Module: Introduction

Page: Introduction

CC0.1

Introduction
Please give a general description and introduction to your organization.

Stockland has a long and proud history of creating places that meet the needs of our customers and communities. Stockland was founded in 1952 with the vision to "not merely achieve growth and profits but to make a worthwhile contribution to the development of our cities and great country."

Pursuing that vision has seen us grow to become one of Australia's leading diversified property groups - developing, owning and managing a large portfolio of shopping centres, logistics and business parks, office buildings, residential communities and retirement living villages.

We operate across most parts of the property value chain. However, we engage others to carry out building works, to deliver services such as security and cleaning, and to provide audit and consultancy services.

This survey discloses information regarding our climate change management approach and greenhouse gas emissions performance for the 2015 financial year, ending 30 June 2015.

We publish independently assured data, commitments and commentary as part of our Annual Review, Sustainability Reporting and our requirements under the Australian Government's National Greenhouse and Energy Reporting Act.

Our Annual Review can be found at http://stocklandcorporatereporting2015.com.au/ and our Sustainability Reporting and previous Carbon Disclosure Project submissions can be found at http://www.stockland.com.au/about/sustainability.htm

Stockland’s portfolio is spread over three business units – Commercial Property, Residential and Retirement Living. An overview of the portfolio, as at 30 June 2015, is provided below. Our property portfolio can also be found in detail online at http://www.stocklandcorporatereporting2015.com.au/docs/property-portfolio--30-june-2015.pdf

COMMERCIAL PROPERTY - Stockland’s Commercial Property business accounts for approximately 70% of our asset mix and comprises three asset types:
- Retail - we are one of the largest retail property owners, developers and managers in Australia. As at 30 June 2015, the portfolio comprises 42 retail centres, with

Stockland's ownership interests valued at $6.1 billion and a gross book value of $6.6 billion. These properties accommodate more than 3,200 tenants and generate $6.3 billion of retail sales per annum.
- Logistics and Business Parks - as at 30 June 2015, our logistics and business parks portfolio comprises 24 properties encompassing over one million square metres of building area, with Stockland's ownership interests valued at $1.7 billion and a gross book value of $1.9 million.
- Office - as at 30 June 2015, our office portfolio comprises 10 properties with Stockland's ownership interests valued at $1.0 billion and gross book value of $1.6 billion.

RESIDENTIAL – We are a leading residential developer in Australia, focused on delivering a range of masterplanned communities in growth areas across the country. Stockland has over 80,000 lots remaining in its portfolio, with a total end value of approximately $20.7 billion (excluding value in projects identified for disposal).

RETIREMENT LIVING - We are a top three retirement living operator within Australia, with 69 established villages, over 9,300 established units across five States and the Australian Capital Territory and a short to medium term development pipeline of over 3400 units.

Stockland has identified changes in the climate as a challenge as well as an opportunity for the organisation. Along with risks and opportunities associated with mitigating carbon emissions and enhancing the energy efficiency of our portfolio, we are taking active steps to increase the resilience of our assets and reduce their potential vulnerability by proactively adapting to a changing climate.

Our Commercial Property business is the largest contributor to greenhouse gas emissions in the Group and presents the greatest opportunity for emissions reduction. As it is our most established asset class, and the one over which we have the greatest degree of control, we have also used it to pilot our work in climate vulnerability and resilience. As such, the majority of our initiatives and achievements to date have related to the Commercial Property business. Over the past few years we have been transferring these learnings to our other business units.

CC0.2

Reporting Year
Please state the start and end date of the year for which you are reporting data.
The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.
We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.
Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed
Tue 01 Jul 2014 - Tue 30 Jun 2015

CC0.3

Country list configuration

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

Select country
Australia

CC0.4

Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

AUD ($)

CC0.6

Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.
If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Board or individual/sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

SUSTAINABILITY BOARD COMMITTEE
The purpose of the Committee is to ensure that the Group operates its business ethically, responsibly and sustainably. It considers the social, environmental and ethical impact of Stockland's business activities; major corporate responsibility and sustainability initiatives and changes in policy; and stakeholder communications about Stockland's sustainability policies and performance.
All Directors of the Board are members of the Sustainability Committee, reflecting the integral role that sustainability plays in Stockland's business operations and brand value. This enables all Directors to be well informed about and engaged in policies and decisions relating to our economic, social, and environmental performance. The Sustainability Committee met three times in FY15 (as reported in the Financial Report, http://www.stocklandcorporatereporting2015.com.au/docs/stockland-financial-report-2015.pdf, pages 20 and 27).

A sustainability update is submitted to the Executive Committee and to the Board each month.

An overview of the Sustainability Board Committee can be found on pages 26-27 of the Financial Report
http://www.stocklandcorporatereporting2015.com.au/docs/stockland-financial-report-2015.pdf

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Corporate executive team	Monetary reward	Emissions reduction target	The Executive team has performance indicators linked to our greenhouse gas emission targets.
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction target	The CEO (along with other members of the executive team) has a performance indicator linked to greenhouse gas emission targets.
Facility managers	Monetary reward	Emissions reduction project Emissions reduction target	Facility Managers have incentivised performance indicators linked to greenhouse gas emissions targets for assets and greenhouse gas emissions project level reporting.
Environment/Sustainability managers	Monetary reward	Emissions reduction project Emissions reduction target	Environment/Sustainability Managers have incentivised performance indicators linked to greenhouse gas emission targets and climate change mitigation and adaptation actions.
All employees	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction	All employees have incentivised performance indicators linked to sustainability performance as part of our balanced scorecard performance assessment approach. These differ in accordance with the roles and responsibilities of the individual employee (e.g. consideration of climate change risks/opportunities, achievement of emissions reduction targets, promotion of energy efficiency initiatives with suppliers/customers etc).

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
		target Efficiency target Behaviour change related indicator	

Further Information

For further information please refer to the Governance section of our FY15 Sustainability Reporting online at http://www.stockland.com.au/assets/about-stockland/1-governance-and-risk-DMA-FY15.pdf. For further information, please refer to the Remuneration section of our FY15 Financial Report (page 34) http://www.stocklandcorporatereporting2015.com.au/docs/stockland-financial-report-2015.pdf

Page: CC2. Strategy

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	Stockland's assets and developments across the entire portfolio (New South Wales, ACT, Victoria, South Australia, Western Australia and Queensland)	> 6 years	All functions (Business Units & Group, including the Executive Committee) are responsible for the identification, assessment and management of risks. As part of our Group Risk matrix, we highlight the risks associated with climate. The key climate-related risks identified by Stockland are around large scale weather events that impact our assets. Each Business Unit has developed Sustainability policies which outline performance standards and requirements relating to energy efficiency and climate change adaptation to be considered in the design, construction and operation of projects and assets. The Sustainability team provide the Executive team and the Board with updates on progress towards emission reduction targets, adaptation and resilience initiatives and any identified climate change related risks and opportunities identified at the asset and/or Group level.

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

COMPANY LEVEL
Formal risk workshops are carried out on an annual basis with leaders from across the business. The workshops are used to identify emerging risks and opportunities. Identified risks are analysed and evaluated at a company level and consolidated into a risk profile for each Business Unit. A Group risk profile is also produced including items that have a company-wide impact, such as climate change. Associated risk plans are monitored and reported quarterly.

ASSET LEVEL
Stockland has a diversified property portfolio that is actively managed in terms of portfolio composition and performance. The portfolio for each asset class is assessed annually, including an assessment of financial and non-financial risks and opportunities. We also conduct climate vulnerability and resilience assessments across our assets. These assessments focus on the vulnerability of the asset to climate and its ability to endure severe weather impacts and operate without disruption. Resilience Action Plans are then developed for assets and include operational responses, maintenance regimes and business continuity plans.
Our Group-wide focus on energy efficiency manifests differently across our three business units, with implementation posing different challenges and opportunities for each asset class. We concentrate our energy and emissions reduction efforts on our Commercial Property and Retirement Living businesses where we directly control the built form. In Residential, we have limited control over the performance of housing within our masterplanned communities as we predominantly sell land to our customers. However, we actively promote energy efficient design and opportunities through our Greenstar communities rating tool and CCAP Precincts in the design of our masterplans.

Risks and opportunities are reviewed at each stage of the project lifecycle as part of our investment process and project management process.

CC2.1c

How do you prioritize the risks and opportunities identified?

At the asset level, risks and opportunities are prioritised based on the:
- Overall potential impact on asset performance
- Financial impact to the business in managing/mitigating
- Impact on communities and the environment in which we operate.

Across the portfolio, risks and opportunities are prioritised based on the:
- geographical areas of highest risk
- design attributes of the asset which affect climate resilience
- regional predictions for weather changes over two time horizons (medium & long term)
- overall impacts on company emissions
- impact on the local communities and environment
- overall risk to portfolio value and revenue.

The prioritisation process differs across our Business Units based on systems in place to measure and evaluate energy and climate change data and performance. For our Commercial and Retirement Living businesses for example, minimum standards have been developed to ensure energy efficiency is designed into all new build projects and major refurbishments. The Green Star accreditation process (which Stockland has formalised into sustainability plans for development and construction) requires assessment and prioritisation of climate change risks and opportunities. This includes energy modelling to assess highest abatement at lowest cost. Targets are set and performance is monitored to measure the design outcomes and efficiency gains made from building tuning and systems optimisation.

For our Residential and Retirement Living businesses, we generally use a statistical model that compares our project masterplans against regional benchmarks. The is used to establish performance based targets at the planning & design phase to reduce energy & greenhouse gas emissions and inform project transport needs. We then model different design and technology options that can be introduced to improve project performance and produce a marginal cost curve to enable a simple assessment of cost and payback of each opportunity or design element.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

i. How strategy is influenced:

Our business strategy has three focus areas to ensure we deliver value for our investors and other stakeholders. These are ‘grow asset returns and customer base’, ‘operational excellence’, and ‘capital strength’. Our sustainability strategy supports our business strategy, with a key pillar of our sustainability strategy 'Optimise and Innovate' supporting our strategy focus area of 'operational excellence'.
Our goal is to provide solutions that better serve our customers while reducing our impact on the environment. Our customers want to run their homes and businesses cost effectively, but also appreciate a connection to the natural environment. Climate change is an integral component as we strive to create climate resilient assets and communities with adequate social and built infrastructure.

Our business strategy is linked to an emissions reduction target. We set emissions reduction targets (such as a 10% improvement in retail FY14 energy intensity by FY17) that help us 'optimise and innovate' and therefore achieve 'operational excellence', which is a key focus area of Stockland’s business strategy. Further information on how our sustainability strategy supports our business strategy can be found at http://www.stockland.com.au/sustainability/sustainability.html

Stockland conducts an annual strategic review of its Group and Business Unit strategies and our Strategic Risk team provides advice to management and the Board Risk Committee on strategic risks. This review takes into account risks and opportunities for the business, including climate change risks and opportunities and their potential impact on corporate strategy.

