

# Climate Resilience

**FY19**

## Why this is important to Stockland

Climate change presents risks and opportunities for our business, and we are committed to identifying, assessing, and managing these to support the resilience of our business, assets, and communities. Climate-related risks and opportunities can be divided into two categories: the transition to a low-carbon economy (transition risks) and physical impacts from changes to climatic conditions, including extreme events (physical risks).

With regard to transition risk, we acknowledge that Australia and nearly 200 other nations have agreed to the objective of limiting global warming to below 2°C (the Paris Agreement<sup>1</sup>). Pursuing this objective implies a general movement away from fossil fuel energy and increased deployment of low/zero carbon energy sources and energy-efficient technology. While changes associated with the transition to a low-carbon economy present risks across most industries, they also create substantial opportunities for organisations focused on climate change mitigation and adaptation solutions. Our [Carbon and Energy Deep Dive](#) reports on how we leverage these opportunities through our focus on energy efficiency and renewable energy.

With regard to physical risk, we are already experiencing physical impacts of climate change in the form of gradual changes to climate variables and an increased frequency and severity of extreme weather events. These events have the potential to damage our assets, disrupt operations and impact the health and wellbeing of our customers and communities. For the benefit of our stakeholders, and society more broadly, we are committed to creating climate resilient assets that operate with minimal disruption, as well as building strong communities that are equipped to adapt to climate change risks and opportunities.

This Deep Dive document is a component of our FY19 sustainability reporting suite, which is publicly available on our [website](#). Our sustainability reporting is third-party assured and drafted in accordance with the GRI Standards.<sup>2</sup> The material in this Deep Dive is supported by a wider collection of performance metrics contained in our [Environmental Data Pack](#).

This Deep Dive is to be read in conjunction with our published approach to climate resilience, available as part of our sustainability reporting suite at [Our Management Approach to Climate Resilience](#).



## Our key achievements

- Completed eight climate and community resilience assessments in our Retirement Living (three) and Residential (five) portfolios.
- Completed six climate resilience assessments and four community resilience assessments across our Commercial Property Retail Town Centres and Logistics Distribution Centres portfolio.
- Integrated our climate risk assessment approach to bring together all of our climate resilience work to date into one centralised tool. This tool provides a framework for undertaking climate risk assessments across our assets, and ensures a systematic, objective, and standardised process for ongoing management of climate resilience.

<sup>1</sup> The Paris Agreement's central aim is to 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 to 1.5 degrees Celsius (<http://bigpicture.unfccc.int/#content-the-paris-agreement>).

<sup>2</sup> The GRI Standards are global standards for sustainability reporting published by the Global Reporting Initiative (<https://www.globalreporting.org/standards/>)

### In this document you will find:

[FY19 priorities and progress](#)
**2**
[FY19 performance and case studies](#)
**3**



- Named GRESB Global Sector Leader for listed companies for Diversified – Retail/Office, listed on the World Dow Jones Sustainability Index for the twelfth consecutive year, and the only Australian property company to be included on CDP’s Climate A-List.

## FY19 priorities and progress

### Commercial Property

FY19 PRIORITIES	STATUS	FY19 PROGRESS
Complete climate resilience assessments in operational assets in priority locations across our portfolio, including our retail town centres at Stockland Cleveland (Qld), Burleigh Heads (Qld), and Caloundra (Qld), and Shellharbour (NSW) and our Logistics assets at Yennora (NSW), Hendra (Qld), and Port Adelaide (SA).	Achieved	Assessments completed in our Retail Town Centres and Logistics Distribution Centres with a focus on completing assets with exposure in Queensland.
Continue to undertake climate resilience assessments in future development projects including Whiteman Edge (WA).	Achieved	Climate Resilience assessments have been completed on two Retail Town Centre developments – Stockland Baringa and Stockland Birtinya (Qld) as part of the Green Star commitments. Whiteman’s Edge will be assessed when it moves to the next stage of our D-Life process

### Communities

FY19 PRIORITIES	STATUS	FY19 PROGRESS
Undertake a formal review of resilience assessment framework approach against industry best practice.	Achieved	A formal review was undertaken as part of the scope for the development of the Group Resilience Assessment Tool. This ensured that the tool is aligned against industry best practice.

### Residential

FY19 PRIORITIES	STATUS	FY19 PROGRESS
Complete climate resilience assessments on new communities in priority locations that commence master-planning during FY19.	Achieved	We undertook five assessments in the following locations: Hope Island (Qld), Paradise Waters (Qld), Promenade (Qld), Glendalough (WA), and Wellard (WA) using our newly-developed Group Resilience Assessment Tool.

