

Climate Resilience

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, communities, customers and people. Climate-related risks and opportunities can be divided into two categories:

1. Transition risks – the transition to a low-carbon economy. We acknowledge that Australia and nearly 200 other nations have agreed to the long term goal of limiting global warming to below 2°C and pursuing efforts to limit it to 1.5°C above pre-industrial levels (the Paris Agreement¹). This involves a general movement away from fossil fuel energy and increased deployment of low/zero carbon energy sources and energy-efficient technologies. While these changes present risks, 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.
2. Physical risks – the physical impacts from changes to climatic conditions, including extreme events and gradual changes in climate. These events have the potential to damage our assets, disrupt operations and impact the health and wellbeing of our customers and communities. 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.

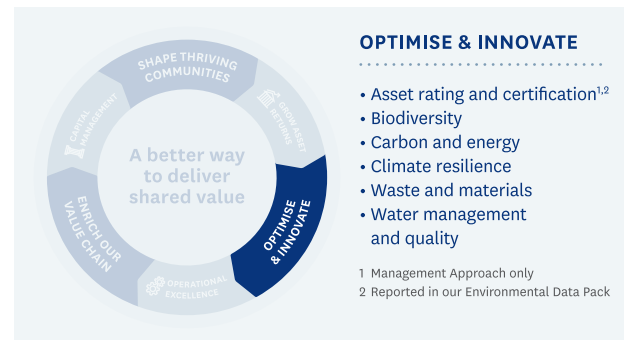
At Stockland we recognise there are also climate-related social risks and opportunities, and so community resilience is integrated as part of our broader climate resilience approach. We have been undertaking community resilience assessments since FY16. Assessing both climate and community resilience allows us to continue to plan for the resilience of buildings and infrastructure as well as the ability of our employees, customers, residents and communities to respond to significant climatic events.

This Deep Dive document is a component of our FY20 sustainability reporting suite, which is publicly available on our **website**. Our sustainability reporting is prepared in adherence to the International Integrated Reporting Framework principles of materiality, stakeholder responsiveness, reliability and completeness; in accordance with the GRI Standards²(Comprehensive); and is **third party assured**. 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**.

Stockland's Sustainability Strategy



¹ The central aim of the Paris Agreement 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>).

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

Our key achievements

- Recognised as a global leader in disclosure and action on climate change, achieving a place on CDP's Climate A-List for the fourth year in a row (the only Australian company to have achieved this status).
- Developed a Group Resilience Assessment Tool aligning our climate resilience assessments with the Stockland Enterprise Risk Framework to ensure climate related risks are assessed and managed as an integral part of Stockland's risk assessment process.
- Completed six climate and community resilience assessments across our Retirement Living (one), Residential (three) and Retail Town Centre (two) portfolios.
- All Stockland assets located in bushfire catchment areas underwent a Bushfire Preparedness Review in FY20. Completed 59 Bushfire Preparedness Reviews in the lead-up to the 2019/20 bushfire season, encompassing effectiveness of site-specific bushfire management plans, physical bushfire preparedness on site, emergency management, fire systems and training.
- Completed a Climate Change Adaptation Design Workshop for our M_Park Stage 1 Workplace development in Sydney to understand the future impacts of climate change and deliver a more resilient building. M_Park will be Stockland's first 100% electric, net zero carbon building powered by renewables.
- Investigated the extent of water scarcity across Australia to better understand the implications for Stockland's property portfolio and our future role in contributing to water system resilience.

Bushfire Preparedness Reviews

59

completed in FY20

Global leader in climate disclosure

4th

consecutive year in CDP's Climate A List

FY20 targets and progress

Optimise and Innovate

| Focus area | Target | FY20 progress | Status | Future priorities |
|--|--|---|-------------|--|
| Reduce emissions and improve climate change resilience within our portfolio | Governance Migrate completed climate resilience assessments into new Group Resilience Assessment Tool for all business units, updating results in accordance with new scoring methodology ¹ . | Migrated 62 completed climate resilience assessments into Stockland's new Group Resilience Assessment Tool. | Achieved | |
| | Risk Assessments Undertake new resilience assessments as required, including new developments and high priority assets as per our national mapping. | Completed six climate and community resilience assessments across our Retirement Living (one), Residential (three) and Retail Town Centre (two) portfolios. Undertook Bushfire Preparedness Reviews across all Stockland assets located in bushfire catchment areas in FY20. | Achieved | Conduct a climate resilience assessment on all new retail town centres, workplace and logistic assets, masterplanned residential communities and retirement living developments, including acquisitions. |
| | Strategy Establish climate resilience targets and priorities for 2021 and beyond. | Developing climate resilience related targets as part of our 2030 Sustainability Strategy development. This new strategy will be launched in FY21. | In progress | Refresh Stockland's Climate Change Action Plan in FY21 and align to TCFD recommendations. |

¹ The new scoring methodology is materially different to the old methodology and new assessments are not directly comparable.

FY20 performance commentary

Over the past year we have continued to align our approach to climate risk disclosure with the recommendations of the Task Force on Climate-related Financial Disclosures (Task Force). This is our third year including climate-related financial disclosures into our **Annual Report**, acknowledging the importance of climate-related risk management for our long-term performance.

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.

Over time we have enhanced our approach to climate-related transition risk management by incorporating 2°C scenarios¹ 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 have also worked with the Green Building Council of Australia (GBCA) 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.

Physical risk

We acknowledge that physical risks associated with climate change can result in negative financial impacts, such as through increased maintenance costs or decreased revenues from disrupted operations. In recognition of these potential impacts, we are committed to creating climate resilient assets and communities with a greater ability to endure severe weather impacts and operate with minimal disruption.

