Coordination, Reference and working groups Asset inspections	Ongoing consultation with Council Coordination with Council projects Statutory planning approvals, including: Development Control Plans, Town centre DAs and Voluntary Planning Agreement Coordinate transport management and infrastructure Management of community impacts, place making and community development issues Resolve design and delivery issues Negotiate subdivision Council asset handovers Development commencement, progress, access, road closures, street name changes Land acquisition and asset handovers

Stakeholders	Consultation method	Issues
Local community groups	Meetings and presentations	Development of plans for precinct
	Telephone and emails	Impacts on local infrastructure and properties
	Ongoing project liaison including through Community Advisory Panels Reference Groups	Opportunities for community input into studies
	Attendance at Community Group Meetings Ongoing liaison through Reference Groups	Provision of active recreational facilities
		Adaptive reuse to secure long term management and ownership
Industry groups and businesses	Presentations/talks at industry events such as business breakfasts, conferences, briefings	Development of plans for precinct
	Advertising	Interest in development and other opportunities
	Media releases	Impacts on working harbour
	Presentations to industry groups and conferences	Impacts on lease arrangements and planning certainty
	Presentations at events	Commercial outcomes
	Meetings and briefings	Servicing schedule and progress
	Workshops	Maintain working relationships
	On site meetings and tours	Negotiating access for works
	Telephone, emails and letters	
Department of Education, Catholic Education Office, Schools and Universities	University Collaboration Agreement	Development of plans for precinct
	University Roundtable and Communities of Practice	Access to teaching materials and project information
	Telephone, emails and letters	Facilitating schools precincts
	Surveys	Maximising shared use of school buildings
	Fieldwork programs	Shared use of open space
	Liaison with school principal	Design, heritage and other aspects of existing spaces
	Ongoing project liaison including through Project Control Group meetings	Access to buildings/land
	Meetings with academics	
	Lectures, presentations and tours as part of course	
Indigenous groups	Aboriginal Cultural Heritage Liaison Committee meetings	Coordinate pre-construction activities
		Design of Aboriginal cultural heritage areas
		Other indigenous matters
Media – TV news, radio and newspaper	Interviews	Development and progress of plans for precinct
	Social media updates	Opportunity to explain balanced outcomes at projects
	Ministerial updates	
	Media releases	

Appendix 3: Assurance Statement

Independent Assurance Statement to the Board and Management of Landcom

Point. Advisory

We, Point Advisory Pty Ltd ('Point Advisory'), performed independent assurance over selected performance data and statements presented in Landcom's FY18 Sustainability Report ('the Report') which includes performance over the period 1 July 2017 – 30 June 2018.

Respective responsibilities

- Landcom management is responsible for the preparation and presentation of the information within the Report. Landcom management is also responsible for the design, implementation and maintenance of internal controls relevant to the preparation of the Report, so that it is free from material misstatement. Landcom management is also responsible for setting targets and for the development of appropriate internal controls to monitor performance.
- Point Advisory's responsibility, in accordance with Landcom management's instructions, is to carry out a 'limited level' ASAE3000[1] assurance engagement on selected data and performance claims in the Report and a Type 2 'moderate level' of assurance over the Report in accordance with AccountAbility's AA1000AS (2008)[2]. We do not accept or assume any responsibility for any other purpose or to any other person or organisation. Other stakeholders should do their own due diligence before taking any action as a result of this statement.

Criteria

We have used the following criteria against which to evaluate the content of the Report:
- The AA1000 AccountAbility Principles of Inclusivity, Materiality and Responsiveness
- The Global Reporting Initiative's Sustainability Reporting Guidelines (GRI Guidelines)
- Landcom's own reporting criteria (as set out in the Report) and relevant policies and procedures to evaluate the selected data.