### Retirement Living

FY19 PRIORITIES	STATUS	FY19 PROGRESS
Complete two assessments in medium priority locations as determined through the national mapping review.	Achieved	We undertook three assessments using our newly-developed Group Resilience Assessment Tool in the following operational villages: Lourdes (NSW), Belcarra (Qld), Affinity (WA) using our newly developed Group Resilience Assessment Tool.
Implement the resilience best practice guidelines across five low-medium priority villages which have not had a formal climate and community resilience assessment completed.	In progress	This priority will move into FY20 as the Retirement Living Best-Practice Guidelines were used as the foundation for the development of the Stockland Group Resilience Assessment Tool, and as such, the five assessments were put on hold until completion. Two operational villages have since been piloted under the new Group Resilience Assessment Tool; Hillsview (SA) and Wamberal Gardens (NSW).



---

## Future priorities

### Commercial Property and Communities

- Migrate previous resilience assessments into new Group Resilience Assessment tool for all business units and update results in accordance with new scoring methodology.
- Undertake new assessments as required, including new developments and high priority assets as per our national mapping.
- Establish climate resilience targets and priorities for 2021 and beyond.

---

## FY19 performance and case studies

Over the past year, we've continued to align our approach to climate risk disclosure with the recommendations of the Task Force on Climate-related Financial Disclosures (Task Force). We first lodged "Stockland's Climate-related Financial Disclosures" on the Australian Securities Exchange (ASX) in February 2018 as part of our half-year reporting suite. We integrated our climate-related financial disclosures into our [FY19 Annual Report](#), acknowledging the importance of climate-related risk management for our long-term performance as a business.

### Physical risk

#### Commercial Property

##### *Climate resilience in operations*

We reviewed our Commercial Property assets to identify exposure to physical risk using updated RCP 8.5 projections from the IPCC (refer to [Our Management Approach to Climate Resilience](#) for more information on our use of IPCC RCP scenarios). Our review was used to inform climate resilience assessments undertaken on four of our Retail Town Centres at Caloundra (Qld), Burleigh Heads (Qld), Cleveland (Qld) and Shellharbour (NSW) as well as three of our Logistics Distribution centres in Port Adelaide (SA), Hendra (Qld) and Yennora (NSW). This now completes assessments of all of our Retail Town Centre assets in Queensland. We developed action plans for each location using the new climate scenarios to assist in understanding the future impacts of climate change and the most appropriate responses to implement to improve resilience over time.

##### *Climate resilience in developments*

We completed climate resilience assessments at our active Retail Town Centre developments; Birtinya (Qld) and Baringa (Qld). These assessments are undertaken as part of our Green Star Design and As Built rating for each project. The assessment findings inform design in new constructions so that our new projects are not being delivered with inherent vulnerabilities to future climate impacts.

##### *Community resilience in Commercial Property*

We completed community resilience assessments at four of our Retail Town Centres and the surrounding community, including Caloundra, Burleigh Heads and Cleveland in Queensland and Shellharbour in New South Wales. The purpose of the assessments was to understand underlying issues in the local communities around social cohesion, economic viability and connectivity, and to identify opportunities to contribute further to enhancing community resilience through our community development planning process. Examples of themes identified in our FY19 assessments include low education levels, unemployment, disability and obesity. The insights and learnings from the assessments undertaken are communicated to the business and centre teams are encouraged to focus community development initiatives on community needs in alignment with our key focus areas of education, health and wellbeing and community connection (see [Our Management Approach to Community Investment and Development](#) and our [Community Deep Dive](#)).

##### *Industry engagement*

We are regularly invited to present at industry forums, conferences and master classes and to participate in task groups and workshops to share our climate resilience expertise and to help shape an industry approach to resilience. In FY19 we presented our work on resilience at several industry forums including Green Building Council of Australia Transform 2019, AIRAH Resilience Forum, Green Star Resilience Master Class, Western Sydney Turn Down the Heat Strategy Launch.



CASE STUDY

Climate risks and opportunities assessment tool

In 2019, following a review of global best practice, we updated our climate risk assessment approach to bring together all of our climate resilience work to date into one centralised tool. We also wanted to ensure our approach was embedded within our enterprise risk management system and aligned with the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD).

