

Our Management Approach to Climate Resilience

A. Purpose

This document sets out our approach to identifying, assessing and managing risks to and opportunities for our business resulting from climate change. It should be read in conjunction with our annual **Climate Resilience Deep Dive** (available on our [website](#)). Together, our management approach documents, deep dive reports and our data packs comprise our sustainability reporting suite, which is prepared in adherence to the International Integrated Reporting Framework principles of materiality, stakeholder responsiveness, reliability and completeness; in accordance with the GRI Standards¹(Comprehensive); and is **third party assured**.

We have a long-standing commitment to manage climate change risk and reduce our carbon emissions. 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 and assets as well as our communities. Climate resilience refers to the ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate. Improving climate resilience involves assessing how climate change will create new, or alter current, climate-related risks, and taking steps to better cope with these risks.²

- Transition risks - risks or opportunities associated with the transition to a low-carbon economy. 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).³ 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 Management Approach to Carbon and Energy** provides more information on how we leverage these opportunities through energy efficiency and renewable energy.

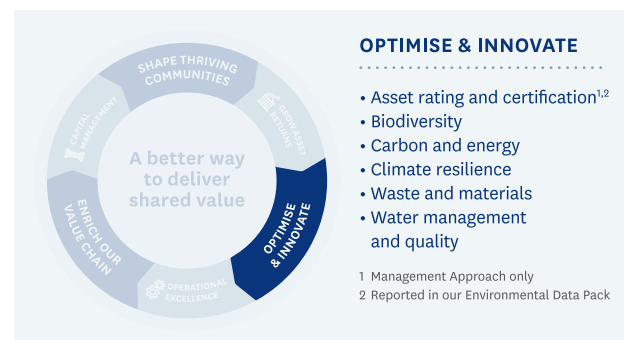
- Physical risks - risks or opportunities associated with physical impacts from changes to climatic conditions, including extreme events. We are already experiencing the physical impacts of climate change in the form of gradual changes to climate conditions and an increased frequency and severity of extreme weather events, including bushfires. Extreme weather and other climate-related 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.

At Stockland we recognise there are also climate-related social risks and opportunities. We have developed a community resilience assessment methodology and have been undertaking community resilience assessments since FY16.



For more information on our approach to Climate Resilience see our annual **Climate Resilience Deep Dive**.

Stockland's Sustainability Strategy



¹ The GRI Standards are global standards for sustainability reporting published by the Global Reporting Initiative (<https://www.globalreporting.org/standards/>)

² Climate Resilience Portal, Centre for Climate and Energy Solutions, <https://www.c2es.org/content/climate-resilience-overview/>

³ 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 °C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C (<https://bigpicture.unfccc.int/#content-the-paris-agreement>)

B. Management approach

B1. Overview

We developed a Climate Change Action Plan in 2006 and a Climate Adaptation Strategy in 2011 to identify, mitigate and adapt to the perceived risks of climate change. This management approach document focuses on the key priorities within our Climate Change Action Plan to research, assess, and adapt to risks associated with climate change. Our priorities to reduce our emissions and integrate innovative climate change solutions into our projects are described in **Our Management Approach to Carbon and Energy** and **Our Management Approach to Supply Chain**.

Our response to the Task Force on Climate-related Financial Disclosures (TCFD) recommendations in our **Annual Report** provides details on how our governance and risk management frameworks address climate change.