Our methodology

Our assurance engagement was planned and performed in accordance with ASAE3000 and AA1000AS (2008). The procedures we performed were based on our professional judgement and included the steps outlined below:

- Interviewed a selection of Landcom's executives and managers to understand its material sustainability topics ('material topics') and the effectiveness of its responses, including how sustainability is integrated across the organisation and projects.
- Reviewed a selection of corporate documents including the Sustainable Places Strategy and other key internal documents to understand Landcom's material topics, how they are managed and what progress was made during the reporting period.
- Reviewed the coverage of material topics within the Report against the key sustainability topics raised in media reports, peer reports, management interviews, key internal documents and the outputs from Landcom's materiality process.
- Interviewed data owners of selected data sets to understand how they collected, calculated and aggregated sustainability data from projects as well as what assumptions or estimations were made.
- Sought and reviewed supporting information or explanations for selected data, statements and claims within the Report regarding Landcom's sustainability performance.
- Checked whether sustainability data in the Report had been calculated and aggregated accurately, was consistent with Landcom's internal records, and according to managements explanations and disclosures.
- Reviewed and assessed Landcom's reported alignment with the requirements of the GRI Guidelines.

The limitations of our review

Our evidence gathering procedures were designed to obtain a 'limited level' of assurance (as set out in ASAE3000) on which to base our conclusions. The extent of evidence gathering procedures performed is less than that of a reasonable assurance engagement (such as a financial audit) and therefore a lower level of assurance is provided. Further:

- We did not visit project sites or interview project teams.
- Our review was limited to sustainability disclosures that were in scope for FY18 which, according to Landcom's management, was for projects that were reporting against the new Sustainable Places Strategy.

Our conclusions and observations

Our detailed observations and areas for improvement will be raised in a report to Landcom management.

In line with the scope of our independent assurance engagement, including the criteria and methodology described above, we conclude that:
- based on our 'limited' assurance procedures under ASAE3000, nothing has come to our attention that causes us to believe that selected sustainability disclosures have not been reported fairly and accurately.
- based on our 'moderate level' of assurance procedures under AA1000AS (2008), nothing has come to our attention that causes us to believe that Landcom has not adhered to the AA1000 AccountAbility Principles of Inclusivity, Materiality and Responsiveness when reporting its sustainability performance.

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[1] Standard on Assurance Engagements ASAE 3000 *Assurance Engagements Other than Audits or Reviews of Historical Financial Information* Issued by the Auditing and Assurance Standards Board

[2] AA1000 AS (2008) Assurance Standard

Point. Advisory

Completeness and accuracy of performance information

We have reviewed information or explanations for selected data and statements on Landcom's sustainability activities presented in the Report and we are not aware of any misstatements in the assertions made.

Evaluating adherence to AA1000 AccountAbility Principles

Our detailed conclusions regarding Landcom's adherence to the AA1000 AccountAbility Principles and selected observations are provided below, and do not affect our conclusions on the Report set out earlier in this statement.

AA1000 AccountAbility Principles	Conclusions	Observations
Inclusivity Has Landcom included stakeholders in developing and delivering its sustainability approach?	We are not aware of any key stakeholder groups which have been excluded from engagement nor any matters that would lead us to conclude that Landcom has not applied the inclusivity principle in developing its approach to sustainability.	Landcom understands the benefits of engaging with its stakeholders, with both its Strategic Directions and Sustainable Places Strategy reflecting stakeholder engagement-related performance objectives. During the reporting period Landcom sought direct feedback from residents through the Healthy and Inclusive Places Survey and employees through an internal staff survey.
Materiality Has Landcom provided a balanced representation of material topics concerning its sustainability performance?	We are not aware of any material topics in our review of Landcom sustainability governance documentation which have been excluded from the Report, and nothing has come to our attention that causes us to believe that Landcom management has not applied its processes for determining material topics to be included in the Report.	Landcom conducted a materiality assessment in 2017 which identified ten material topics and performed an internal validation process in 2018 when preparing the Report. Most topics relate to social sustainability issues which aligns with Landcom's Strategic Directions focus on Housing, Partnerships and Leadership, and reflects the focus of management and stakeholders during the reporting period.
Responsiveness Has Landcom responded to stakeholder perspectives and their interests and concerns?	We are not aware of any key actions or initiatives responding to material topics which have been excluded from the Report nor any matters that would lead us to conclude that Landcom has not applied the responsiveness principle in considering the matters to be reported.	Landcom developed and launched its Sustainable Places Strategy during the reporting period. The strategy's vision, goals, and targets demonstrate a comprehensive response to stakeholder perspectives and material topics. The inclusion of leadership goals and aspirational targets demonstrates commitment to creating long-term positive impact, and the Report includes accessible and relevant information that allows stakeholders to make their own assessment of progress.

