



# Carbon Disclosure Project 2009

## Contents

Introduction	1
Risks and opportunities	1
Greenhouse gas (GHG) emissions accounting, emissions intensity, energy and trading	9
Performance	18
Governance	28



#### Introduction

Stockland is one of Australia's leading diversified property groups with total assets of over \$14.7 billion and operations in Australia and the United Kingdom.

We're active in retail, office and industrial property, as well as residential communities, apartments and retirement living.

At 30 June 2008 we had over \$900 million assets under management in Australia and \$2.4 billion assets under management in the UK and continental Europe. We are a top 50 Australian Securities Exchange listed company (ASX: SGP) and have achieved 26 consecutive years of growth in operating earnings.

Diversity by asset class and geography underpins our continued performance. Our capability is strengthened by having a 'one company' approach but with the strengths of a diversified business. Our vision is to create a world class property group. We see that our purpose is to deliver enduring value for our stakeholders through innovative, customer-focused property solutions.

Stockland's previous submissions to the Carbon Disclosure Project, along with our annual Corporate Responsibility and Sustainability (CR&S) Reports, can be publicly accessed at: [www.stocklandsustainability.com.au](http://www.stocklandsustainability.com.au)

#### 1.1 IS YOUR COMPANY EXPOSED TO REGULATORY RISKS RELATED TO CLIMATE CHANGE?

We consider our company to be exposed to regulatory risks.

Stockland recognises that climate change presents significant risks to its future operations. While we are not a carbon intensive company and are seen by climate change analysts as being exposed to relatively low risk for an ASX100 organisation, we continue to explore the nature of our risks, measure and analyse potential impacts, and inform our business decisions and operations.

For the purpose of definition, risk is defined by the Australian Department of Climate Change as "the chance of something happening that will have an impact on the organisation's objectives."

We continue to see regulation related to climate change building – widening in scope, deepening in the form of detailed requirements, and escalating in terms minimum standards.

#### Identifying risks

We monitor regulatory risk through direct engagement with government, and through participation in industry groups such as the Property Council of Australia (PCA) and the Green Building Council of Australia (GBCA). Regulatory risk associated with climate change has also been identified through our internal risk mapping exercises by our Compliance, Audit and Risk team.

#### Anticipated risks

Over the past year, we have seen regulatory risks continue to increase. Regulatory risk is growing in three key areas:

- Emissions and energy efficiency disclosure;
- Adaptation to physical impacts of climate change; and
- Evident/likely downstream financial impacts of emissions trading.

As a property owner, manager and developer our biggest opportunity to reduce our impact on climate change is through energy efficiency. Government also sees this opportunity and over the past year has continued, implemented and/or drafted legislation to promote energy efficiency in the property sector.

## Regulatory risks (continued)

Governments continue to introduce legislation to catalyse energy efficiency programs in existing property assets, for example, energy efficiency standards for housing have been increased. In addition, state and local governments are increasingly concerned with developing guidelines in relation to physical impacts associated with climate change.

Below are listed the main regulations applicable to Stockland in Australia and the United Kingdom. In addition, a number of proposed regulations have been included:

### **Carbon Pollution Reduction Scheme**

In mid 2008, the Australian Prime Minister committed to a Carbon Pollution Reduction Scheme (CPRS). This emissions trading scheme has been designed to place a limit on the amount of carbon pollution industry can emit. Under the proposed scheme, Stockland will not be obliged to participate directly in the scheme, however, we will be exposed to downstream cost impacts.

Stockland has sought external advice to model the likely costs impacts of the CPRS, specifically in relation to rising energy costs. We are using this data to inform our cost benefit analysis of our ongoing energy efficiency program for our office and retail assets. This modelling is helping us understand how we might effectively roll out low carbon technology, such as co/tgri-generation across a number of assets.

### **National Greenhouse and Energy Reporting Act 2007**

The National Greenhouse and Energy Reporting Act (NGERA) establishes a single, national system for reporting greenhouse gas emissions, abatement actions, and energy consumption and production by corporations from 1 July 2008.