Our Group Executive of Strategy and Stakeholder Relations is responsible for ensuring that the annual Board Strategy Review addresses the key risks and opportunities for the business and that Stockland tracks correctly against our risk adjusted framework.

ii. What CC aspects have influenced strategy:
- Physical risks - ensuring our assets are resilient to the pressures of changing climate and extreme weather conditions. We conduct climate vulnerability and resilience assessments at projects in high risk locations. These assessments focus on the vulnerability of assets to climate change and the ability to endure severe weather impacts and operate without disruption.
- Supply chain risks - ensuring climate change risks and opportunities are considered and factored into the activities of our key suppliers. Stockland continues to develop and encourage sustainable procurement practices across our direct and indirect spend.
- Financial risks - increased costs associated with changing regulation, more frequent asset repair/maintenance etc.
- Cost reductions - focus on operational efficiency (linked to emission reduction targets), as well as the upfront design and build of efficient and resilient assets.
- Energy abatement and alternate energy - capitalising on voluntary emissions trading opportunities through abatement opportunities. We have also installed solar at several Stockland shopping centres such as Stockland Shellharbour.

iii. Short-term strategy influence:
The short term (ie 1-3 years) strategy components influenced by climate change include:
- Operational efficiency - the approval and adoption of energy efficiency targets across all assets, and spend on environmental works such as HVAC and LED lighting upgrades and the installation of solar at our shopping centres.
- Customer satisfaction/ Climate resilience - enhancing affordability through improved energy efficiency in the design and operation of assets and guaranteeing business continuity for our tenants through the provision of resilient assets. This may also reduce Stockland's maintenance and upgrade costs. Information on the climate resilience of our assets can be found at http://www.stockland.com.au/assets/about-stockland/10-climate-resilience-DMA-FY15.pdf
- Sustainable development - making our communities and assets stronger, healthier, more connected and more resilient through environmental and social initiatives, including Green Star ratings.

iv. Long term strategy influence:
The long term (ie. 6-10 years) strategy components influenced by climate change include:.
- Adoption of new business types, models and geographies that are more resilient to climate change and associated risks. For example, we are required to review sea level rise and flooding risk for potential acquisitions.
- Ensuring we are minimising our liability – we limit our exposure to legal risk through the delivery of real estate assets that are able to withstand extreme weather events and align with building code standards or better.

v. Strategic advantage gained
Through energy efficiency programs (such as solar installations, LED lighting, energy efficient air conditioning, provision for future embedded energy network), we are able to improve affordability for residents and retail/ office tenants. This may differentiate Stockland from competitors and assist in maintaining existing customers and attracting new customers.

Further, by implementing initiatives that improve the resilience of our assets, we reduce the risk of business disruption to our residents and customers and mitigate potential future costs associated with maintenance and emergency response.

There is also an opportunity reduce insurance costs. Following a cyclone in 2015, an insurance provider agreed to reduce the insurance deductible for Stockland’s assets by $150,000 due to the completion of cyclone vulnerability assessment and resilience works.

vi. Decisions in reporting period affected by climate change:

Stockland installed rooftop solar panels on our Shellharbour shopping centre in 2015. The system is sized at 1.22 MW, which at the time was the largest single

rooftop solar PV system in Australia. The system comprises 3,991 photovoltaic panels with a total surface area of 7,658 square metres. It generates on average 4,789 kilowatt hours per day, the equivalent of 28 per cent of the centre's daily base building power requirements and will offset approximately 1,700 tonnes of CO2 annually. Stockland's retailers benefit from being supplied with renewable energy at a reduced cost for their daily power and lighting needs. The cost of the system was approximately $2 million.

Stockland Rockhampton Moore's Creek footing repairs - the City of Rockhampton has experienced significant rain events over the last four years. In these strong weather events, footings were damaged in the creek area. Stockland upgraded the design of our footings from allowing for a 1:100 year storm design to a 1:300 year storm event. In March 2015 there was another major storm event in Rockhampton and the asset held well with no major damage. The asset was used as a disaster recovery centre for the surrounding areas.

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.2c

Does your company use an internal price of carbon?

Yes

CC2.2d

Please provide details and examples of how your company uses an internal price of carbon

In the absence of a national carbon trading scheme, Stockland assesses potential carbon pricing internally in a number of ways, which represent a proxy carbon price:
- For assets, we receive a five year energy forecast that includes a price probability for legislation introducing a carbon price.
- In 2011, we assessed the impact of a price on carbon across our operations and through our supply chain. This allows us to understand direct and indirect cost impacts.
- Our New South Wales business also assesses the energy certificate trading opportunities arising from improvements in our NABERS ratings. The Energy Savings Scheme (ESS) is governed by NSW legislation. It reduces electricity consumption in NSW by creating financial incentives for organisations to invest in energy savings projects. Energy savings are achieved by installing, improving or replacing energy savings equipment. The ESS has enabled Stockland to accrue credits

annually, creating a potential revenue generator for the company. Energy Savings Certificates (ESC's) are created for projects and initiatives that reduce energy consumption. One 'ESC' represents 1 tonne/CO2 and has a dollar value which can be traded in an open market. Buyers are typically energy retailers to meet mandatory energy savings reporting obligations using a NABERS benchmarking method.

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
Trade associations

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Adaptation resiliency	Support	Stockland, in collaboration with the Australian Built Environment Council, has discussed opportunities to increase the resilience of the built environment with the National Climate Change Adaptation Research Facility and the Federal Government.	In collaboration with industry and the Australian Sustainable Built Environment Council, a proposal has been put forward to the Federal Government for an Adaptation Policy Framework to improve the resilience of the built environment in the face of climate change. This Framework aims to: - protect the wellbeing of communities through targeted policy initiatives and better urban and building design - ensure appropriate institutional arrangements to facilitate adaptation - realise economic benefits from early adaptation through effective strategic planning and risk minimisation - advance sustainability through better resource and risk management strategies - increase community education and awareness about climate change risks and adaptation.
Energy efficiency	Support	As a member of the National Sustainability Committee at the Property Council of Australia, Stockland was involved in the preparation of a 2015 advocacy paper to explain the role of the property sector in managing carbon emissions and advocating	The PCA National Sustainability Roundtable proposes to develop a comprehensive framework that recognises the following areas that will assist the industry in becoming more sustainable: ● The respective roles of sustainable carbon reduction strategies: ○

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
		for a better sustainability outcome. The aim is to describe the principles necessary for energy efficiency and renewables to flourish.	energy efficiency ○ on site renewables energy generation and storage ○ off site renewable energy ○ fuel switching ○ carbon offsets ○ electrification of the transport sector ● Incentives that encourage best practice, developing new skills and technologies ● Removal of perverse subsidies where they continue to exist ● Programs that account for the cost of carbon ● Programs that reward and create demand for high performing buildings and cities ● The role of new skills and training ● The role of new and emerging technologies ● That markets can be designed that drive desired behaviours ● That collaboration between energy generators, energy distributors and energy users is required for optimal energy productivity. Stockland has also participated with the Property Council in the Australian Sustainability Built Environment Council report released in May 2016 called "Low Carbon, High Performance" and reviews the global 2015 Paris commitments in an Australian context, and the pathway to reduced emissions.
Other: Green buildings	Support	Green Building Council of Australia (GBCA) - Stockland is a member of the Board, a member of the Steering Committee and a member of the working group. Climate change and appropriate frameworks to enhance this across all asset classes are key drivers.	The GBCA engages with government to promote the role of Green Buildings in reducing Australia's emissions. GBCA proposed incentives for developers to take up more sustainable and efficient developments and operations that encourage best practice sustainable development and enhance the development of new skills and technologies for the industry.

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Property Council of Australia	Consistent	Promoting smart policies to improve energy efficiency and incentivise best practice development and community creation.	We support the Property Council's position on climate change, their focus on eco-efficiency and the need to establish an Adaptation Policy Framework. We provide case studies to provide support for their submissions. Our Managing Director and CEO is the President of the Property Council of Australia and we are on the National Sustainability Roundtable which promotes innovative climate change action and make recommendations on effective government climate change policy for the property sector. Stockland has also participated with the Property Council in the Australian Sustainability Built Environment Council report which was released in May 2016 which is called "Low Carbon, High Performance" and reviews the global Paris 2015 commitments in an Australian context, and the pathway to reduced emissions.
Green Building Council of Australia	Consistent	The Green Building Council of Australia (GBCA) is supportive of raising awareness and taking action on climate change adaptation.	We support the GBCA's position on climate change and work in partnership with the GBCA to develop tools and initiatives to promote more efficient and resilient assets and communities across Australia. We sit on the Board and on the GBCA Steering Committee to promote innovation, best practice and advocate for a more sustainable built environment through the development and use of voluntary rating tools to meet policy objectives and access government incentives. Stockland is participating in the GBCA's efforts to expand the national carbon offset standard for buildings, precincts and cities.
Green Cross Australia	Consistent	Green Cross Australia empowers a resilient Australia and addresses the interface between environmental and humanitarian stresses. They offer environmental education and cultivate community resilience to the impacts of climate change, while inspiring Australians to embrace sustainable living. Green Cross Australia has launched the Business Adaptation Network as a place where best adaptation practice can be shared to mainstream responses and improve Australia's resilience to the impacts of climate change.	Stockland is a contributor to the Australian Business Adaptation Network. With a portfolio of assets and operations in major regional areas around the country, we are increasingly focused on the vulnerability and resilience of buildings in a changing future climate. Our involvement in the Business Adaptation network allows us to stay in touch with the latest thinking around adaptation and to share our experiences with like-minded organisations.

CC2.3d

Do you publicly disclose a list of all the research organizations that you fund?

CC2.3e

Please provide details of the other engagement activities that you undertake

CC2.3f

What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Stockland's climate change strategy is supported by a Group Climate Change Position Statement, our Environment Policy and Business Unit sustainability policies.

Stockland's Stakeholder Relations team leads and supports engagement with Government and Industry to ensure that good practice is followed and that our direct and indirect activities are consistent with our policies and strategy.

We sit on the Board and on the technical and advocacy committees at the Green Building Council of Australia to promote innovation and best practice, and to advocate for a more sustainable built environment through the development and use of voluntary rating tools to meet policy objectives and access government incentives.

Stockland's Managing Director and CEO is the President of the Property Council of Australia and Stockland sits on the National Sustainability Roundtable to both promote innovative climate change action and make recommendations relating to effective government climate change policy for the property sector.

Our engagement is governed by a Board-endorsed government and stakeholder engagement policy that applies to all our people and covers donations, the role of consultants, access to our properties, gifts and personal political participation. The policy is updated annually and is part of our Code of Conduct, signed by employees on commencement of employment at Stockland and reviewed and signed by existing employees as part of our annual Compliance Statement.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?

Absolute target
Intensity target
Renewable energy consumption and/or production target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
Abs1	Scope 1+2 (market-based)	27%	70%	2006	24679	2030	No, but we anticipate setting one in the next 2 years	As part of the Better Buildings Partnership with City of Sydney, we are committed to reducing the emissions of our Sydney CBD office assets by 70% by 2030 using a 2006 base year. Emissions across our Sydney CBD office assets totalled 24,679 tonnes CO2e in 2006. This equates to an absolute reduction of 17,275 tCO2e by 2030. We have been working with CDP Australia to assess whether this target is a science-based target and it is currently in

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions covered by target (metric tonnes CO2e)	Target year	Is this a science-based target?	Comment
								the process of being assessed.
Abs2	Scope 1+2 (market-based)	100%	10%	2014	5804971	2017	No, but we are reporting another target which is science-based	Given the changing size of our business with divestments and acquisitions, intensity targets are more meaningful to our business than absolute targets. For our Commercial Property business, we committed to a 10% energy intensity reduction in FY14 by FY17. This equates to approximately 5,804,971kgCO2-e in absolute savings terms This 10% is a further reduction on the 29% intensity reduction achieved by FY14, based on FY09 figures. We have selected the option 'No but we are reporting another target which is science based' as we are working with CDP Australia on Abs1.

CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
Int1	Scope 1+2 (market-based)	100%	10%	Other: kgCO2-e per square meter	2014	61.52	2017	No, but we are reporting another target which is science-based	For Commercial property - in FY14, we committed to a 10% energy intensity reduction against FY14 by FY17. This 10% is a further reduction on the 29% reduction achieved by FY14, based on FY09 figures. We have selected the option 'No but we are reporting another target which is science based' as we are working with CDP Australia on

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment
									Abs1.

CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Decrease	10	No change	0	On a like-for-like basis this would represent a 10% absolute reduction.

CC3.1d

Please provide details of your renewable energy consumption and/or production target

ID	Energy types covered by target	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
RE1	Electricity consumption	2014	65017	0.23%	2017	3%	We have set a target to achieve 3% renewable energy in retail by FY17 through on-site generation.

CC3.1e

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions or renewable energy)	Comment
Abs1	38%	75%	We are on track to achieve this target well ahead of schedule having maintained a reduction of 52.5% in FY15.
Abs2	33.33%	18%	The retail portfolio has reduced its absolute carbon emissions by 2% against FY14 which equates to 18% of the target. This is a good outcome considering the amount of large developments that have taken place in FY15 .We will continue to report on our 10% improvement target through to FY17.
Int1	33.33%	20%	The Retail portfolio has reduced its energy intensity by 2% from FY14. This is a good outcome considering the amount of large developments that have taken place in FY15. We will continue to report on our 10% improvement target through to FY17.
RE1	33.33%	100%	3% represents 1.36MW, which we have installed the capacity to deliver across four assets, including through the Shellharbour PV project (1.22 MW). Our focus for FY17 will be verifying that we have exceeded our 3% renewables target in operation.

CC3.1f

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

CC3.2

Do you classify any of your existing goods and/or services as low carbon products or do they enable a third party to avoid GHG emissions?

Yes

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
Company-wide	Green Star certified retirement living villages and retail centres.	Low carbon product	Climate Bonds Taxonomy	9%	Less than or equal to 10%	Assets which form part of the retirement living low carbon products include the following Green Star rated villages: - Selandra Rise Village (4 star Green Star - Custom Design rating) - Mernda Retirement Village (4 star Green Star - Custom Design rating) - Affinity Village (4 star Green Star - Public Building Design and As Built ratings) Assets which form part of the commercial property low carbon products include the following Green Star rated shopping centres: -

Level of aggregation	Description of product/Group of products	Are you reporting low carbon product/s or avoided emissions?	Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions	% revenue from low carbon product/s in the reporting year	% R&D in low carbon product/s in the reporting year	Comment
						Townsville (4 star Green Star - Retail Centre v1 Design and As Built ratings) - North Shore (4 star Green Star - Retail Centre v1 Design and As Built ratings) - Highlands (4 star Green Star - Retail Centre v1 As Built rating) - Merrylands (4 star Green Star - Retail Centre v1 Design rating) - Shellharbour (4 star Green Star - Retail Centre v1 Design and As Built ratings) - Hervey Bay (4 star Green Star - Retail Centre v1 Design and As Built ratings) - Baldivis (4 star Green Star - Retail Centre v1 Design rating) - Wetherill Park (5 star Green Star - Retail Centre v1 Design rating).

CC3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and/or implementation phases)

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	25	
To be implemented*	8	2006
Implementation commenced*	1	500
Implemented*	23	1652
Not to be implemented	3	

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency: Building services	Upgrading of Air conditioning units (end of life) to more energy efficient units, Installation of Variable Speed Drives on various motors and fine tuning of Building Management System	162	Scope 1 Scope 2 (location-based)	Voluntary Mandatory	30000	300000	4-10 years	11-15 years	In FY15 there were numerous PAC units at the end of their life cycle. Therefore these units were replaced and upgraded to be: 1) More energy efficient 2) to no longer operate on R22 gas

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	controls								
Energy efficiency: Building services	LED Lighting	290	Scope 2 (location-based)	Voluntary	50000	450000	4-10 years	3-5 years	Lighting upgrades using LED lighting technology were completed or underway across 12 Retail centres in FY15 with the actual savings consistently meeting expectations. Additional lighting upgrade opportunities are being investigated for FY16. This was a voluntary initiative implemented to reduce Scope 2 emissions across our retail portfolio and will be a contributing factor towards commercial property achieving its FY17 reduction targets.
Energy efficiency: Building services	Installation of a 1.22MW roof top solar system	1200	Scope 1 Scope 2 (location-based)	Voluntary	200000	2000000	4-10 years	21-30 years	Delivered one alternative energy project within our retail portfolio with the installation of one of the largest solar rooftop systems in Australia at Stockland Shellharbour. This was a voluntary initiative implemented to reduce Scope 2 emissions across our retail portfolio.
Energy efficiency: Building services	Monitoring system	145	Scope 1 Scope 2 (location-based)	Voluntary	20000	45600	1-3 years	6-10 years	A smart energy monitoring and metering system was installed in Bundaberg in FY15 after Stockland purchased 50%

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
									share in the asset. This was so it was in line with the rest of the portfolio. The system will allow remote engineers to provide advice and guidance where efficiency can be achieved and to resolve wastage immediately.
Low carbon energy purchase	Greenpower	5.5	Scope 2 (location-based) Scope 2 (market-based)	Voluntary	0	350	>25 years	Ongoing	Certified Greenpower is purchased for the illumination of the Stockland sign at the top of the Sydney head office. This is a voluntary initiative which does not have a payback as there are additional costs to implement this initiative.

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Marginal abatement cost curve	At an organisational level, we use carbon abatement cost curves to identify specific abatement opportunities and the costs to implement these measures. The curves enable us to quickly model the costs of reducing emissions across our entire asset

Method	Comment
	portfolio, as well as at the individual asset level. The estimates are based on Stockland carbon abatement data, ensuring a high level of confidence in the results returned. Marginal abatement cost curve is also used within our development master planning process to identify key infrastructure and programs to reduce emissions.
Compliance with regulatory requirements/standards	Compliance with State and Federal regulation on energy efficiency is contributing to investment in more efficient design and better management of our projects. We aim to stretch beyond these increasing compliance requirements.
Dedicated budget for energy efficiency	CAPEX budget - if an energy efficiency project meets our investment hurdle rate and can deliver a return on investment, then it is given approval to proceed to implementation. This can be achieved at an individual site level or at a portfolio level.
Dedicated budget for low carbon product R&D	New technology is trialled and if successful, then it's rolled out across the portfolio e.g. chiller optimisation
Dedicated budget for other emissions reduction activities	Budget is set aside for building tuning and maintenance activities that result in improved emission performance.
Employee engagement	Promoting staff sustainability awareness, seek innovative ideas from staff and drive energy efficiency across corporate and site offices.
Internal incentives/recognition programs	KPIs for emissions reduction targets for key development and operations staff. Acknowledging best practice and rewarding through internal communication and recognition (e.g. intranet stories and values awards).
Other	Development standards/ratings - Green Star as a minimum development standard. Embedding minimum standards for energy efficiency is driving investment in emission reduction activities across our organisation. Our Commercial Property business has minimum Green Star rating performance standards. There are minimum energy efficiency requirements for all Residential and Retirement Living projects, including maximising the solar orientation of sites, providing energy efficient lighting in public spaces and connecting dwellings to reticulated natural gas or LPG where available. Our Retirement Living business committed to a 40% reduction in energy usage per retirement home incorporated into the design of newly developed projects (compared to regional averages) using CCAP Precinct.
Other	Operational standards/ratings - using the NABERS Energy rating tool to benchmark our building performance, we are improving energy efficiency through capital investment in high-efficiency chillers, building management systems, lighting controls and variable speed drives.

CC3.3d

If you do not have any emissions reduction initiatives, please explain why not

Further Information

An overview of Stockland's solar installation at Shellharbour can be found on page 5 of the Energy and Emissions DMA at http://www.stockland.com.au/assets/about-stockland/9-energy-and-emissions-DMA-FY15.pdf

Page: CC4. Communication

CC4.1

Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Status	Page/Section reference	Attach the document	Comment
In mainstream reports (including an integrated report) in accordance with the CDSB Framework	Complete	Annual Review 2015/ Optimise and Innovate	https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/CC4.1/Stockland Integrated Report 2015.docx	Stockland's Integrated Report is available online. Please refer to http://www.stocklandcorporatereporting2015.com.au/ Information on our emission and climate change performance can be found under 'Optimise and Innovate' and 'Operational Excellence'.
In voluntary communications	Complete	Sustainability Report 2015 (Optimise and Innovate/ Carbon & Energy section) http://www.stockland.com.au/about/sustainability.htm	https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/CC4.1/9-energy-and-emissions-DMA-FY15.pdf	Please refer to Stockland's Energy and Emissions Disclosure on Management Approach and our Climate Resilience Disclosure on Management Approach, both of which are provided on our sustainability reporting webpage http://www.stockland.com.au/about/sustainability.htm and attached.

Further Information

Stockland's 2015 Sustainability Report can be found at http://www.stockland.com.au/about/sustainability.htm. Stockland's Annual Review 2015 can be found at http://www.stockland.com.au/corporatereporting2015 Stockland's Energy and Emissions and Climate Resilience Disclosures on Management Approach are attached.

Attachments

https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC4.Communication/10-climate-resilience-DMA-FY15.pdf
https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC4.Communication/9-energy-and-emissions-DMA-FY15.pdf

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Risks driven by changes in regulation
Risks driven by changes in physical climate parameters
Risks driven by changes in other climate-related developments

CC5.1a

Please describe your inherent risks that are driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
General environmental regulations, including planning	Changes to planning approval criteria and climate change assessments may reduce the amount of land that is developable. This creates the risk of Stockland's developments not being approved or approvals being delayed. Changes to planning approvals are increasingly expected as part of the planning approval process for property development in Australia (particularly in relation to floodplain risk management).	Increased capital cost	1 to 3 years	Direct	Likely	Low-medium	The figure could be significant but varies based on project type and size and the nature of the regulatory change. By way of example, if 2% of Stockland's residential portfolio (ie end-market value of $20.7 billion as at 30 June 2015) was deemed not suitable for development, this would lead to an adverse valuation of approximately $400 million. As we already have processes in place to assess climate change risks, we do not anticipate additional significant financial implications.	Stockland conduct Climate Change Assessments for potential acquisitions to assess the climate change risks inherent at each site. This is an integral part of our planning and acquisition process. Our ability to meet the required conditions for approvals is strong given demonstrated climate change adaptation management and performance. Stockland completed Climate Resilience assessments in several development assets in FY15 including at Willowdale and Caloundra South (now called	Climate Change Assessments on new developments cost approximately $8000 for a full scale assessment. This cost is factored into development budgets, and is a minor investment given the financial risk it enables us to offset. As we have conducted a total of 23 assessments at the time of reporting, the estimated cost of management is $184,000.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								Aura).	
Uncertainty surrounding new regulation	There has been a moderate level of uncertainty regarding environmental regulation in Australia, in particular regarding a price on carbon. This creates uncertainty in the market as it is unclear whether or not a carbon price will be re-instated at a later stage due to international pressures. This uncertainty presents financial risks surrounding our operational costs and the costs of Stockland's future developments.	Increased operational cost	Up to 1 year	Direct	About as likely as not	Low	It is difficult to estimate costs accurately as it would be dependent on the proposed legislative change and the required response. In regard to a price on carbon, this would lead to increased operational costs. As an indication, when a carbon price was introduced in Australia in FY13 (later withdrawn), we estimated that this led to a 10% increase in our annual electricity costs.	Maintain a close watch on, and work with industry bodies to influence emerging policy and regulation which may impact our operations.	No additional cost - this is a core responsibility of our Stakeholder Relations team.