Review of alignment with the GRI Guidelines

We have reviewed Landcom's reported alignment with GRI Guidelines and we are not aware of any misstatements in the assertions made.

Our independence

We are not aware of any issues that could impair our independence or objectivity for this assurance engagement. Point Advisory's independence policy and supporting measures apply to management and professional staff. This policy also prohibits any financial interests in our clients that would or might be seen to impair independence.

Our team

Led by a Lead Certified Sustainability Assurance Practitioner (CSAP), our assurance team has qualifications and experience in applying the ASAE3000, AA1000AS (2008) and GRI Guidelines relevant for this sustainability assurance engagement.

On behalf of the assurance team.

Alan Dayeh
Managing Principal, NSW
Lead CSAP (AccountAbility UK)
Point Advisory, Sydney
31 October 2018

AA1000
Licensed Assurance Provider
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Appendix 4: Sustainable Development Goals Alignment

Landcom is committed to supporting international agreements, protocols and targets to help ensure our planet and communities thrive into the future. As part of this commitment, in FY18 we have commenced reporting our contribution to the United Nations Sustainable Development Goals (SDGs)[67].

In summary, our Climate Resilience Places pillar supports SDGs 1, 2, 6, 7, 9, 11, 12, 13 and 15.

Our Healthy & Inclusive Places pillar supports SDGs 1, 2, 3, 5, 10, 16 and 17.

Our Productive Places pillar supports SDGs 4 and 8.

Our Accountable & Collaborative pillar supports SDGs 8 and 15.

SDG Goal & Target	Landcom Response
Goal 1: End poverty in all its forms everywhere **Target:** By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	Landcom supports the ending of poverty through our mandate to provide Affordable Housing[68]. We expand on this to ensure housing diversity and accessibility are addressed, for equity. **Healthy & Inclusive Places Targets** Deliver 5-10% Affordable Housing across the Landcom portfolio. 20% of medium to high density dwellings within all new projects are achieve Livable Housing Australia Silver Certification (or equivalent). Landcom further supports all community members, including the vulnerable, to increase their resilience to climate related extremes and other shocks or stresses through our commitments to building resilience. **Climate Resilient Places Targets** All projects to prepare and implement an effective Climate Change Adaptation Plan; and Community Resilience Plan.
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture **Target:** By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round	Landcom is seeking ensure access to nutritious food by mandating the adoption of independent rating tools – such as Green Star Communities. Within these tools, we will aim to achieve all credits related to 'access to fresh food'. **Climate Resilient Places Targets** All projects will adopt the use industry recognised rating tools at a masterplan and built form scale, achieving not less than 'Australian Best Practice' equivalent.
Goal 3: Ensure healthy lives and promote well-being for all at all ages **Target:** By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being	Landcom is committed to ensuring our communities are mentally and physically well. We address this through the design of our communities, and activities or programs we offer throughout the year. We then measure our ongoing success through direct engagement with the people living in our communities. **Healthy & Inclusive Places Targets** All projects provide design, programs or events that encourage active, social and healthy eating lifestyles, achieve 90% resident reported health and wellbeing. All new projects are designed and delivered to achieve 90% resident satisfaction with public, active and sustainable transport options to key amenities, services, public transport and employment. **Activities** FY18 Landcom Community Development programs related to health, offered at various projects. FY18 Landcom and Welcome Dinner Project partnership established, focused on connecting people, reducing social isolation, and supporting positive mental health outcomes.

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67 United Nations Sustainable Development Goals (2018) https://www.un.org/sustainabledevelopment/sustainable-development-goals/
68 Managed or owned by a Community Housing Provider for not less than 10 years, and accessible to people who meet the government means testing (or other criteria) for access to Affordable Housing.