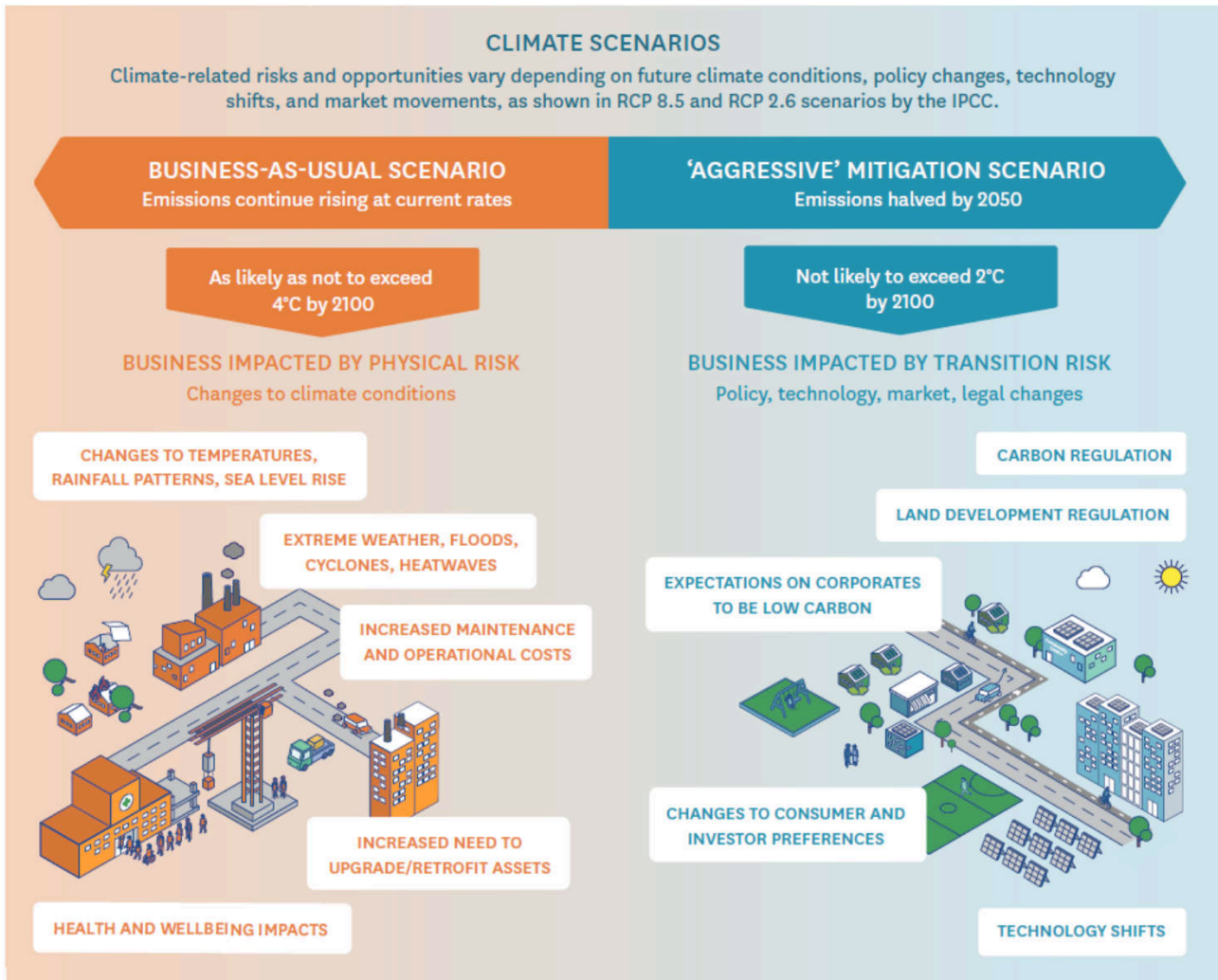
B2. Identifying and assessing climate-related risks and opportunities

The first step in managing climate resilience is to identify key climate-related risks and opportunities. For over a decade, we have identified risks and opportunities related to both the physical impacts of climate change and a global transition to lower-carbon energy sources. Our response to these risks and opportunities has been guided by our Climate Change Action Plan (commenced in 2006) and our detailed Climate Adaptation Strategy (commenced in 2011).

Climate-related risks will persist for the foreseeable future and the nature of these risks depends on complex factors such as policy change, technology development and market forces. To accommodate this uncertainty, we incorporate scenario analysis into our climate risk assessment process to understand how climate-related risks and opportunities may evolve and impact the business over time. Scenario analysis is a well-established method for enhancing resilience to a range of future conditions and is a key recommendation of the TCFD.

We use the Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathway (RCP) scenarios to explore both physical and transition risk. The nature of climate-related risk changes according to varied assumptions about future policy, technology, and climate changes incorporated into each IPCC RCP scenario.