CC5.1b

Please describe your inherent risks that are driven by changes in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Sea level rise	In 2011, Stockland commissioned external research on the key climate risks to which we are exposed. This research found that sea level rise presents the risk to which our portfolio has the greatest exposure. The risk analysis investigated impacts from sea level rise, wave run-up and flooding risk. While the NSW coastline is	Reduction/disruption in production capacity	>6 years	Direct	Likely	Low-medium	Financial loss relating to loss of entire tracts of development land and the adverse impact on existing assets. The value of this loss would vary depending on the size and nature of the land/assets impacted and the severity of the impact. As an indication, if 1% of Stockland's residential portfolio (ie end-market value of $20.7 billion as at 30 June 2015) was impacted or deemed not suitable for development, this would lead to an adverse valuation of	All projects are required to review sea level rise and flooding risk in the acquisition/planning stage. High risk projects (according to location) must conduct a Climate Vulnerability and Resilience Assessment. These assessments focus on the vulnerability of assets to climate change and the ability to endure severe weather impacts and operate without disruption. Where specific risks are identified, suitable mitigation or correctional measures must be included in action plans. During FY15 we continued our assessment of shopping centres at Stockland Forster, Stockland Traralgon and Stockland Bathurst. These assets are in regional locations with different climate impacts. In FY15 Stockland Forster was damaged by a severe hail storm. Whilst the asset was impacted, we believe that the assessment process and associated changes in key elements (such as drainage & roofing) improved the resilience of the asset and lessened the impact of the storm. This progress has been recognised in FY15 through our insurance premium. Further information can	The cost of management is associated with undertaking and developing the Climate Vulnerability and Resilience Assessments - a process that is either conducted internally by key staff or by external consultants. Costs therefore range from $1000-$8000 per assessment. As we have conducted a total of 23

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	predicted to have the greatest increase, the report indicates that Queensland coastal areas will also be significantly exposed to the predicted rise in sea levels and floods. Sea level risk in these areas is likely to give rise to indirect impacts on communities and infrastructure at surrounding Stockland's assets.						approximately $200 million. It would also have indirect financial impacts if communities surrounding Stockland's shopping centres are impacted and therefore unable to access and shop at our centres due to salt water inundation.	be found at http://www.stockland.com.au/assets/about-stockland/10-climate-resilience-DMA-FY15.pdf	assessments at the time of reporting, the estimated cost of management is $184,000 (assuming $8000 per assessment).
Change in mean (average)	In 2011, Stockland commission	Increased operational cost	1 to 3 years	Direct	Likely	Low	Increased operating and maintenance	Potential at risk projects (based on location) must conduct a Climate Vulnerability and Resilience	The cost of management is

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
temperature	ed external research on the key climate risks to which we are exposed. This research found that higher mean temperatures were another climate change impact to which our portfolio had significant exposure. More frequent warmer/hotter days will increase demand for ventilation and air conditioning, leading to higher operating costs due to increased						costs for Stockland's assets due to increased demand on HVAC systems. It is estimated that this could lead to a 5% increase in the system operating costs. For our Commercial Properties business for example, with an annual HVAC operating cost of $5.6 million, this represents approximately $280,000 annually.	assessment. These assessments focus on the vulnerability of assets to climate change and the ability to endure severe weather impacts and operate without disruption. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans, with actions implemented and tracked. An example includes the periodic assessment we conduct of our retail portfolio to assess the optimal operating conditions for our HVAC units (i.e. using minimal energy to maintain optimum temperature). At our Green Hills shopping centre for example, we replaced the HVAC system ahead of the end of life at a cost of $5 million.	associated with undertaking and developing the Climate Vulnerability and Resilience Assessments - a process that is either conducted internally by key staff or by external consultants. Costs therefore range from $1000-$8000 per assessment. As we have conducted 23 assessments to date, the estimated cost of manageme

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	maintenance and energy consumption. Changes in mean average temperatures will also impact the health and wellbeing of our residents.								nt is $184,000. In addition, we spend approximately $100,000 per annum assessing the performance of our HVAC systems and in 2015, spent approximately $8.6 million upgrading and replacing our HVAC systems at our shopping centres.
Change in temperature extremes	In 2011, Stockland commissioned external research on the key climate risks	Wider social disadvantages	1 to 3 years	Indirect (Client)	Likely	Medium	Increased operating and maintenance costs for Stockland's assets due to increased	Potential at risk projects must conduct a Climate Vulnerability and Resilience assessment tool. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans. An example includes	Stockland's potential at risk projects must conduct a Climate Vulnerabilit

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	to which we are exposed. This research identified higher maximum daily temperatures as another climate change effect to which our portfolio had significant exposure. Heat waves in Australia are virtually certain to increase in frequency and intensity. This will impact our residents, particularly our more vulnerable Retirement Living residents,						demand on HVAC systems. It is estimated that this could lead to a 5% increase in our HVAC system operating costs. For our Commercial Properties business for example, with an annual HVAC operating cost of $5.6million, this represents approximately $280,000 annually.	the periodic assessment we conduct of our retail portfolio to assess the optimal operating conditions for our HVAC units (i.e. using minimal energy to maintain optimum temperature). At our Green Hills shopping centre for example, we replaced the HVAC system ahead of the end of life at a cost of $5 million. We also ensure energy efficiency and natural ventilation of Retirement Living villages using the Green Star standards.	y and Resilience Assessment. This process is either conducted internally by key staff or by external consultants. Costs therefore range from $1000-$8000 per assessment. As we have conducted a total of 23 assessments at the time of reporting, the estimated cost of management is $184,000. Where specific risks are identified,

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	and increase the demand for air conditioning and overall energy consumption, leading to higher operating costs due to increased maintenance and energy consumption. Heat waves can also lead to bushfires, destroying a large number of homes and potentially fatalities.								suitable mitigation or correctional measures must be included in asset-specific action plans, with actions implemented and tracked. In some instances, we have had to upgrade HVAC systems at our shopping systems (ahead of their end of life) as the systems could not cope with the increased temperatures. At our

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
									Green Hills shopping centre for example, we replaced the HVAC system ahead of the end of life at a cost of $5 million.
Tropical cyclones (hurricanes and typhoons)	In 2011, Stockland commissioned external research on the key climate risks to which we are exposed. This research found that the most significant risk for our North Queensland assets was an increase in frequency	Reduction/disruption in production capacity	1 to 3 years	Direct	Likely	Medium	Costs associated with significant structural damage to development sites, construction activities or existing assets. Costs may also include the cost of building retuning/ repair following a cyclone. As an indication, Stockland incurred a cost of approximately $120,000 at a	Our climate resilience approach aims to increase our understanding of future climate impacts on our business and identify what we need to do to create resilient communities and assets of the future. Over time we seek to further integrate climate resilience into all key business decision-making processes, with criteria set for the design and construction of buildings and neighbourhoods. We do this by conducting Climate Resilience and Vulnerability Assessments, which assess the vulnerability of assets to climate change and the ability to endure severe weather impacts and operate without disruption. The methodology defines key vulnerability and resilience criteria, with a particular focus on location	Stockland's potential at risk projects (based on location) must conduct a Climate Vulnerability and Resilience Assessment. This process is either conducted internally by key staff or by external consultants. Costs

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	and severity of storms. Intense tropical cyclone activity increases the incidence of flood and high winds. Increased frequency and impact of extreme weather may also lead to increasing insurance premiums and the possibility of not being able to insure property in vulnerable locations. The unpredictability and extreme nature of these events						shopping centre in Rockhampton following damage to air conditioning equipment due to an extreme weather event.	and design, structure, operation and maintenance, utilities and services and stakeholders. Action plans are developed for each asset and include the implementation of operational responses, maintenance regimes and emergency response plans with a view to improving the resilience score of the asset. As an example, Stockland conducted an assessment of climate change risks at our Rockhampton shopping centre and implemented a plan to improve the cyclone resilience of this centre at an approximate cost of $700,000.	therefore range from $1000-$8000 per assessment. As we have conducted a total of 23 assessments at the time of reporting, the estimated cost of management is $184,000. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans, with actions

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	may lead to structural damage of our assets and the disruption of our operations during and immediately following an event. It also presents a significant indirect risk via the impact on development sites managed by our supply chain in high risk areas.								implemented and tracked. As an example, Stockland conducted an assessment of climate change risks at our Rockhampton shopping centre and implemented a plan to improve the cyclone resilience of this centre at an approximate cost of $700,000. There are no additional management costs involved in screening suppliers as this is

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
									integrated into current contractor management system.
Change in precipitation extremes and droughts	Australia is the driest inhabited continent on earth, heavily exposed to extreme heat and drought as well as large-scale flooding. These events are influenced by many factors and while their occurrence is difficult to accurately estimate, the trend is towards larger, more intense events. Droughts	Reduction/disruption in production capacity	1 to 3 years	Direct	Likely	Low	Drought would impact us directly (through increased cost of water to develop/service our assets) and indirectly (through visual amenity and appeal issues linked to drought and through increased cost of water placing additional stress on customers/tenants). As an indication, for Commercial Properties, with an annual water cost of approximately $3.8 million in FY15, a 10% increase in water costs	Water sensitive urban design is considered in the design and build of our assets, with water consumption addressed across our Commercial Property portfolio to ensure effective management and minimal use of the resource. All projects are required to review sea level rise and flooding risks in the acquisition/planning stage. High risk projects must conduct a Climate Resilience and Vulnerability assessment. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans. During FY15 we continued our assessment of shopping centres using our climate resilience assessment tool at Stockland Forster, Stockland Traralgon and Stockland Bathurst. These assets are in regional locations with different climate impacts. Stockland Bathurst is the best performing retail asset of the 18 assets assessed to date. In FY15 Stockland Forster was damaged by a severe hail storm. Whilst the asset was	Stockland's potential at risk projects (based on location) must conduct a Climate Vulnerability and Resilience Assessment. This process is either conducted internally by key staff or by external consultants. Costs therefore range from $1000-$8000 per assessment. As we have conducted

Risk driver	Description	Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	will see the cost of water utilities increase as water security becomes a more serious issue for Australia. Large scale flooding will impact the operation of our businesses and lead to potential disruption of our services.						would lead to an annual cost increase of approximately $380,000. Flood would also impact our business due to structural damage to our assets and business continuity impacts for our tenants. It is difficult to estimate costs associated with drought more accurately as it would depend on the location and severity of the drought and Stockland's required response. However, as we already focus on climate resilience in the design and site selection of our assets, we do not anticipate	impacted, we believe that the assessment process and associated changes in key elements (such as drainage & roofing) improved the resilience of the asset and lessened the impact of the storm. This progress has been recognised in FY15 through our insurance premium. Further information can be found at http://www.stockland.com.au/assets/about-stockland/10-climate-resilience-DMA-FY15.pdff	a total of 23 assessments at the time of reporting, the estimated cost of management is $184,000. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans, with actions implemented and tracked.