SDG Goal & Target	Landcom Response
Goal 4: Ensure inclusive and quality education for all and promote lifelong learning **Target:** By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	Landcom believes that equitable access to education and opportunities is an important part of delivering our communities. We address this through our targets, and programs/activities offered at our projects. **Productive Places Targets** Projects to engage and foster education, learning or employment outcomes via activities or initiatives, based on identified needs of the local and regional community. **Activities** FY18 Landcom Skills Exchange, offered at two communities to support at risk secondary school students, and long term unemployed people, to engage in meaningful learning, skills development and/or employment.
Goal 5: Achieve gender equality and empower all women and girls **Target:** Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life	Landcom is committed to diversity and inclusion, including the engagement of women and girls. **Healthy & Inclusive Places Priority** Identify opportunities to positively impact diversity, inclusion and accessibility. **Activities** FY18 Landcom Board commits to establish a Diversity & Inclusion Policy, for adoption in FY19.
Goal 6: Ensure access to water and sanitation for all **Target:** By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	Landcom recognises that water scarcity and drought is an increasing issue for Australia. We're committed to enhancing the efficiency, reducing the unnecessary use of potable water, and ensuring water quality is not negatively impacted by our activities or the communities we build. **Climate Resilient Places Targets** Achieve water positive communities by 2028. All projects modelled to reduce mains potable water demand by 50% at the precinct scale against a 2016 reference case. BASIX 60 water target for all new dwellings within our development control. Water Sensitive Urban Design strategy for all projects, pollutant discharge loads not to exceed Nitrogen 45, Phosphorus 65, Suspended Solids 85, Gross Pollutants 90.
Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all **Target:** By 2030, increase substantially the share of renewable energy in the global energy mix	Australia is privileged to have reliable energy sources, therefore Landcom's focus is on enhancing efficiency, improving cost of living, and increasing the use of renewables. **Climate Resilient Places Targets** 5% of predicted energy demand supplied from onsite renewable energy, where site constraints permit. All new projects modeled to reduce Green House Gas (GHG) emissions at a precinct scale (transport & stationary) by 50% against 2016 reference case (CCAP PRECINX modelling). **Activities** Landcom's Sustainability Rebate for home owners was approved, and will be rolled out to selected communities in FY19.
Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all **Target:** Take immediate and effective measures to eradicate forced labour, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labour, including recruitment and use of child soldiers, and by 2025 end child labour in all its forms	Landcom aims to support the Greater Sydney Commission objective to achieve a 30 minute city. We're focused on ensuring land use diversity across our projects to promote jobs close to homes. We are also committed to identify any risks of modern slavery or human rights infringements within our operations or supply chain, and take action. **Productive Places Targets** Enable 30,000 enduring jobs by 2036. **Accountable & Collaborative Priorities** Develop an approach to human rights with consideration for modern slavery.

SDG Goal & Target	Landcom Response
Goal 9: Build resilient infrastructure, promote sustainable industrialization and foster innovation **Target:** Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	Landcom is committed to delivering and enabling resilient infrastructure and communities. We address this through our Climate Resilient Places targets, such as mandating resilience risk assessments and adaptation plans, adopting independent rating tools and pushing for highly efficient buildings. **Climate Resilient Places Targets** All projects will adopt the use industry recognized rating tools at a masterplan and built form scale, achieving not less than 'Australian Best Practice' equivalent. Above standard NABERS and BASIX building ratings. All projects to prepare and implement an effective Climate Change Adaptation Plan; and Community Resilience Plan.
Goal 10: Reduce inequality within and among countries **Target:** By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	We are focused on ensuring equity and inclusion across the communities we delivering, which is why we measure satisfaction with quality of life from our residents – through our Healthy & Inclusive Places Survey. This information helps us identify areas to improve the social and economic inclusion of all members in our communities. **Healthy & Inclusive Places Target** Achieve 90% resident satisfaction with quality of life, as measured by the Personal Wellbeing Index.[69] **Healthy & Inclusive Places Priority** Identify opportunities to positively impact diversity, inclusion and accessibility. **Activities** FY18 Landcom Board commits to establish a Diversity & Inclusion Policy, for adoption in FY19. FY18 Landcom Community Development programs for a broad range of interests and needs, offered at various projects. FY18 Landcom and Welcome Dinner Project partnership established, focused on connecting people, reducing social isolation, and supporting positive mental health outcomes.
Goal 11: Make cities inclusive, safe, resilient and sustainable **Target:** By 2030, ensure access for all to adequate, safe and affordable housing and basic services **Target:** By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities	Landcom's objective is to deliver affordable and sustainable communities. We do this through our commitments to sustainability, housing affordability and diversity, and the provision of parks and open spaces throughout our communities – that are safe and equitable. **Healthy & Inclusive Places Targets** Deliver 5-10% Affordable Housing across the Landcom portfolio. 20% of medium to high density dwellings within all new projects are achieve Livable Housing Australia Silver Certification (or equivalent). Achieve a culture of safety throughout our organisation and on all Landcom projects, striving to achieve 90% overall community safety score at our projects. **Activities** Participated in the creation of Everyone Can Play, a NSW government initiative to develop a suite of indicators for inclusive play spaces. Audited existing Landcom project parks for their achievement against the Everyone Can Play guidelines to help inform areas for improvement. **Climate Resilient Places Targets** 20-50% of the total project site area, in plan view, is comprised of building or landscape elements that reduce the impact of urban heat island effect.