In the business-as-usual scenario where emissions continue rising at current rates (known as RCP 8.5), business is exposed to increasing levels of physical risk from changing climatic conditions. In the 'aggressive' mitigation scenario where global emissions are halved by 2050 (known as RCP 2.6), business would experience less risk from changing climatic conditions, yet would be exposed to transition risks related to policy change.



Physical Risks

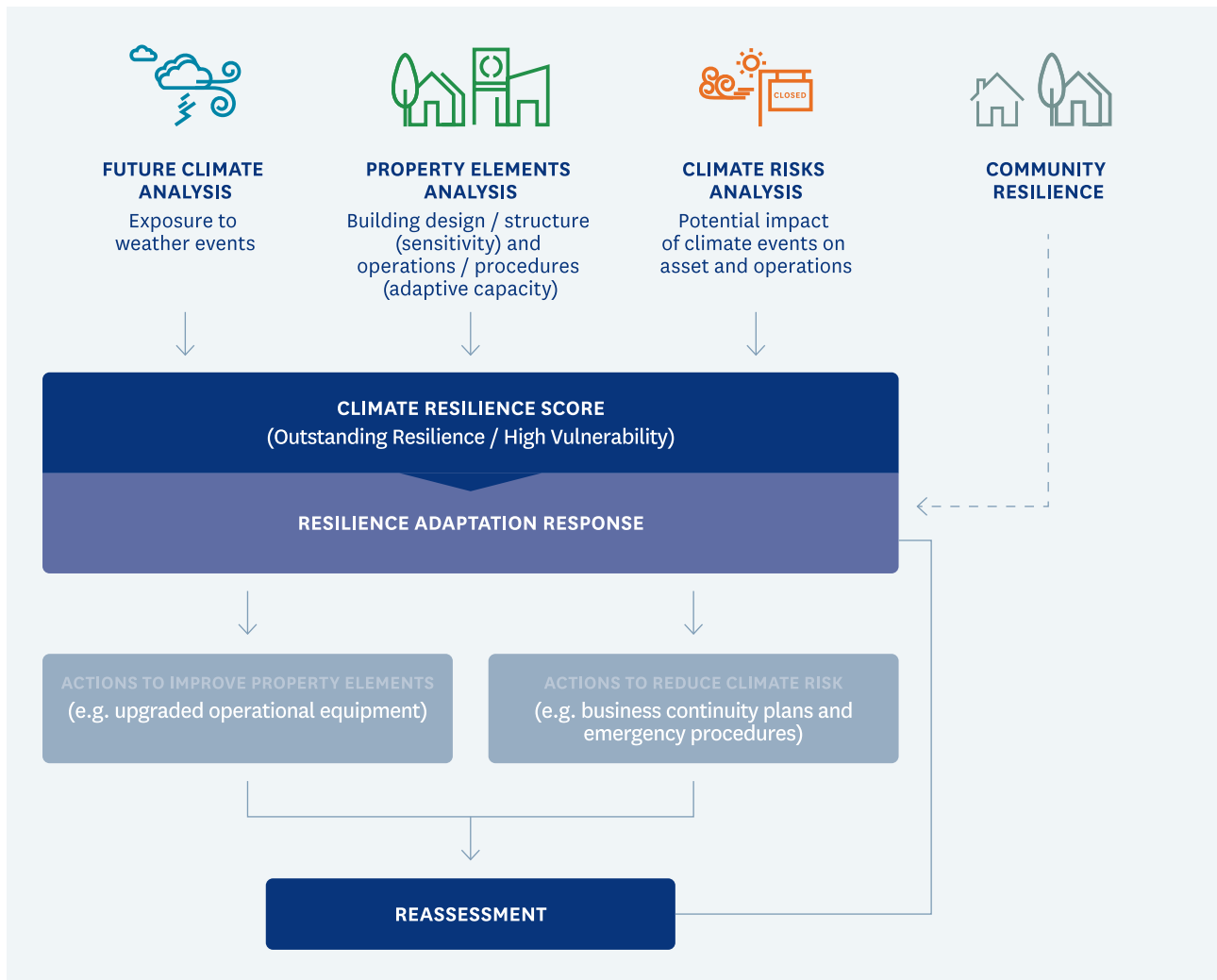
We acknowledge that physical risks associated with climate change can result in negative financial impacts, such as through increased maintenance costs or decreased revenues from disrupted operations. In recognition of these potential impacts, we are committed to creating climate-resilient assets and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