Our focus for FY20 has been to continue the development of our Group Resilience Assessment Tool through the integration of our climate resilience assessments with the Stockland Enterprise Risk Framework to ensure that climate related risks are assessed and managed as an integral part of Stockland's risk assessment process. This tool currently contains 10 years' worth of asset level climate risk assessments (over 62 nation-wide assets) which will be used to better understand Stockland's vulnerabilities to climate change. This includes understanding which assets, business units and geographies have the highest vulnerabilities, what climate hazards are of most concern and where (including heat, bushfire and extreme rainfall), how assets perform and respond over time to various climate hazards, and what assets can do to adapt to the climate risk identified. This extensive climate risk data set will inform better decision-making, enabling the business to evolve its response to both climate risks and opportunities, now and in the future.

¹ 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.

Bushfire preparedness

The unprecedented 2019/20 bushfire season had an impact on several Stockland assets, triggering a crisis management response. Whilst six retirement villages and one shopping centre were temporarily evacuated, no injuries were sustained by Stockland staff or residents and no property damage was sustained.

The risk of bushfires is an inherent risk to Stockland, with over 50 properties located in or adjacent to a bushfire zone. As part of our risk management strategy, annual Bushfire Preparedness Reviews have been undertaken since 2017. These reviews are designed to gauge the level of bushfire preparedness across our 'at risk' assets. These assessments encompass various preparedness elements, including the effectiveness of site-specific bushfire management plans, physical bushfire preparedness on-site, emergency management, fire systems and training. Findings from the 2019 Bushfire Preparedness Reviews (conducted prior to the bushfire season) were very positive, demonstrating progressive improvements in preparedness since the inception of the program in 2017. This level of preparedness was also reflected in our ability to respond to the emergency situations that later unfolded during the 2019/20 bushfire season.

Following the 2019/20 bushfires, several debriefs were undertaken with the relevant asset teams to identify improvements to our preparedness and response models. This has resulted in the further evolution of our Bushfire Preparedness Review program with key changes including:

- Bringing forward the timing of our preparedness reviews to August 2020 (previously October 2020) to prepare for an earlier start to the bushfire seasons.
- Applying a more conservative lens to the assessment of 'at risk' sites. Previously, assessment was based on bushfire maps and bushfire catchment classifications by either the local Council or relevant State Fire Authority. We have now added additional considerations e.g. the proximity to fuel sources, impact of major road closures, likelihood of assets to be used as places of refuge (e.g. retail centres along arterial highways) as well as recent bushfire impact.
- Expanding the scope of our preparedness reviews to include planning for bushfire smoke and hazardous air quality. This will include the identification of staff employees with respiratory conditions (e.g. asthma), monitoring of the local air quality index and safety provisions for outdoor works (e.g. P2 respirators).

Lessons learnt have also led to improvements in our response plan, including changes to the way the Stockland Call Centre is briefed on unfolding emergency situations (particularly after-hours support), improvements to the process around authorising INS (emergency call system) messages, consideration of Rural Fire Service emergency text messaging systems, and the management of residents refusing to evacuate.

Water system resilience

During FY20 we extended our scenario analysis to better understand the extent of water scarcity across Australia and the adaptive capacity of Australian water utilities, including the resilience of water supply and water infrastructure. We will use these insights to further develop Stockland's role in contributing to water system resilience, along with providing greater focus on key climate hazards in the future.

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 two of our Retail Town Centres, at Riverton and Baldivis in Western Australia. 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 a Climate Change Adaptation Design Workshop for our M_Park Stage 1 Workplace project in Sydney ahead of the final design as part of our Green Star strategy for the development. 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. A number of recommendations have been included in the design for the project to address stormwater drainage for one in 100-year rainfall events and to utilise soft-scaping, increased tree cover and light-coloured paving to reduce urban heat island effect.

Community resilience

We completed community resilience assessments at the same time of completing climate resilience assessments at two of our Retail Town Centres and the surrounding community, including Riverton and Baldivis in Western Australia. The purpose of the assessments was to understand underlying issues in the local communities around social cohesion, connectivity and economic viability, and to identify opportunities to contribute further to enhancing community resilience through our community development planning process. Examples of themes identified in our FY20 assessments include low education levels, unemployment, disability and obesity. The insights and learnings from the assessments are used to identify community development initiatives with a focus on education, health and wellbeing and community connection (see our Management Approach to Community and our Community Deep Dive).

Communities

Residential

In FY20 we assessed the climate and community resilience of three of our residential communities: Minta (Vic), Red Hill (ACT) and West Dapto (NSW). The risk of increased heat stress was identified across all three communities, with recommended actions including the use of more mature trees, shade shelter structures and the installation of solar PV on dwellings. 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.

Other residential communities continued to implement climate resilience initiatives throughout FY20, with our Elara community delivering phase 3 of a riparian corridor, including picnic shelters, bicycle and walking tracks as well as fitness equipment designed to avoid the heat island effect, and at our Newport community, land was raised to cope with a one in 100-year flood.

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.

¹ The mapping was last updated in 2019 and remains current for 2020 as the underlying exposures used in the assessment have not been updated.

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.¹ This approach allows us to prioritise those villages where we need 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 FY20 we completed an assessment at Pine Lakes Retirement Village (Qld), and findings continue to highlight the risk of increased heat stress, extreme storms and impacts associated with bushfire. Operational measures continue to be reviewed at the village level, including cleaning of stormwater drains and roof gutters as well as securing outdoor furniture where there is a risk of high wind conditions.

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 FY20 we presented our work on resilience at several industry forums including the Investor Group on Climate Change (IGCC) Summit in Sydney and the Australian Institute of Refrigeration Air Conditioning and Heating (AIRAH) Forum in Brisbane.