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69 Personal Wellbeing Index, Deakin University & Australian Unity (2017) australianunity.com.au/.../wellbeing%20index/wellbeing%20index%2020

SDG Goal & Target	Landcom Response
Goal 12: Ensure sustainable consumption and production patterns **Target:** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	Landcom has maintained a waste diversity from landfill target for many years. We continue to see our most material contribution to the SDG as ensuring unnecessary construction waste does not end up in landfill, but is recycled or reused. **Climate Resilient Places Targets** All new projects divert minimum 95% construction waste from landfill (excluding contamination or hazardous materials). 100% timber used in construction is FSC certified (or equivalent).
Goal 13: Take urgent action to combat climate change and its impacts **Target:** Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	Landcom developed the Sustainable Places Strategy with the SDGs and Paris Agreement at front of mind. Our entire Strategy is focused on combatting climate change and its impacts, and building community resilience to climate induced shocks and stresses. **Climate Resilient Places Targets** All targets found in this pillar of Landcom's Sustainable Places Strategy. **Activities** Collaboration with the CRC for Low Carbon Living to develop an urban heat island mitigation tool.
Goal 14: Conserve and sustainably use the oceans, seas and marine resources **Target:** By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	**Climate Resilient Places Targets** Water Sensitive Urban Design strategy for all projects, pollutant discharge loads not to exceed Nitrogen 45, Phosphorus 65, Suspended Solids 85, Gross Pollutants 90.
Goal 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss **Target:** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species	One of Landcom's leadership goals is to ensure net positive ecological outcomes across our portfolio. We address this through the conservation or enhancement of biodiversity and ecological communities at our projects, and encouraging responsible materials sourcing in our supply chain. **Climate Resilient Places** All new projects enhance the local habitat, biodiversity or ecological communities, compared to the site conditions pre-development. 100% timber used in construction is FSC certified (or equivalent). **Activities** Established a partnership with the Sustainability Supply Chain School, and plan to make online training and resources available to staff in FY19.
Goal 16: Promote just, peaceful and inclusive societies **Target:** Ensure responsive, inclusive, participatory and representative decision-making at all levels	Landcom seeks to advance inclusion and participation within and across communities through our Community Development and Welcome Programs, by sourcing data through our Healthy & Inclusive Places Survey, and between staff within our organisation. **Healthy & Inclusive Places Targets** Achieve 90% resident reported community cohesion across all new projects, by fostering the integration of community networks and facilities. **Healthy & Inclusive Places Priorities** Identify opportunities to positively impact diversity, inclusion and accessibility.
Goal 17: Revitalize the global partnership for sustainable development **Target:** Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships	Landcom is committed to promoting effective public, public-private and civil society partnerships and engagement. Our main framework to support this is our Join In framework, aligned with the IAP2, and dedicated to meaningful engagement. **Healthy & Inclusive Places Targets** All new projects apply the stakeholder engagement framework Join In, aligned to industry best practice.

Appendix 5: Global Reporting Initiative

G4 General and Specific Standard Disclosures

General Standard Disclosures 2018		
GRI Reference	**General Standard Disclosure (summarised)**	**Reference to where the relevant information can be found**
STRATEGY AND ANALYSIS		
G4-1	Statement from the most senior decision-maker of the organisation	'Message from the CEO' in FY18 Sustainability Report.
ORGANISATIONAL PROFILE		
G4-3	The name of the organization	'Our Organisation' in Landcom Annual Report 2018.
G4-4	The primary brands, products, and services	'Chair's Review' and 'Our Organisation' in Landcom Annual Report 2018.
G4-5	The location of the organisation operates	'Our Organisation' in Landcom Annual Report 2018.
G4-6	The countries where the organisation operates	'Our Organisation' in Landcom Annual Report 2018.
G4-7	The nature of ownership and legal form	'Our Organisation' and 'Our governance structure' in Landcom Annual Report 2018.
G4-8	The markets served	'Our Organisation' in Landcom Annual Report 2018.
G4-9	Scale of organisation	'Our Organisation' in Landcom Annual Report 2018.
G4-10	Employment and diversity	'Trends in the representation of Workforce Diversity Groups' in Landcom Annual Report 2018. No significant variations in employment numbers during FY18.