Risk driver	Description	Potential impact	Timefra me	Direct / Indire ct	Likeliho od	Magnitu de of impact	Estimated financial implications	Management method	Cost of manageme nt
							any significant additional costs.		

CC5.1c

Please describe your inherent risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	Stakeholders are increasingly looking to understand what organisations are doing to manage climate change risks. This is particularly important as business partners and investment advisors place increasing value on	Reduced stock price (market valuation)	1 to 3 years	Direct	Unlikely	Low-medium	Stockland would be impacted financially if our reputation for climate resilience was damaged and we were therefore no longer considered an investment of choice (therefore impacting access to capital). Stockland's share price could also be negatively impacted from damage to our reputation. The extent of impact would be	Potential at risk projects (based on location) must conduct a Climate Vulnerability and Resilience assessment. These assessments focus on the vulnerability of assets to climate change and the ability to endure severe weather impacts and operate without	Climate-related reputation is part of the mandate of the Stakeholder Relations team. There is therefore no additional/specific cost associated with management of this risk. Stockland's potential at risk projects must conduct a Climate Vulnerability and Resilience Assessment. This process is either

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	intangible dimensions such as risk management, brand, reputation and employee engagement. If Stockland were to lower its focus on climate resilience, it risks damage to its reputation and reduced demand for its assets, adversely impacting sales. Stockland may also lose the confidence of key decision-making bodies (such as State Government and local Australian Councils) and institutional investors. This would adversely impact project approvals and						dependent on the nature of the reputation damage. By way of example, a 10% fall in Stockland's share price could result in approximately $975m in loss of share value for investors (based on a market capitalisation of $9,747.82m as at 30 June 2015). There would also be financial implications of reduced market share and missed opportunities if Stockland was not considered a developer or partner of choice. As we already focus on climate resilience in the design and operation of our assets, we do not anticipate any reputational damage or additional costs.	disruption. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans, with actions implemented and tracked. An example includes the periodic assessment we conduct of our retail portfolio to assess the optimal operating conditions for our HVAC units (i.e. using minimal energy to maintain optimum temperature). At our Green Hills shopping centre for example, we replaced the HVAC system ahead of the end of life at a	conducted internally by key staff or by external consultants. Costs therefore range from $1000-$8000 per assessment. As we have conducted a total of 23 assessments at the time of reporting, the estimated cost of management is $184,000. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans, with actions implemented and tracked.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	access to capital.							cost of $5 million. Stockland has an active Stakeholder Relations team which ensures climate change issues remain on the radar and that the company responds to any concerns quickly and effectively to minimise potential reputational damage. We also manage our reputation through participation in a range of reporting surveys, such as DJSI, GRESB, CDP, Sustainalytics, MSCI and Oekom. We report on our sustainability performance annually through	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								Stockland's integrated Annual Review and hold regular meetings with institutional investors.	
Changing consumer behaviour	In some facets of Stockland's business, customers are increasingly engaged on sustainability issues, with growing expectations around the sustainability performance of assets. Some tenant groups, including government, have stated their intention to only occupy buildings that meet minimum sustainability (energy efficiency) requirements. If Stockland were to lower its focus on	Reduced demand for goods/services	1 to 3 years	Direct	Likely	Low	Stockland could be impacted financially if our reputation for climate resilience was damaged and we were unable to attract tenants/customers to our assets. This risk will increase over time as other new buildings are developed with modern and efficient fixtures. It is difficult to estimate the exact financial impact of this risk as it would depend on the extent of the downturn in demand from tenants or customers.	Ensure that all our assets have a minimal level of sustainability performance which ensures maximum benefit to our customers in terms of reduced operating cost/living costs and improved environmental performance. Continuous improvements and upgrades across our assets to ensure they maintain high level performance.	Costs involved in design and development of assets in accordance with Green Star, and also costs involved in upgrading and refurbishing existing assets to ensure their enhanced sustainability performance. Consultant costs associated with our 5 Green Star as-built ratings in FY15 were approximately $300,000. Management costs also include the costs of maintaining and upgrading our systems such as LED lighting and HVAC. In FY15, we

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	climate change resilience, it risks damage to its reputation and reduced demand for its assets.								spent approximately $8.6 million maintaining and replacing our shopping centre HVAC systems and approximately $600,000 upgrading our LED lighting systems.

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

Opportunities driven by changes in regulation
Opportunities driven by changes in physical climate parameters
Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your inherent opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Cap and trade schemes	The Energy saving Scheme (ESS) is governed by NSW legislation. It reduces electricity	Other: Revenue	1 to 3 years	Direct	Very likely	Low-medium	Stockland has traded ESC's in 2012 (all office) and more recently in March 2015 (office and	As an Accredited Certificate Provider under the ESS, we must ensure we manage all our data/reporting in	Management costs include consultants fees for the creation of the ESCs and fees for the ESC registration

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	consumption in NSW by creating financial incentives for organisations to invest in energy saving projects. Energy savings are achieved by installing, improving or replacing energy saving equipment. The ESS has enabled Stockland to accrue credit annually, creating a potential revenue generator for the company. Energy Saving Certificates (ESCs) are created for projects and initiatives that reduce energy consumption. One 'ESC' represents 1 tonne/CO2 and has a dollar value which can be traded in an open market. Buyers						retail). On 9 March 2015, we traded 14,337 certificates accumulated between 2012 and 2014 at a price of $17.90 for an income of $256,632. To date we have traded over 20,000 ESC's and realised $421,000 of income. We will create new ESC's again with this year's NABERS ratings and will look to trade again in 2017.	accordance with the requirements set by the Scheme. As such, the requirements are integrated into our management system and responsibility is assigned to a member of the sustainability team to monitor and maintain the systems and associated processes. Stockland has traded ESC's in 2012 (all office) and more recently in March 2015 (office and retail). To date we have traded over 20,000 ESC's and realised $421,000 of income. At our Green Hills shopping centre, we have upgraded lights to LEDs, replaced all the	totalling approximately $10,000. While there are costs associated with the upgrade of assets to generate credits, these costs would be undertaken anyway to meet internal energy targets.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	are typically energy retailers to meet mandatory energy savings reporting obligations using a NABERS benchmarking method.							air conditioning plant and placed smart metering in. The cumulative savings are more than 50% and Stockland receives an annual contribution through ESCs in recognition of these savings.	

CC6.1b

Please describe the inherent opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in mean (average) temperature	Higher mean temperatures in our areas of operation will drive greater traffic to our retail centres as people seek cool, public	Increased demand for existing products/services	1 to 3 years	Indirect (Client)	Likely	Low	Increased revenues for our retail tenants and therefore demand from tenants for Stockland retail space. In 2015,	Stockland manages this opportunity by ensuring that our retail centres are resilient to climate change and remain attractive and	Costs associated with energy efficiency initiatives, building upgrades etc. These are factored into annual asset plans and if they

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	areas in which to spend their time. This will also lead to increased demand from our shopping centre tenants as they seek highly efficient (lower energy cost) premises.						Stockland's tenants saved over $5 million in energy bills as a result of energy efficiency improvements across the Commercial Property portfolio.	enjoyable areas in which the community choose to spend time, and that they are able to operate effectively at high capacity (car parks, lifts etc). An example includes the periodic assessment we conduct of our retail portfolio to assess the optimal operating conditions for our HVAC units (i.e. using minimal energy to maintain optimum temperature). At our Green Hills shopping centre for example, we replaced the HVAC system ahead of the end of life at a cost of $5 million.	meet required Return on Investment criteria, they are integrated into operational budgets. At our Green Hills shopping centre for example, we replaced the HVAC system ahead of the end of life at a cost of $5 million.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in temperature extremes	Market demand for more efficient design as potential tenants seek highly efficient (lower energy cost) premises. This could lead to increased demand for Stockland's assets.	Increased demand for existing products/services	1 to 3 years	Direct	Likely	Medium	Positive financial implications of maintaining minimal vacancy rates across our portfolio by having highly efficient and therefore attractive assets. In 2015, Stockland's tenants saved over $5 million in energy bills as a result of energy efficiency improvements across the Commercial Property portfolio.	Stockland manages this opportunity by ensuring that our assets are continuously assessed and upgraded to ensure energy efficiency is optimised and in line with best practice. An example includes the periodic assessment we conduct of our retail portfolio to assess the optimal operating conditions for our HVAC units (i.e. using minimal energy to maintain optimum temperature). At our Green Hills shopping centre for example, we replaced the HVAC system ahead of the end of life at a cost of $5	Costs associated with energy efficiency initiatives, building upgrades etc. These are factored into annual asset plans and if they meet required Return on Investment criteria, they are integrated into operational budgets. As an example, the implementation of smart monitoring (COZero EnergyLink) at the Stockland Gladstone shopping centre required a capital investment of $50,400 with a Return on Investment of 108% in the first 12 months.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								million.	
Induced changes in natural resources	As natural resources become scarcer and more costly, those companies with more efficient operations will be best placed in the market. As such, having highly efficient assets will increase our competitive advantage and ability to respond to market demand.	Increased demand for existing products/services	1 to 3 years	Direct	Likely	Low-medium	Positive financial implications from increased market demand and cost savings due to ongoing efficiency initiatives. In 2015, Stockland's tenants saved over $5 million in energy bills as a result of energy efficiency improvements across the Commercial Property portfolio.	Continuous improvement across our assets to ensure that efficiency is constantly enhanced at every opportunity. In addition to lighting and physical upgrades, this also includes assessing the optimal load at which our air conditioning equipment operates to ensure minimal energy use, assessing the frequency and quantity of our waste disposal and monitoring water use across our assets.	Costs associated with individual efficiency improvement initiatives. As an example, a LED lighting upgrade at the Stockland Merrylands shopping centre in 2014 required a capital investment of $132,000, with a Return on Investment in the first 12 months of 53%.
Other physical climate opportunities	The frequency of extreme weather events is predicted to increase due to	Reduced operational costs	1 to 3 years	Direct	Likely	Medium	Reduced deductibles insurance claims. Following a	Potential at risk projects (based on location) must conduct a Climate	Stockland's potential at risk projects must conduct a Climate Vulnerability and

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	climate change. This means that residential and commercial properties are at risk of damage. There is an opportunity for Stockland to continue to improve the climate resilience of its assets and therefore incur lower insurance premiums.						cyclone in February 2015, an insurance provider agreed to reduce the insurance deductible for Stockland's assets by $150,000 due to the completion of cyclone vulnerability assessment and resilience works.	Vulnerability and Resilience assessment. These assessments focus on the vulnerability of assets to climate change and the ability to endure severe weather impacts and operate without disruption. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans, with actions implemented and tracked.	Resilience Assessment. This process is either conducted internally by key staff or by external consultants. Costs therefore range from $1000-$8000 per assessment. As we have conducted a total of 23 assessments at the time of reporting, the estimated cost of management is $184,000. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans, with actions implemented and tracked.