In 2012 we developed a climate resilience assessment methodology that sets out the criteria to assess the resilience of individual properties and their communities across all types of properties within Stockland’s portfolio. This methodology was reviewed and updated in 2020. We conduct a national mapping exercise based on the projected changes to climate variables in order to identify the level of exposure for all assets in our portfolio (including those under development) and we prioritise assets for further assessment based on their level of exposure. Our climate resilience assessment methodology focuses on the vulnerability of an asset to climate change, particularly its ability to endure severe weather impacts and operate without disruption. As outlined in the figure below, the methodology defines key resilience criteria, with a particular focus on location and design, structure, operation and maintenance, utilities and services, and stakeholders. These attributes are assessed for their exposure to:

- future climate effects - the degree of exposure a building has to weather events based on its geographic location, such as North Queensland where there is a high exposure to cyclones;
- property elements - the physical and operational attributes of a building that make it vulnerable or resilient to those climate effects, such as condition of box gutters expected to cope with high volumes of stormwater; and
- climate risks - the potential impacts of weather related events on a building based on its location and attributes, such as loss of trade due to local flooding or air conditioning failure on hot days.

The assessments of each component are combined to provide an overall climate resilience score on a scale from 1 to 25, from outstanding resilience to high vulnerability. We then develop resilience action plans that integrate resilience-building initiatives into asset management plans, with a view to improving the resilience of the assets over time by minimising negative impacts and creating opportunities, including reduced maintenance, reduced insurance premiums and increased revenues from increasing consumer preferences for climate-resilient products.

Climate Resilience Assessment Methodology



Physical risk assessment tool

In 2019 we developed a Group Resilience Assessment Tool that centralised all existing assessments on individual properties in order to help us to understand physical climate risk at a portfolio level. This tool aligns our climate resilience assessment with the Stockland Enterprise Risk Framework. This tool will provide results that are comparable to and can be benchmarked across Stockland's assets and portfolios in a centralised system. The tool enables Stockland staff to monitor and evaluate adaptation actions over time.

Transition Risks

Carbon emissions regulation and climate-related land development regulation are examples of transition risks that may impact our business through the pricing of energy required to develop and operate our assets. We use scenario analysis to explore how transition risks may evolve over time, leveraging publicly available scenarios published by the IPCC and the Deep Decarbonisation Pathways Project. Each scenario includes transition risks and opportunities that fall into four categories:

- **policy and legal** issues that lead to financial impacts through taxes or subsidies, through mandating capital improvements that require additional investment, or through increased liability risk
- **technology** issues that lead to financial impacts through changes to how we procure and use energy in development, operations, and transport
- **market** considerations that lead to financial impacts through changes to consumer preferences and prices of goods and services
- **reputational** issues that lead to financial impacts through affecting stakeholder willingness to transact or partner with us.

Each of these scenarios offers a unique vision of how policies, technologies and economic outcomes evolve through 2050 as the world pursues the objective of limiting global warming to 2°C.

B3. Key categories of climate-related risks and opportunities

The table below describes key categories of climate-related risks and opportunities that we have identified for our business.