Totals

	Female	Male	Total
Staff Numbers	81	82	163
Full-Time	66	80	146
Part-Time	15	2	17
Award Staff	60	53	113
Snr Mgt Contract	21	29	50

Award Staff

	Female	Male	Total
Full-Time	50	52	102
Part-Time	10	1	11
Permanent	20	21	41
Term	40	32	72

Snr Mgt Contract

	Female	Male	Total
Full-Time	17	27	44
Part-Time	4	2	6

Location

	Female	Male	Total
Parramatta	68	73	141
CBD	12	6	18
Other	1	3	4
(Campbelltown, Claymore, Foster)			

Note: contractor (on project site) numbers have not been included within the above totals.

G4-11	Percentage of employees covered by collective bargaining agreements	100% Landcom staff are covered by the Landcom Award.

G4-12	Organisation's supply chain	'Reporting Entity' in 2018 Annual Report.
		'Accountable & Collaborative Places' and 'Supply Chain Performance Results' in FY18 Sustainability Report.
G4-13	Significant changes during the reporting period to the organisation's size, structure, ownership or supply chain	'Legal Events, Organisational separation' in Landcom Annual Report 2018.
G4-14	How the precautionary approach or principle is addressed by the organisation	'Landcom's Approach to Environmental Management' at:
		https://www.landcom.com.au/assets/Sustainability/Landcom-approach-to-environmental-management.pdf
		'Climate Resilient Places Overview' in the FY18 Sustainability Report
G4-15	Externally developed economic, environmental and social charters, principles or other initiatives to which the organisation subscribes or which it endorses	'Chair's Review, Leadership: demonstrate excellence in sustainable development and planning practice' in Landcom Annual Report 2018.
		'Sustainability' in Landcom Annual Report 2018.
		'Accountable and Collaborative Places Overview' in Sustainability Reporting 2018.
G4-16	Membership of associations (such as industry associations) and national or international advocacy organisation's in which the organisation holds a position on the governance body; participates in projects or committees; provides substantive funding beyond routine membership dues; and views membership as strategic.	Memberships include: Green Building Council of Australia, Property Council of Australia, Master Builders Association, Urban Taskforce Australia, Urban Development Institute of Australia, Corporate Club of Australia, and Committee for Economic Development of Australia.

IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES

G4-17	Organisation's consolidated financial statements	'Notes to and forming part of the Financial Statements' in Landcom Annual Report 2018.
G4-18	Defining the report content and the Aspect Boundaries	'Reporting Requirements' and Reporting Boundaries' in FY18 Sustainability Report.
G4-19	Material Aspects identified	'Material Issues' in FY18 Sustainability Report
G4-20	Material Aspect boundary	'Material Issues' and 'Reporting Boundaries' in the FY18 Sustainability Report.
G4-21	Material Aspect Boundary outside the organisation	'Material Issues' and 'Reporting Boundaries' in the FY18 Sustainability Report.
G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements	There have been no restatements of information.
G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries	'Reporting Boundaries' in FY18 Sustainability Report.

STAKEHOLDER ENGAGEMENT

G4-24	List of stakeholder groups engaged by the organisation	'Appendix 2: Summary of Stakeholder Issues' in FY18 Sustainability Report.
G4-25	Basis for identification and selection of stakeholders with whom to engage	'Community Engagement' in FY18 Sustainability Report.
G4-26	Organisation's approach to stakeholder engagement	'Community Engagement' in FY18 Sustainability Report.
		'Appendix 2: Summary of Stakeholder Issues'
G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded	'Appendix 2: Summary of Stakeholder Issues' in FY18 Sustainability Report.
		'Community Engagement' in FY18 Sustainability Report.