CC6.1c

Please describe the inherent opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Reputation	Ensuring the climate resilience of our developments so that they continue to be great places to live now and into the future. This safeguards our brand and demonstrates the value of our assets. It also promotes trust and customer satisfaction which are key drivers of referrals and ongoing sales and revenue. In addition, sustainability and the climate resilience of our assets is increasingly important to institutional investors and therefore Stockland's access to capital, which allows to Stockland to maintain, expand	Wider social benefits	>6 years	Direct	Likely	Low-medium	Positive financial implications associated with long term brand value and demand for Stockland's assets. A strong reputation may lead to greater investor confidence, an increased share price and make it cheaper to raise capital. Stockland's share price could be positively impacted from an enhanced reputation. The extent of impact would be dependent on the nature of the reputation impact. By way of example, a 10% increase in Stockland's share price could result in a gain of approximately $975m share	Potential at risk projects (based on location) must conduct a Climate Vulnerability and Resilience assessment. These assessments focus on the vulnerability of assets to climate change and the ability to endure severe weather impacts and operate without disruption. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans. Stockland has also developed a community resilience scorecard, which is designed to measure the resilience of communities and	Stockland's potential at risk projects must conduct a Climate Vulnerability and Resilience Assessment. This process is either conducted internally by key staff or by external consultants. Costs therefore range from $1000-$8000 per assessment. As we have conducted a total of 23 assessments at the time of reporting, the estimated cost of management is $184,000. Where specific risks are identified, suitable mitigation or correctional measures must be included in asset-specific action plans, with actions implemented and tracked. Stockland spent approximately

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	and grow our assets.						value for investors (based on a market capitalisation of $9,747.82m as at 30 June 2015). Further, an enhanced climate resilience reputation may lead to improved sales. For example, if sales of residential assets were to increase by 1% due to our enhanced sustainability reputation, this could lead to an increase in sales revenue of $12.4 million (based on FY15 residential revenue of $1,245 million).	identify opportunities to help them bounce back from external stresses and shocks such as climate change. The scorecard has been used to assess resilience at three Stockland shopping centres, providing a profile of community resilience for each asset. This helps us understand whether our community and environmental initiatives contribute to more resilient communities and guide future activities. Stockland has an active Stakeholder Relations team which ensures climate change issues remain on the radar and that the company responds to any concerns quickly and effectively to	$30,000 on the development of the community resilience scorecard. Other costs include the costs of employing Stockland's environmental team and the time contributed from other personnel. This cost is estimated to be approximately $900,000.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								minimise potential reputational damage. We also manage our reputation through participation in a range of reporting surveys, such as DJSI (global real estate sector leader in 2015), GRESB, CDP, Sustainalytics, MSCI and Oekom. We report on our sustainability performance annually through Stockland's integrated Annual Review and hold regular meetings with institutional investors.	
Reputation	Reputation benefits associated with supporting the communities in which we operate to become more resilient, including to climate change.	Wider social benefits		Direct	Likely	Low-medium	Positive financial implications associated with increased market share from customer loyalty and long term brand value. As this is a long-term opportunity associated with enhancing brand	Stockland developed a community resilience scorecard. The scorecard is designed to measure and manage the resilience of communities and help them bounce	Stockland spent approximately $30,000 on the development of the community resilience scorecard. Implementation of the scorecard is conducted by Stockland employees with a

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							value, it is difficult to more accurately estimate the extent of the financial implication.	back from external stresses and shocks such as climate change. The scorecard has been used to assess resilience at three Stockland shopping centres, providing a profile of community resilience for each asset. This helps us understand whether our community and environmental initiatives contribute to more resilient communities and guide future activities.	time commitment of approximately four hours per asset.

CC6.1d

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Tue 01 Jul 2008 - Tue 30 Jun 2009	20909

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 2 (location-based)	Tue 01 Jul 2008 - Tue 30 Jun 2009	119352
Scope 2 (market-based)	Tue 01 Jul 2008 - Tue 30 Jun 2009	119257

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use
Australia - National Greenhouse and Energy Reporting Act

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	Other: National Greenhouse Accounts (NGA) Factors
CH4	Other: National Greenhouse Accounts (NGA) Factors
Other: N20	Other: National Greenhouse Accounts (NGA) Factors
HFCs	Other: National Greenhouse Accounts (NGA) Factors

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Other:			See attachment

Further Information

The base year FY2009 emissions have been re-based to reflect the inclusion of the residential and retirement living portfolio that we currently report (but didn't in previous years) and also changes in our Commercial Property business due to divestment, acquisitions and redevelopments. The residential portfolio has undergone significant organic growth and the retirement living portfolio has grown significantly through acquisitions. The previously reported baseline emissions of 3016 tCO2-e for Scope 1, and 120001 tCO2-e for Scope 2 did not include the emissions for the residential and retirement living business activities and didn't reflect changes in our Commercial Property business. In May of the FY09 baseline year, we commissioned the trigen plant in the Piccadilly Centre which operated for just two months during this year. Thus the location-based Scope 2 emissions are only slightly greater than the market-based emissions for this baseline and this is not an error (where one may expect that the location and market-based numbers would be the same for the baseline year).

Attachments

https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/ghg_emission_factor.xlsx

Page: CC8. Emissions Data - (1 Jul 2014 - 30 Jun 2015)

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Operational control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

26368

CC8.3

Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?

Yes

CC8.3a

Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
98134	97763	In principle, Stockland has been accounting its GHG emissions in line with the market-based approach prior to the new distinction between location- and market-based approaches. Stockland's carbon strategy does not involve procuring RECs to offset emissions, but rather building low carbon operations into the assets. For example, Stockland reports the Scope 2 GHG emissions for the Piccadilly Centre based on emissions factors specific to the natural gas trigeneration plant operated by a third party under a power purchasing agreement. While the PPA operator has no formal certificates available for the trigen plant, we calculate an emissions factor specific to this plant in line with the NGER Act. Thus Stockland's location-based Scope 2 emissions are different to what is reported in our annual report.

CC8.4

Are there are any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 2% but less than or equal to 5%	Assumptions Metering/ Measurement Constraints	Assumptions: the data boundary ignores extremely small emissions that are part of property management e.g. fire extinguishers. These small emissions account for less than 0.5%. Measurement Constraints: Our residential and retirement living development businesses face a number of challenges reporting on the activities of contractors and thus rely on the third party data.
Scope 2 (location-based)	Less than or equal to 2%	Extrapolation	We apply a comprehensive estimation methodology across any data that has not accrued at the time of reporting. Thus a level of uncertainty exists due to the nature of estimated data versus the actual emissions, which was less than 1% in FY15.
Scope 2 (market-based)	Less than or equal to 2%	Extrapolation	We apply a comprehensive estimation methodology across any data that has not accrued at the time of reporting. Thus a level of uncertainty exists due to the nature of estimated data versus the actual emissions, which was less than 1% in FY15.

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

Third party verification or assurance process in place

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/CC8.6a/Stockland emissions assurance report.pdf	Page 1	ISAE 3410	100
Annual process	Complete	High assurance	https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/CC8.6a/KPMG-Sustainability-Assurance-Report.pdf	Page 1 - reasonable level assurance for AA1000 AccountAbility Principles (2008) and limited assurance of the accuracy and quality of the sustainability information.	AA1000AS	100

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

CC8.7

Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures

Third party verification or assurance process in place

CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Market-based	Annual process	Complete	Reasonable assurance	https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/CC8.7a/Stockland emissions assurance report.pdf	Page 1	ISAE 3410	100
Market-based	Annual process	Complete	High assurance	https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/CC8.7a/KPMG-Sustainability-Assurance-Report.pdf	Page 1 - reasonable level assurance for AA1000 AccountAbility Principles (2008) and limited assurance of the accuracy and quality of the sustainability information.	AA1000AS	100

CC8.8

Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2

Additional data points verified	Comment
Year on year emissions intensity	Assured by KPMG as part of AA1000AS sustainability assurance.

Additional data points verified	Comment
figure	
Year on year change in emissions (Scope 1 and 2)	Assured by KPMG as part of AA1000AS sustainability assurance.
Progress against emission reduction target	Assured by KPMG as part of AA1000AS sustainability assurance.
Emissions reduction activities	Assured by KPMG as part of AA1000AS sustainability assurance.
Other: Scope 3 emissions	Scope 3 emissions assured by KPMG as part of AA1000AS sustainability assurance includes electricity production and distribution loss emissions, air travel emissions and car hire emissions.

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

Further Information

Further details can be found in the attached FY15 environmental data pack published along with Stockland's 2015 Sustainability Reporting http://www.stockland.com.au/sustainability/sustainability.html. The Australian Clean Energy Regulator (CER) publishes the total Scope 1 and 2 emissions for entities reporting under the National Greenhouse and Energy Reporting Scheme (NGERS). A minor variance will occur between the emission figures reported in our Sustainability Report and those submitted to the CER in our NGERS report due to the timing of disclosure. Our sustainability report includes estimations for where data is not available at the end of the financial year in time for the corporate reporting release. The NGER report is submitted later in the year and uses a data set with actual emissions replacing the estimates. The gross totals submitted to the CER are: Scope 1 26,344TCO2e; and Scope 2 98,802TCO2e. The NGER submission is also assured as noted in the PwC assurance statement. This CDP submission references the emissions data from Stockland's sustainability report as the data is more widely available and includes commentary on performance. The data published by the CER is uniquely the gross Scope 1 and 2 totals.

Attachments

https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC8.EmissionsData(1Jul2014-30Jun2015)/environmental-data-FY15.pdf

Page: CC9. Scope 1 Emissions Breakdown - (1 Jul 2014 - 30 Jun 2015)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

No

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By business division
By activity

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)
Commercial Property	5633
Retirement Living	677
Residential Communities	21641
Corporate	84

CC9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude

CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)

CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
Office and Business Park Operations	999
Industrial Facility Operations	0
Retail Centre Operations	185
Fleet Vehicles	84
Leaked Refrigerants	2783
Residential Community Sales	15
Residential Community Development	21626
Retirement Living Village Operations	591
Retirement Living Village Development	86

Further Information

Environmental data pack published as a part of Stockland's 2015 Sustainability Report is attached. Stockland's sustainability reporting can be found at http://www.stockland.com.au/sustainability/sustainability.html

Attachments

https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC9.Scope1EmissionsBreakdown(1Jul2014-30Jun2015)/environmental-data-FY15.pdf

Page: CC10. Scope 2 Emissions Breakdown - (1 Jul 2014 - 30 Jun 2015)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

No

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)

CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By business division
By activity

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Commercial Property	88163472	88163472
Residential Communities	1888054	1888054
Retirement Living	6339612	6339612
Corporate	1371918	1371912

CC10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)

CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Corporate Tenancies	1371918	1371912
Office and Business Park Operations	22981231	22981231
Logistics Centres Operations	2047925	2047925
Retail Centre Operations	63134316	63134316

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Residential Community Sales	1573101	1573101
Residential Community Development	314953	314953
Retirement Living Village Operations	6323482	6323482
Retirement Living Village Development	16130	16130

Further Information

Environmental data pack published as a part of Stockland's 2015 Sustainability Report is attached.