This tool provides a framework for undertaking climate risk assessments for Stockland's assets, and encourages a systematic, objective, and standardised process for ongoing management. It allows users to understand the climate exposure of an individual asset, as well as its adaptive capacity and sensitivities to climate-related risks and opportunities. It covers both the built aspects of an asset, including operation and maintenance of buildings and infrastructure, and considers the community resilience of tenants, residents and/or customers that depend upon the asset.

Once an asset has been assessed using this tool, adaptation responses are assigned and will be tracked through Stockland's enterprise risk system. This provides a more sophisticated platform to monitor and evaluate adaptation actions over time, ensuring proactive design is prioritised from the earliest stages of development and ongoing asset management.

The tool also provides the assessment results in a dashboard so they are comparable and can be benchmarked in a centralised reporting system. This provides a readily accessible view of our climate risk at an asset, portfolio, regional and organisational level that can be used across the business.



The process and output of our climate resilience tool.



## Communities

### *Residential*

In FY19, we assessed the climate resilience of five residential communities; Hope Island (Qld), Paradise Waters (Qld), Promenade (Qld), Glendalough (WA) and Wellard (WA). These communities were prioritised for assessment because they were either mapped in priority locations or are new projects. Typical climate related impacts on residential communities arise from potential for bushfire, reduced access resulting from flooding, changes in extreme heat conditions, and intense rainfall events.

We prepared resident emergency checklists for our residential communities at: Cloverton (Vic) (available online), Kalina (Qld), Paradise Waters (Qld), Mount Atkinson (Vic), Altona North (Vic), Minta Farm (Vic), Edgebrook (Vic), and Braybrook (Vic). The checklists respond to the outcomes of resilience assessments undertaken at each community and provide residents with a guide in the event of extreme weather or fire events. The checklist uses the four phases of emergency management – prevention, preparedness, response, and recovery – to structure actions that enable community self-reliance in the event of an emergency.

We applied our first cool roof covenant to homes in our Bells Reach (Qld) project in 2012. We have since continued to apply these covenants at Aura (Qld) on the Sunshine Coast and North Shore (Qld) in Townsville. We have found that the benefits of cool roofs, including improved thermal performance, reduced heating and cooling costs, and reduced urban heat island effect, come at no additional cost to build. Further, since applying the initiative we have worked with suppliers to increase the variety of cool roof options available to the market. We have now standardised cool roofs with a maximum of 50 per cent solar absorbency as a covenant requirement across our new Sunshine Coast projects.

We are also working to embed climate and community resilience assessments into our project lifecycle process for Communities developments (D-Life) and will continue to formalise the process in FY20.

### *Retirement Living*

We regularly update our national mapping schedule to identify those individual villages and developments that have the greatest exposure to climate extremes including heat waves, drought, flooding, storms, cyclones, coastal inundation and bushfires. This approach allows us to prioritise those villages over a staged program to conduct detailed climate and community resilience assessments. One of the key challenges facing all of our villages is the frequency and intensity of extreme heat events, which increase energy demand for cooling and the need for areas of respite for residents.

In FY19, we prioritised three operational retirement living villages for climate resilience assessments based on their climate risk exposure, including Lourdes (NSW), Belcarra (QLD) and Affinity (WA). As part of the ongoing development of our approach to community resilience, these three considered the sensitivity and adaptive capacity of village residents in determining community resilience actions to be included in the action plans for each village.

## Transition risk

The global transition to a low carbon economy as envisioned by the Paris Agreement and the Task Force presents risks and opportunities for our business. Carbon emission regulation, for example, may impact the pricing of energy required to develop and operate our assets. Our [Carbon and Energy Deep Dive](#) presents progress in our energy efficiency and renewable energy activities, in which we continue to invest to seize transition opportunities and minimise transition risks.

In FY18, we enhanced our approach to climate-related transition risk management by incorporating 2°C scenarios<sup>3</sup> into our corporate climate scenario analysis framework. Our 2°C scenario analysis confirmed that our existing commitments to energy efficiency and renewable energy are appropriate for leveraging low carbon opportunities. It also raised the profile of risks associated with land development regulation and climate risk disclosure. See our Management Approach on Climate Resilience for more information.

We continue to collaborate with our peers to understand how the property industry can manage the risks and leverage the opportunities presented by a transition to a low carbon economy. Following on from the 2016 publication of *Low Carbon, High Performance*<sup>4</sup> by the Australian Sustainable Built Environment Council (ASBEC), last year we worked with ASBEC on *Built to Perform: An industry led pathway to a zero carbon ready building code*. Built to Perform shows how stronger energy standards for new buildings in the National Construction Code could reduce energy bills and deliver emissions savings.