REPORT PROFILE		
G4-28	Reporting period for information provided	'About This Report' in FY18 Sustainability Report.
G4-29	Date of most recent report	Sustainability Report 2018.
G4-30	Reporting cycle	'About This Report' in FY18 Sustainability Report.
G4-31	Contact point for questions regarding the report or its content	'Corporate Directory' in Landcom Annual Report 2018.
G4-32	GRI Content Index and reference to the External Assurance	'Appendix 3: Assurance Statement' in FY18 Sustainability Report. 'About This Report' in FY18 Sustainability Report.
G4-33	The organisation's policy and current practice with regard to seeking external assurance for the report.	'Appendix 3: Assurance Statement' in FY18 Sustainability Report. 'About This Report' in FY18 Sustainability Report.
GOVERNANCE		
G4-34	Organisation's governance structure	'Board of Directors', 'Executive Committee' and 'Our Governance Structure' in Landcom Annual Report 2018.
ETHICS AND INTEGRITY		
G4-56	Organisation's values, principles and standards	'Board Commitments', 'Corporate Governance' and 'Our guarantee of service' in Landcom Annual Report.

G4 Specific Standard Disclosures		
DMA and Indicator	Specific Standard Disclosures (summarized)	Reference to where the relevant information can be found
Category: Economic		
Material Aspect: Economic Performance		
G4-DMA	Disclosures on Management Approach.	'Our charter and function', 'Corporate governance' and 'Risk management' in 2018 Annual Report.
G4-EC1	Direct economic value generated and distributed	'FY18 economic and financial highlights' and 'Notes to and forming part of the Financial Statements for wages and other payments' in 2018 Annual Report.
G4-EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	'Business continuity' in 2018 Annual Report. 'Climate Resilient Places Pillar Overview, Management Approach' and 'Climate Resilient Places Performance Results' in FY18 Sustainability Report.
Material Aspect: Indirect Economic Impacts		
G4-EC7	Development and impact of infrastructure investments and services supported	'Healthy & Inclusive Places Pillar Overview, Management Approach' and 'Measuring Impact' in FY18 Sustainability .
G4-DMA	Disclosures on Management Approach	'Climate Resilient Places Pillar Overview, Management Approach' and 'Climate Resilient Places Performance Results'.
Category: Environmental		
G4-EN7	Reductions in energy requirements of products and services	'Climate Resilient Places Pillar Overview' and 'Climate Resilient Places Performance Results' in FY18 Sustainability Report.
CRE1	Building Energy Intensity	

Location	Total Electricity Use	NLA	Intensity
Parramatta Head Office	133,267 kWh (100% Green Power)	2640 m^2	50.5 kWh/m^2
MLC Centre	During the year the MLC office lease was taken over by NSW UrbanGrowth Development Corporation and Landcom has sublet a small area of that tenancy to maintain a Sydney CBD presence. There is no electricity data available for the space we sublet.		

Material Aspect: Water

G4-DMA	Disclosures on Management Approach	'Climate Resilient Places Pillar Overview, Management Approach, Energy & Emissions and Water' in FY18 Sustainability Report.
G4-EN10	Total volume of water recycled and reused by the organisation linked to metered utility data.	Landcom has no material water recycling and reuse linked to metered utility data for our business operations, as we do not have operational assets.
		Planning for water recycling is addressed through master planning and generally is the responsibility of our customers (i.e. to meet BASIX requirements). Once land is sold to the customer, Landcom no longer maintains operational control of that land and its water collection or usage.
CRE2	Building water intensity.	

Location	Total Water Use	NLA	Intensity
Parramatta Head Office	639 kl	2,640 m^2	0.24 kl/ m^2
MLC Centre	During the year the MLC office lease was taken over by NSW UrbanGrowth Development Corporation and Landcom has sublet a small area of that tenancy to maintain a Sydney CBD presence – however staff presence fluctuates and there is no definitive number of persons using this space. There is no water data available for the space we sublet.		

Material Aspect: Materials

G4-DMA Materials	Disclosures on Management Approach.	'Climate Resilient Places Pillar Overview, Management Approach, Waste & Materials and Environmental Management' in FY18 Sustainability Report.