Attachments

https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC10.Scope2EmissionsBreakdown(1Jul2014-30Jun2015)/environmental-data-FY15.pdf

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

CC11.2

Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	Energy purchased and consumed (MWh)
Heat	19
Steam	0
Cooling	268

CC11.3

Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year

8797

CC11.3a

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Natural gas	8473
Diesel/Gas oil	266
Motor gasoline	46
Biogasoline	11

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment
Direct procurement contract with a gridconnected generator or Power Purchase Agreement (PPA), where electricity attribute certificates do not exist or are not required for a usage claim	1291	The Piccadilly Tower in Sydney has a trigen plant operated by Origin Energy. This plant provides the electricity reported here in CC11.4 as well as the heating and cooling reported in CC11.2. Origin has no formal certificates denoting the emissions factors for this energy available, so we work with consultants to calculate the appropriate emissions factor in accordance with the NGER Act.
Contract with suppliers or utilities, supported by energy attribute certificates	7	The illuminated signage atop the Stockland head office in Sydney is supplied with certified 100% renewable Greenpower.

CC11.5

Please report how much electricity you produce in MWh, and how much electricity you consume in MWh

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
113564	113269	295	295	295	Total energy produced by Stockland assets are from solar PV installations. All energy produced is consumed by the assets.

Further Information

Environmental data pack published as a part of Stockland's 2015 Sustainability Report is attached.

Attachments

https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC11.Energy/environmental-data-FY15.pdf

Page: CC12. Emissions Performance

CC12.1

How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Increased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	0.6	Decrease	Emission reduction activities primarily take place in Stocklands commercial property business unit through efficiency upgrades and diversification of energy sources. Examples of these initiatives are described in CC3.3B. The calculation used is consistent with page 152 of the guidance, specifically a reduction of 697 tCO2e was achieved through emissions reduction activities in FY15. Total S1+S2 emissions in previous year were 122,029 tCO2e. The calculation is therefore (-697 / 122,029) = 0.6%.
Divestment	2.0	Decrease	For FY15 we divested seven assets across our office, retail and retirement living portfolios. These assets were: 78 Waterloo Rd; Glenrose retail centre; Freemantle retail centre; Cardinal Freeman nursing home; Gillin Park aged care; Rylands of Hawthorn village; Rylands of Kew village. These divestments decreased our gross emissions from the previous year by 2,382 tCO2e in both Scope 1 and 2 emissions. The calculation explained is 2,382 tCO2e decrease due to divestment, the total S1+S2 emissions in previous year were 122,029 tCO2e, thus (-2,382 / 122,029) = -2.0%.
Acquisitions	1.2	Increase	Stockland acquired one new asset for the FY15 reporting year for which we have operational control,

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
			Bundaberg retail centre. This centre lead to an increase of 1,412 tCO2e in gross emissions over the previous year mainly in Scope 2 emissions. The calculation explained is 1,412 tCO2e increase due to acquisitions, the total S1+S2 emissions in previous year were 122,029 tCO2e, thus (1,412 / 122,029) = 1.2%.
Mergers	0	No change	There were no mergers in FY15 that led to any changes in gross emissions.
Change in output	5.7	Increase	Changes in Stockland's output relate primarily to increased production of lots and units across the residential and retirement living business units. FY15 also saw an increase in activity at three retail centres due to the opening of additional development stages. These centres were Hervey Bay, Baldivis and Wetherill Park. This increase in production and activity saw an increase of 6,903 tCO2e over the previous year. Residential and retirement living emissions are predominantly scope 1 emissions and the retail centres are a mix of Scope 1 and 2. The calculation explained is 6,903 tCO2e increase due to change in output, the total S1+S2 emissions in previous year were 122,029 tCO2e, thus (6,903 / 122,029) = 5.7%.
Change in methodology	0	No change	There was no change in methodology in FY15 that led to any changes in gross emissions.
Change in boundary	2.9	Decrease	In FY15, there were five commercial property and retirement living assets which had a change in operational control and eight retirement living assets which had a change in data collection boundary (due to improvements in processes and systems) that led to a decrease in gross emissions. This change in boundary resulted in a decrease of 3,512 tCO2e over the previous reporting year primarily in Scope 2 emissions. The calculation explained is 3,512 tCO2e increase due to change in output, the total S1+S2 emissions in previous year were 122,029 tCO2e, thus (-3,512 / 122,029) = -2.9%.
Change in physical operating conditions	0	No change	There was no real change in physical operating conditions which were attributable to changes in gross emissions.
Unidentified	0	No change	There were no unidentified reasons for changes to gross emissions.
Other	0.3	Increase	Stockland calculates emissions from refrigerant leakage based on the NGER Act. As this methodology is based on the portfolio floor area for commercial property, there has been an increase in leaked refrigerant due to an increase in the portfolio floor area. The other emissions included here in FY15 account for an increase of 402 tCO2e over the previous year. Refrigerants are Scope 1 emissions. The calculation explained is 402 tCO2e increase due to change in output, the total S1+S2 emissions in previous year were 122,029 tCO2e, thus (402 / 122,029) = 0.3%.

CC12.1b

Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.0000595	metric tonnes CO2e	2087000000	Market-based	5.5	Decrease	For the FY15 reporting period, Stockland's increase in total revenue of 7.6% outweighed the slight increase in combined Scope 1 and Scope 2 emissions of 1.7%. This yielded a moderate decrease in tCO2e/AUD of 5.5%. The overall emissions increased due to acquisitions and developments (change in output). We were able to limit the emission increases through emission reduction activities.

CC12.3

Please provide any additional intensity (normalized) metrics that are appropriate to your business operations

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
92.3	metric tonnes CO2e	full time equivalent (FTE) employee	1345	Market-based	2.7	Decrease	For the FY15 reporting period, Stockland had an increase in full time equivalent employees of 4.6%. The increase in FTEs was greater than the increase in emissions, which led to a decrease in this intensity metric (increase in denominator led to the reduction in tCO2e/FTE of 2.7%). The overall emissions increased due to acquisitions and developments (change in output). We were able to limit the emission increases through emission reduction activities.
58.3	metric tonnes CO2e	square meter	1014045	Market-based	2	Decrease	Emission reduction activity - the emissions intensity of the retail portfolio component of the commercial property business saw a decrease due to the roll out of efficiency upgrades, with an increase in Gross Floor Area.
67.3	metric tonnes CO2e	square meter	356060	Market-based	0	No change	The emissions intensity remained stable across the office and business park portfolio of the commercial property business. The Square metre denominator used here represents Net Lettable Area of this portfolio.

Further Information

The environmental data pack, employee data and financial report references are attached.

Attachments

https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC12.EmissionsPerformance/people-data-FY15.pdf
https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC12.EmissionsPerformance/environmental-data-FY15.pdf
https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC12.EmissionsPerformance/stockland-

financial-report-2015.pdf

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

Yes

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership
Other: NSW Energy Savings Scheme	Fri 01 Jan 2010 - Fri 31 Dec 2010	1181	0	1181	Facilities we own and operate
Other: NSW Energy Savings Scheme	Sat 01 Jan 2011 - Sat 31 Dec 2011	4484	0	4484	Facilities we own and operate
Other: NSW Energy Savings Scheme	Sun 01 Jan 2012 - Mon 31 Dec 2012	4191	0	4191	Facilities we own and operate
Other: NSW Energy Savings Scheme	Tue 01 Jan 2013 - Tue 31 Dec 2013	3206	0	3206	Facilities we own and operate

CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

Stockland is involved in the New South Wales Energy Savings Scheme. This scheme places a mandatory obligation on Liable Entities to obtain and surrender Energy Savings Certificates (ESCs) to meet annual energy savings targets. We are an Accredited Certificate Provider, creating ESCs that can be sold to Liable Entities or other voluntary parties.

We create ESCs by carrying out Recognised Energy Savings Activities (RESA) including: the replacement and installation of common electrical appliances; high efficiency lighting and other energy saving devices; the NABERS rating of buildings and changes in electricity consumption measured against an established baseline. Our strategy for complying with the scheme is to ensure these requirements are integrated into our management system and that responsibility is assigned to a member of the sustainability team to monitor and maintain the system and associated processes.

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

Yes

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
Credit origination	Energy efficiency:	The NABERS baseline method can be used to calculate energy savings for improvements in the NABERS rating of a	Other: NABERS	6940	6940	Not relevant	Voluntary Offsetting

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
	industry	commercial building. To use this method, Stockland must have a certified NABERS rating issued by the NABERS National Administrator for each building from which we may create energy savings certificates. NABERS ratings are undertaken on our portfolio of office buildings and shopping centres and energy efficiency improvements are typically achieved through lighting and HVAC upgrades, building tuning and optimisation of building systems. The NABERS Baseline Method provides a way to calculate and create Energy Savings Certificates (ESCs) reflecting the energy savings resulting from the improvement in a NABERS rating for a building. The baseline is determined by the Benchmark NABERS Rating Index which is taken from a previous NABERS rating and compares improvement against the current NABERS rating. To create ESC's, the rating must be at least one star greater than the benchmark NABERS rating index.	Metered Baseline Method				

Further Information

Attachments

https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC13.EmissionsTrading/Invoice 2012.pdf
https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC13.EmissionsTrading/Invoice 2014.pdf
https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC13.EmissionsTrading/Invoice 2010.pdf
https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC13.EmissionsTrading/Invoice 2013.pdf
https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC13.EmissionsTrading/Invoice 2011.pdf

Page: CC14. Scope 3 Emissions

CC14.1

Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Not relevant, explanation provided	0		0.00%	Emissions data from contractors and suppliers involved in our Residential and Retirement Living developments is captured within our Scope 1 + 2 emissions data, as their activities fall within our operational control boundary. The contractors and suppliers working on our Commercial Property developments do not fall within our operational control boundary and so we do not collect or report data on their emissions - this is managed by the principal contractor/operator on site.
Capital goods	Not relevant, calculated	21629	MLCI assessments undertaken in accordance with EN15978 and ISO14044.	0.00%	As a real estate company, our capital goods primarily consists of buildings. As these buildings have a long life (>60 years), the embodied emissions become less significant than the operational emissions which are captured as Scope 1 and Scope 2. Capital good emissions are therefore not tracked. In the reporting year we undertook an MLCI assessment for one retail centre development which is reported here for example.
Fuel-and-energy-related activities	Relevant, calculated	17255	Total transmission losses from electricity, gas and fleet fuel. Calculated using	100.00%	Relevant as it is information requested under NGERS, and reductions are directly related to our