Climate-related risks	Positive financial impact potential	Negative impact on Stockland
Acute physical risks including heatwaves, cyclones, floods and bushfires.	Resilient assets that can withstand acute physical risks, promote business continuity, attract tenants/customers and receive insurance benefits	Increased expenditure on repairs, loss of business continuity and potentially higher insurance premiums.
Chronic physical risks including increases to mean temperatures, long-term changes to rainfall patterns and sea level rise.	<p>Designing and constructing ‘future-proof’ assets and communities that accommodate future climate changes and thus prevent the need for expensive retrofits.</p> <p>Integrating climate risk into the due diligence process for acquisitions to minimise the risk of acquiring land or assets that may become impaired in the future.</p>	<p>Expenditure required to upgrade facilities to cope with changed climatic conditions (e.g. early upgrades of air conditioning units to manage rising temperatures).</p> <p>Lost revenue associated with the inability to develop on land that we own because of flooding or sea level rise concerns.</p>
Policy-related transition risks including carbon pricing, incentives for low/zero carbon energy production, land development regulations and changes to building standards.	<p>On-site generation and sale of low/zero carbon energy, from proactively upgrading assets to enhance efficiency and avoid cost increases.</p> <p>Proactively assessing the resilience of land that we own and acquire to maximise development opportunities into the future.</p>	<p>Increased development and operational costs associated with enhanced building standards.</p> <p>Lost revenue associated with regulation that limits the development capacity of land that we own.</p>
Legal transition risks including liability surrounding climate risk disclosure and changes to insurability of assets.	<p>Efficiency and resilience initiatives that reduce our insurance costs.</p> <p>Enhanced climate risk disclosure that minimises likelihood of fines and judgements against us.</p>	<p>Inadequate disclosure of climate-related risks.</p> <p>Inability to insure our assets.</p>
Technology-related transition risks including decarbonisation of Australia’s National Electricity Market, electrification, advances in battery storage, and energy efficiency.	Opportunity to leverage technological advances to reduce costs through energy efficiency and renewable energy, and to more readily meet climate-related regulatory requirements.	<p>Increased investment required in low-carbon technology.</p> <p>If technological disruption leads to energy pricing variability, difficulty in planning capital expenditure, and/or a need to upgrade our assets in a short time frame.</p>
Market-related transition risks including investors and lending institutions favouring low-carbon investments and consumers demanding low-carbon products.	<p>Our continued leadership in climate risk management, in the form of enhanced revenues from customers who prefer low-carbon products.</p> <p>Enhanced capacity to attract investment from investors favouring companies with strong climate risk management.</p>	Reduced attractiveness of our assets and our business from an investment perspective if we fail to manage climate risk appropriately.
Reputational transition risks including failing to attract funding, employees, and project approvals because of a perceived lack of action on climate change.	<p>Continued leadership in energy efficiency, renewable energy, and climate resilience; for example, increased revenues if we can remain a preferred development partner for governments interested in low-carbon solutions.</p> <p>Decreased costs associated with lower employee turnover because employees feel their work is contributing to the low-carbon transition.</p>	<p>Reputation risk due to a perception that we are not contributing to the low-carbon transition as much as our peers and competitors.</p> <p>Reduced revenues if customers prefer competitor products, or increased hiring costs as prospective employees prefer to work for peers.</p>

B4. Managing climate-related risks and opportunities

Physical risk management

Given the potential for climate-related physical risks to damage assets and bring about potential losses, we have included these risks and the potential financial implications in our enterprise risk framework. We implement initiatives that improve the resilience of our assets, and thereby reduce the risk of business disruption to our customers and residents. Improving resilience also mitigates potential future costs associated with maintenance, upgrade and emergency response initiatives. This contributes to our competitive position as a leading creator of places that meet the needs of our customers

Managing physical risks identified during resilience assessments

Physical risks and opportunities identified within our climate and community resilience assessments are prioritised for action based on:

- impact on communities and the environment in which the asset is operating
- overall potential impact on asset performance
- financial impact to the business in managing the risk or opportunity.

Across our portfolio, physical risks and opportunities are prioritised for action based on:

- geographical areas of highest risk
- lessons learned and perceived likelihood of significant loss
- impact on local communities and environment (relative to where we operate)
- design attributes of the asset that affect climate resilience
- climate change scenarios for the medium and long term
- overall impact on business-wide emissions reductions, and
- overall risk to portfolio value and revenue.

Recommendations for minimising impacts of physical risks may include the implementation of operational responses, maintenance regimes, emergency response plans and community development programs that focus on improving the health and wellbeing of our communities. Key recommendations identified during the risk management process are included in a resilience action plan that is integrated with annual sustainability and asset/business planning processes.