Material Aspect: Biodiversity

G4-DMA	Disclosures on Management Approach	'Climate & Resilience Pillar Overview, Management Approach, Biodiversity' in FY18 Sustainability Report.
G4-EN13	Habitats protected or restored.	'Climate Resilient Places Leadership Target' and 'Climate & Resilience Places Performance Results' in FY18 Sustainability Report.

Material Aspect: Emissions

G4-DMA	Disclosures on Management Approach	'Climate Resilient Places Leadership Target' and Climate Resilient Places Pillar Overview, Management Approach, Energy & Emissions and Water' in FY18 Sustainability Report.
G4-EN15	Direct Greenhouse Gas Emissions (Scope 1)	'NSW Government Resource Efficiency Policy (GREP)' in FY18 Sustainability Report.

Scope 1 emissions:

Source	Emissions
Fleet Vehicle Fuels	14.16 tCO2-e
Greenfleet Offsets	-18.98 tCO2-e

During the year, Greenfleet emission offsets were purchased based on the emissions from fleet vehicles during the previous reporting year.

G4-EN16	Indirect Greenhouse Gas Emissions (Scope 2)	Scope 2 Greenhouse Gas emissions from electricity purchased by Landcom for our offices are zero.
		Landcom purchased 100% GreenPower for the reporting year and has done so since 2010.
CRE3	Greenhouse Gas Emissions intensity from buildings.	'NSW Government Resource Efficiency Policy (GREP)' in FY18 Sustainability Report.
		Greenhouse Gas emissions from Landcom office buildings within the reporting scope are zero. This is consistent with the purchase of 100% Green Power for these buildings.

Material Aspect: Compliance

| G4-DMA | Disclosures on Management Approach | 'Landcom's approach to environmental management' at: https://www.landcom.com.au/assets/Sustainability/Landcom-approach-to-environmental-management.pdf |
| G4-EN29 | Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations | Nil – no significant fines or monetary sanctions for non-compliance with environmental laws and regulations. |

Material Aspect: Effluents and Waste

| G4-DMA | Disclosures on Management Approach | 'Climate Resilient Places Overview, Management Approach, Waste & Materials' in FY18 Sustainability Report. |
| G4-EN23 | Total weight of waste by type and disposal method. | 'Waste & Materials Performance Results' in FY18 Sustainability Report. |

Category: Social

Sub-Category: Labor Practices and Decent Work

Material Aspect: Occupational Health and Safety

G4-DMA	Disclosures on Management Approach	Chair's Review', 'Corporate Governance', 'Risk Management' and 'Work Health and Safety' in 2018 Annual Report.
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender.	'Work Health and Safety' in 2018 Annual Report.
		Note: The definition of 'supervised worker' in the G4 Implementation Manual p.252 does not cover workers on Landcom projects as these sites are not under the operational control of Landcom as defined at s11 of the NGER Act. Landcom does not report all of the required indicators under this GRI item.
G4-CRE6	Verified compliance with an internationally recognized health and safety management system.	100% of staff are covered under the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2011. All staff are included in the NSW Treasury Managed Fund which includes workers compensation.
		Note: The definition of 'supervised worker' in the G4 Implementation Manual p.252 does not cover workers on Landcom projects as these sites are not under the operational control of Landcom as defined at s11 of the NGER Act.

Sub-Category: Society

Aspect: Local Communities

| G4-DMA | Disclosures on Management Approach | 'Health, Equity & Inclusion, Management Approach, Design through Engagement' in FY18 Sustainability Report. |
| CRE7 | Number of persons voluntarily and involuntarily displaced and/or resettled by development, broken down by project | Nil - has no direct involvement in voluntary and involuntary displacement and/or resettlement due to the development. |

Sub-Category: Product Responsibility		
Material Aspect: Customer Health and Safety		
G4-DMA	Disclosures on Management Approach	'Risk Management' in 2018 Annual Report.
		'Health, Equity & Inclusion, Community Connection & Safety' in FY18 Sustainability Report.
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes.	'Work Health and Safety' in 2018 Annual Report.
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	Nil fines were received during FY18.
Sub-Category: Product Responsibility		
Material Aspect: Product and Service Labelling		
G4-DMA	Disclosures on Management Approach	'Public Access to information and the protection of privacy' in 2018 Annual Report.
		'Your Right to Information' at:
		https://www.landcom.com.au/your-right-to-information/