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
(not included in Scope 1 or 2)			National Greenhouse Accounts Scope 3 emission factors.		reduction in purchased electricity consumption.
Upstream transportation and distribution	Not relevant, explanation provided	0		0.00%	Not considered material to our overall emissions - however we do implement specifications to ensure transportation of waste and materials on site is minimised to improve efficiencies and avoid unnecessary fuel consumption.
Waste generated in operations	Relevant, calculated	16553	Calculated using the National Greenhouse Accounts Scope 3 emissions factors, based on waste data collected, mass of waste reported and assured in Sustainability Report.	100.00%	The reduction of waste to landfill is an ongoing focus for both our development and operational activities. In development: 92% diversion from landfill in our commercial property development construction waste; 96% diversion from landfill for our Residential and Retirement Living contractor waste. In operations: 31% diversion from landfill across our retail centre assets; 38% diversion from landfill across our office building assets.
Business travel	Relevant, calculated	3747	These emissions are calculated for car hire and air travel. Air travel is calculated using the United Kingdom Department of Environment, Food & Rural Affairs standard as the Australian National Greenhouse Accounts do not include conversions for air travel. Car hire is calculated using the Australian Government Green Vehicle Guide.	100.00%	Given the geographical spread of our assets, business travel is considered a material source of Scope 3 emissions for our business. For FY15, airline travel actually increased by 30% from more movements between the east and west coasts of Australia. Carbon emissions appear to not change substantially as the DEFRA emission factors have been updated for FY15. This reflects improvements in the airline industry and their carbon accounting methods.
Employee commuting	Not relevant, explanation provided	0		0.00%	While employee commuting does not have a material impact to our total greenhouse gas emissions, due to the nature of Stockland's operations (across majority of states in Australia, employees located at assets as

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					well as employees travelling between assets) this would be challenging to calculate and business travel would account for much of the emissions.
Upstream leased assets	Not relevant, explanation provided	0		0.00%	Not applicable to our business as we generally operate from assets which we own and these emissions are reported as Scope 1 and 2.
Downstream transportation and distribution	Not relevant, explanation provided	0		0.00%	Not applicable to our business as we do not 'transport or distribute' our assets. Any transportation or distribution associated with our tenants' activities is beyond our scope of control.
Processing of sold products	Not relevant, explanation provided	0		0.00%	Not applicable to our business as we do not produce intermediate products.
Use of sold products	Not relevant, explanation provided	0		0.00%	While this is not relevant to our overall emissions performance, as a responsible property developer we work to minimise the emissions generated by our Retirement Living and Residential customers. We have processes in place to ensure optimal energy efficiency in lot design and orientation, to maximise energy efficiency of the built environment in retirement living, and to influence the choices of our residential customers with regard to energy efficient home design. We have initiatives in place to encourage energy efficiency and emissions reduction in our residential communities and the emissions generated by our Retirement Living residents are captured as part of our recorded Scope 2 emissions.
End of life treatment of sold products	Not relevant, explanation provided	0		0.00%	Our products are designed for longevity and ongoing upgrade and refurbishment in response to changing climate, operating conditions and/or trends, therefore

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
					'end of life' is not a point of focus for our business.
Downstream leased assets	Not relevant, explanation provided	0		0.00%	The energy consumption of our retail centres or industrial estate tenants is outside our scope of control, however we do work to positively influence tenant behaviour. The emissions of our office tenants are captured to inform NABERS (National Australian Built Environment Rating System) ratings across our portfolio of office assets.
Franchises	Not relevant, explanation provided	0		0.00%	Not applicable to our business as we operate zero franchises.
Investments	Not relevant, explanation provided	0		0.00%	Not applicable to our business due to the nature of our investments, which is land or existing assets.
Other (upstream)	Not relevant, explanation provided	0		0.00%	Not applicable to our business due to the nature of our activities ie. development and operations of assets.
Other (downstream)	Not relevant, explanation provided	0		0.00%	Not applicable to our business due to the nature of our activities ie. development and operations of assets.

CC14.2

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

Third party verification or assurance process in place

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)
Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2016/70/17770/Climate Change 2016/Shared Documents/Attachments/CC14.2a/Stockland emissions assurance report.pdf	Page 1	ISAE 3410	100

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Other: Change in NGA emission factors	13	Decrease	There were substantial changes in the NGA factors for FY15 compared to the previous year which contributed to a net reduction in total Scope 3 emissions from energy production and distribution losses. For example, there was a 32% reduction in the emissions factor for the state of New South Wales for FY15, where NSW accounts for over 35% of our total emissions.
Business travel	Change in output	1.4	Increase	For FY15, airline travel actually increased by 30% from more movements between the east and west coasts of Australia due to the organic growth in the business. GHG emissions appear to not change substantially as the DEFRA emission factors have been updated for FY15. This reflects improvements in the airline industry and their carbon accounting methods.
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Emissions reduction activities	0.4	Decrease	The Scope 3 emissions from energy production and distribution losses has reduced for the facilities which reduced emissions through emission reduction and energy efficiency activities during the period.
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Change in output	3.5	Increase	Changes in output primarily due to the organic growth of the residential development business and retail portfolio has led to an increase in Scope 3 emissions from energy production and distribution losses.
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Divestment	1.5	Decrease	Divestments in the commercial property portfolio and high energy intensity retirement living assets (aged care facilities and luxury independent living apartments) have led to a modest decrease in Scope 3 emissions from energy production and distribution losses.
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Acquisitions	0.9	Increase	The acquisition of a retail centre during the period has led to an increase in the Scope 3 emissions from energy production and distribution losses.
Fuel- and energy-related activities (not included in Scopes 1 or 2)	Change in boundary	2.3	Decrease	Changes in the operational control boundary at commercial and retirement living properties for the reporting period have led to an overall decrease in Scope 3 emissions form energy production and distribution losses.

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers
Yes, our customers
Yes, other partners in the value chain

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagement and measures of success

Suppliers - we engage with our suppliers during project delivery.

As part of the tender process we engage with potential suppliers and request detailed outlines of activities underpinning their scope of work. This enables us to identify those contractors who will complete the work with the least amount of material/waste relocation/transportation, ensuring that we are immediately selecting less emission-intensive contractors. We review environmental management credentials of contractors.

As part of the design phase, we engage with suppliers to ensure they understand the technical and environmental requirements of the project and work with them to meet these standards. This engagement is critical for achieving our Green Star certifications.

Throughout construction, we collect and monitor emissions data from our contractors (except for commercial property developments where it does not fall within our operational control boundary).

We have also started to engage more closely with our larger contractors to identify opportunities for performance improvements.

We prioritise our engagement with our strategic suppliers. Our strategic suppliers are those that 1) are integral to delivering our business strategy; 2) are top suppliers by overall spend; and 3) provide opportunities to partner to deliver outcomes.

We hosted our inaugural ‘Supplier Roadshow’ and engagement program in FY15 across all our states offices. Our first Supplier Roadshow was an opportunity for us to share our strategy with our broader stakeholders and suppliers who are integral to our business. Further, this forum was an opportunity to facilitate closer working relationships with our development supply chain and to provide opportunities to discuss, expand and improve our working relationships.
Guests from our critical contractors and consultants responsible for the delivery of our assets joined us for an afternoon presentation and networking event. We shared our current development pipeline and details of our sustainability, supply chain and health and safety strategies and initiatives.

Following the roadshow, we surveyed participants to assess the success of the roadshow and their experience working with Stockland. The outcomes of this survey will form a key measure of engagement success going forward. We also measure success through the percent of our spend that is with strategic partners. Measuring our spend with suppliers enables us to identify further strategic opportunities to leverage our relationships to influence and achieve desired outcomes.

We also launched "What Stockland Expects from its Suppliers". While we expect our suppliers to comply with Australian state and federal laws and regulations, this document outlines the additional corporate responsibility and sustainability practices we consider when making key procurement decisions.

Customers - we engage with our customers at all three businesses which we operate.

At our Commercial Properties we promote Green Star ratings where these have been achieved during the development or extensions of assets. At retail centres in locations prone to extreme weather, we engage with local government and community on climate change particularly around extreme weather events. We have been developing strategies to ensure that these retail centres are assessed for climate resilience and as a result systems can be developed so that the assets can be utilised as emergency shelters during extreme weather events.

In the Retirement Living business we developed a custom Green Star rating tool with the Green Building Council of Australia to demonstrate our response to climate change through a third party trademarked certification at our developed retirement villages. We continue to engage with our residents to better understand the climate change drivers which are most pertinent to them.

In the Residential communities business we have been recognised for our developments that have achieved the Green Star - Communities certification. We use this rating to communicate our approach to climate change approach to our potential customers.

Other Partners - we have several joint ventures in the Retail business and we engage with our partners to ensure we apply our corporate approach and strategy and collaborate on joint initiatives.

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Number of suppliers	% of total spend (direct and indirect)	Comment
316	62%	We engage directly with suppliers involved in the development of our assets. These 316 suppliers make up 62% of our overall supplier spend. We also engage with suppliers who provide corporate procurement and property management services regarding climate change and GHG emissions. These engagements are not included in this response as we have focused on our engagement with the most material supplier spend. From a development perspective, we engage with critical suppliers across all business units on issues of environmental performance and climate change strategies. We request general environmental performance, assess supplier capabilities, require project-specific Environmental Management Plans and specify minimum standards for environmental performance as part of development projects. As part of the design phase, we engage with suppliers to ensure they understand the technical and environmental requirements of the project and work with them to meet these standards. This engagement is critical for achieving our Green Star certifications. In addition, we request and capture emissions data from 65 contractors involved in our Residential communities and Retirement Living developments, where their activities fall within our operational control. These 65 contractors account for 83% of residential and retirement living construction spend. We do not collect emission data from Commercial Property or Retirement Living

Number of suppliers	% of total spend (direct and indirect)	Comment
		developments where Stockland does not have operational control. We have also started to engage more closely with our larger contractors to identify opportunities for performance improvements. We prioritise this more detailed engagement with larger contractors given that they generally have the greatest impact, deliver the most significant stages of project work and have the most mature systems and processes. Last year, our Project Management team embarked on a new initiative in collaboration with our Development, Sustainability and Corporate Communications teams to deliver the first Supplier Roadshow across our all of our State offices. Guests from our critical contractors and consultants responsible for the delivery of our assets joined us for a presentation and networking event where we shared our current development pipeline and details of our strategies relating to carbon, broader sustainability, supply chain and health and safety.

CC14.4c

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data	Please give details
Identifying GHG sources to prioritize for reduction actions	Given that we capture and report contractor emissions as part of our Scope 1+2 emissions, we use the data collected to identify opportunities to engage with critical suppliers (e.g. development contractors) across our Residential and Retirement Living business to identify opportunities for emissions reductions.
Stimulating innovation of new products	We work with our suppliers and construction contractors across commercial property, residential and retirement living projects to develop and test innovations that are formally recognised by the Green Star ratings. For example his includes innovations in materials such as use of "cool roofs" or innovations in education such as subcontractor climate change training.

CC14.4d

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Michael Rosmarin Simon Shakesheff	Chief Operating Officer Group Executive, Strategy and Stakeholder Relations	Chief Operating Officer (COO)

Further Information

CDP 2016 Climate Change 2016 Information Request