While we acknowledge that managing climate change risk can involve additional costs, management of climate risks is an opportunity to develop resilient, future-proof assets. Our approach to physical risk and investment in the resilience of our assets has been acknowledged by our insurers through a reduction in our premiums at certain locations.

Asset design and ongoing operations

Our project teams consider climate-related risks and opportunities in the design of our assets by including principles-based criteria in our design guidelines and minimum standards. We integrate the outcomes of our climate scenario analysis into the designs of our assets in development so that they consider how physical risks may impact stormwater drainage, roofing, and air conditioning systems, as well as how the asset can take advantage of low/zero carbon energy solutions.

We develop emergency management plans for all our assets and update them as required. In addition to using a traditional risk matrix for climate vulnerability, we also use an opportunities matrix to identify the value of discretionary climate resilience initiatives such as shade sails in our car parks and cool roof covenants in our Queensland residential projects such as North Shore and Aura. These initiatives are prioritised based on their ability to reduce the asset's vulnerability to physical risk.

Our climate resilience approach has been recognised by the Green Building Council of Australia's Green Star rating tools as meeting the aim of their Adaptation and Resilience credit. New Retail Town Centre, Workplace and Retirement Living developments implement our approach to climate and community resilience and aim for recognition as Green Star rated facilities.¹ For our residential communities rated under Green Star Communities, we have climate adaptation and resilience plans for project teams on how to create resilient communities throughout the life of the development.

¹ All new retail town centre and office developments must achieve a Green Star rating (as per our policy). Retail town centre extensions or redevelopment projects must achieve a Green Star rating where a project is larger than 8,000 m².

Transition risk management

Our Government Relations, Investor Relations, Group Risk, Group Legal and Sustainability teams keep the Executive Committee and Board informed on existing or emerging climate regulation that may impact on the business. In response to regulatory and market risks relating to energy supply and demand, Stockland is committed to promoting efficient operation of our assets and increasing our renewable energy capacity.

We participate in industry-wide collaborations (Property Council of Australia, Green Building Council of Australia, Australian Sustainable Built Environment Council, Investor Group on Climate Change) that focus on how the property industry can lead the transition to a low-carbon economy. Through these collaborations we have developed and published pathways and standards for how the built environment can reduce emissions and ultimately become zero carbon. **Our Management Approach to Carbon and Energy** describes how we manage risks associated with carbon emissions regulation through focusing on energy efficiency and renewable energy.