We have also worked with the Green Building Council of Australia as a strategic supporter of its Carbon Positive Roadmap for the built environment. The roadmap establishes the steps required for commercial, institutional and government buildings and fitouts to decarbonise and contribute to global climate targets.

<sup>3</sup> A 2°C scenario lays out a pathway and an emissions trajectory consistent with limiting the average global temperature increase to a temperature range around 2°C.

<sup>4</sup> The full report title is *Low Carbon, High Performance: How buildings can make a major contribution to Australia's emissions and productivity goals* by ASBEC ([www.asbec.asn.au](http://www.asbec.asn.au)).



## CASE STUDY

**Aura paving the way for community resilience**

At Stockland, resilience extends beyond preparedness of business and assets to climate change shocks and stressors, to social and community resilience. Assessing and strengthening community resilience involves a holistic approach including social cohesion, economic viability and connectivity. Understanding and addressing these factors is a key priority in developing our masterplanned communities, such as Aura (Qld), and ensuring we are creating thriving communities now and into the future.

One of the key initiatives to increase community resilience at Aura is the extensive 200km pedestrian cycleways planned for the community, creating a 'bike city'. The objective of such an extensive cycleway network is to create a safe and integrated active transport network that promotes cycling for all ages and abilities, creating a community that embraces and values cycling as a more sustainable form of transport now and into the future. With no known projects of similar size or scope, the Aura team collaborated with local and state government to develop project-specific policies and standards to deliver the extensive cycling infrastructure, otherwise known as the Aura Veloway,

The Aura Veloway is a two-way cycle path that is safe, easily accessible, and allows residents and community members to not only get active but also to discover the nature and amenities their community has to offer. The project developed a holistic network planning approach, allowing the Veloway to connect to key destinations and activity clusters, to encourage social connectivity and eliminate vehicle travel. Establishing the network early allowed the residents to be connected, even if road networks were not established. The network design is a key factor contributing to the project's success, linking the Veloway to external bike paths in neighbouring suburbs to create broader network, further enhancing community connectivity and decreasing dependence on less-sustainable modes of transport.

The Aura 'bike city' contributes to many positive benefits for individuals and the community as a whole, including

- **Health and wellbeing benefits:** Since Aura has opened, community attitudes towards cycling have significantly improved, encouraging residents to be more active via cycling. As such, the Veloway has potential to increase physical exercise with cycling both for leisure and transport. The Veloway also promotes inclusivity and social interaction, which can enhance one's sense of community and belonging, an important factor in wellbeing.
- **Environmental benefits:** Cycling is a pollution-free mode of transport that does not emit greenhouse gas emissions, and also contributes to the reduction of the need to build, service, and dispose of cars.
- **Economic benefits:** Transport can contribute up to 15 per cent of household expenditure, so increasing active transport may result in significant cost savings for individuals and families. Increasing active transport modes such as cycling may also reduce pressure on road infrastructure and congestion, which is a cost to local governments and communities.

Uptake of the Veloway has been assisted by community programs and initiatives such as a partnership with the Australian Cycling Academy to educate community members and promote safe cycling, with school visits and community programs. Aura also has a 'Pedal Park', featuring a learn-to-ride circuit, as well as a more challenging circuit with a tunnel, bridge, speed humps, traffic lights, and road signage, catering to a range of bicycle rider skill levels. Schools such as Baringa State Primary School have also adopted innovative Ridescore technology program, in which a Bluetooth beacon is placed under the bike seat, triggering an email notification to parents when the bike is placed in the school's bike storage area. Students have the opportunity to earn points for cycling and awarded prizes when they achieve milestone. Such initiatives have seen over 55 per cent of Baringa State School students ride to school, compared to the state average of 12 per cent.

We're proud to be building community resilience with developments such as the Aura Veloway. Our residents and community members have the opportunity to be more active, social, save money, and contribute to positive environmental outcomes. With consistent feedback from residents and visitors on how much they love the Veloway, and the Pedal Park recently nominated by the Sunshine Coast Daily as one of the top 10 parks on the Sunshine Coast, our vision of creating thriving communities is coming to life.



To access the complete list of documents in Stockland's Sustainability Deep Dive Series, [click here](#).