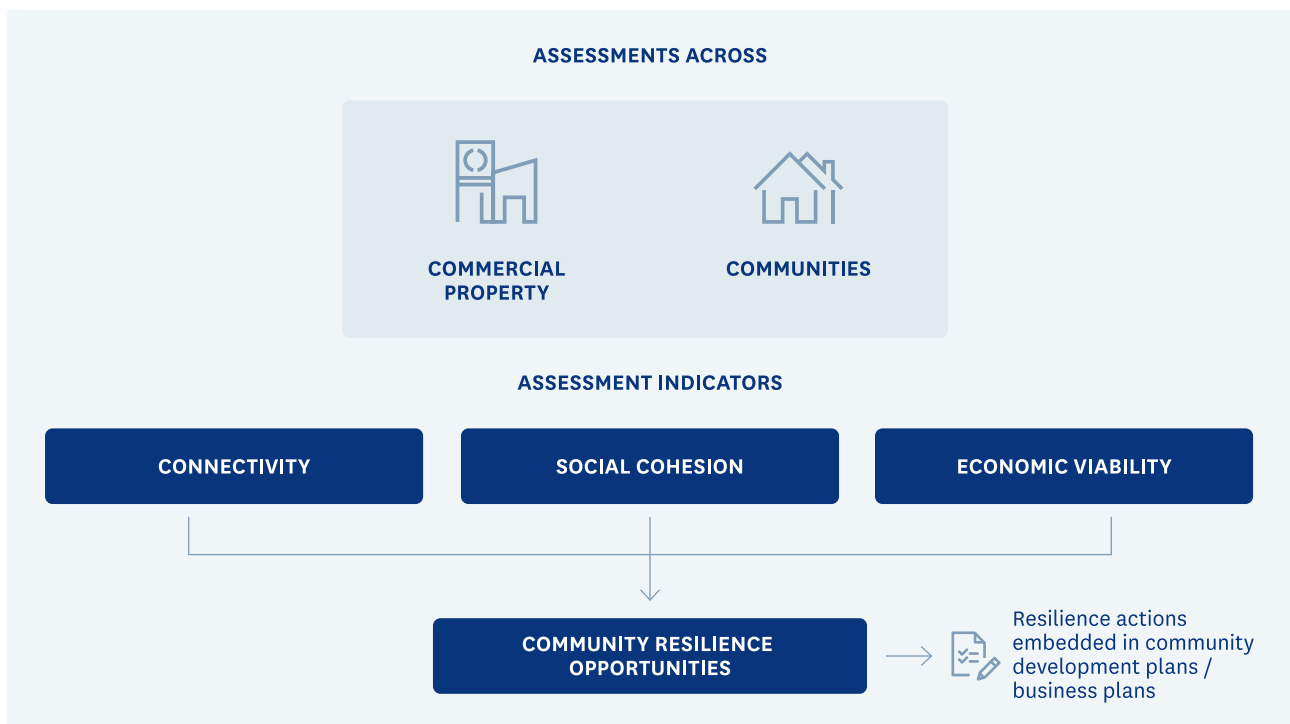
B5. Community resilience

Community resilience is integrated as part of our broader climate resilience approach that assesses known factors of community resilience such as social cohesion, economic viability and connectivity. The assessment process identifies how our community development planning can contribute to community resilience at our assets. Key components of the assessment include:

- measuring the resilience of the asset against key features of a resilient community
- identifying the features of the community that may or may not contribute towards being resilient
- informing areas of improvement for community resilience to be implemented as part of community development initiatives within the asset or development.

Assessing both climate and community resilience allows us to plan for the resilience of buildings and infrastructure as well as our residents’ ability to respond to significant climatic events. Climate resilience assessments are undertaken on all Commercial and Communities developments seeking Green Star Communities and Green Star Design & As Built certifications.

Community Resilience Assessment Methodology



C. Review and evaluation of the management approach

We review and report on our progress against our climate resilience priorities and targets in our annual **Climate Resilience Deep Dive**. In this reporting, we include:

- a status update and progress against our short, medium and long-term targets;
- detailed commentary on the priority actions that contributed to the achievement of key targets;
- the identification of future priorities;
- highlights of initiatives implemented over the reporting period; and
- case studies that explore key achievements, usually at particular locations.

Across our Commercial Property business, we review climate resilience action plans to track progress on the implementation of initiatives following the initial assessment. Reassessment of the assets reviewed to date will be conducted over time to measure the improvements in resilience against the actions that were recommended at the time of the original assessment.

In our Communities business, we track and evaluate the implementation of recommendations in our asset-specific sustainability plans. This provides us with the ability to measure the success of the initiatives and articulate the value of undertaking the climate and community resilience assessments. Assets are prioritised for reassessment based on their status as high-risk assets and based on whether they have been subject to resilience investments.

D. Responsibilities

The table below describes key roles and responsibilities associated with our approach to climate and community resilience.

Role	Responsibilities
Board Sustainability Committee	Oversight of approach to climate resilience, including targets and performance tracking
Chief Financial Officer (CFO)	Responsibility for our approach to climate resilience at a Group level Reports directly to Managing Director and CEO
Group Executive and CEO Commercial Property Group Executive and CEO Communities	Ultimate accountability for delivery of climate resilience within respective portfolios
Executive Committee	Supports the delivery our climate resilience approach
National Manager – Group Sustainability	Effective implementation and evaluation of our approach to climate resilience
National Sustainability Managers	Guidance of asset teams in effective delivery of our sustainability policy and supporting toolkits
Development and Operations teams	Effective management of a climate resilience approach at the project and asset level through the implementation of identified resilience actions

E. Version control

Revision	Date	Owner(s)	Changes
1	September 2018	General Manager – Sustainability and Corporate Procurement	
2	August 2019	National Manager – Group Sustainability	
3	March 2020	National Manager - Group Sustainability	