During the past year we have sought expert advice as we prepare for our first NGERs report in October 2009. Our program has included:

- Improving the quality of our emissions data collection system, known as our CCAP (Climate Change Action Plan) tool;
- Preparing a gap analysis to identify/confirm that all data sets are being captured by our data system;
- Updating our CO<sub>2</sub> database and diagnostic tool CCAP, in preparation for reporting against NGERA;
- Seeking legal advice on the application of the NGERA to our organisation; and
- Engaging with property peers to develop an "Industry View Document" to assist with the interpretation of the NGERA and the implementation of NGERs reporting for property organisations.

The time taken to interpret the NGERA and prepare for NGERs has required considerable investment of resources from across the sector.

### **New South Wales (NSW) Energy Savings Plans; Environment and Resource Efficiency Plans (EREP), Victoria**

Stockland has not been captured by state-based energy reporting requirements.

### **Energy Efficiency Opportunities (EEO) Act 2006**

The EEO Act aims to improve the identification and evaluation of energy efficiency opportunities by large energy using businesses and, as a result, to encourage implementation of cost effective opportunities.

In 2007, Stockland registered for EEO participation and set out a reporting schedule. Our reporting schedule was approved by government in 2008. A detailed program of training and identification of opportunities to implement energy efficiency initiatives is now underway in our retail and office portfolios. As required by the EEO Act, we will report publicly on the outcomes of our assessments to demonstrate to the community that we are effectively managing our energy consumption.

### **Planning approvals and climate change assessment**

Climate change assessments, particularly in relation to floodplain risk management, are increasingly expected as part of the planning approval process for property development in Australia. The Victorian coastal strategy now requires consideration of sea level rise as part of planning assessment, proposing a minimum sea level rise estimate of 0.8 metres be applied for planning purposes. The NSW government has prepared a draft sea level risk policy statement, and includes reference to benchmarks of a rise relative to 1990 of 40cm by 2050 and 90cm by 2010. Similar statements and policies are being developed by other local and state governments. The federal government is also indicating taking an increased level of interest in adaptation, specifically sea level risk and storm surge.

### **Building Code of Australia**

The Building Code of Australia (BCA) has established minimum requirements for energy efficiency in new buildings. Some specific requirements vary from state to state. Significant draft changes to the BCA's energy efficiency provisions have recently been placed on exhibition. Proposed changes to the code include requirements for increased energy efficiency performance and requirements for renewable energy. We are currently engaging with peers and industry groups to better understand the implications of the proposed changes.

## Regulatory risks (continued)

### **State-based residential energy efficiency requirements**

The development of Stockland's residential community, apartments and retirement living businesses are subject to a range of energy efficiency requirements. These state-based requirements vary in focus, leading to different built form outcomes in different states, for example:

- Built fabric thermal performance focus: Victoria's 5 Star standard for new houses leads to design solutions concerned mostly with the performance of the built fabric; and
- Energy performance focus: NSW's BASIX tool leads to solutions concerned with energy performance of the house, encompassing the thermal performance of the built form, as well as the selection of technology such as energy efficient lighting, cooling/heating and water heating. The tool allows for more flexible design responses at the least cost, while ensuring overall emissions are reduced.

### **Council of Australian Governments**

The Draft Strategy on Energy Efficiency was released by the Council of Australian Governments (COAG) on 30 May 2009. Aspects of the draft strategy with significant implications for Stockland include:

- Improving consistency in energy efficiency standard setting and performance assessment frameworks;
- Introducing mandatory disclosure of energy performance in existing commercial buildings (phase-in from 2010);
- Introducing mandatory disclosure of eco-efficiency performance of residential buildings at point of sale (phase in from May 2011, commencing with energy); and
- Increasing energy efficiency standards for residential to 6 Stars nationally (commencing 2010).

The draft sets out the intent of proposals only. There is significant work yet to be undertaken in setting out the detail of legislation and the nature of implementation. We will look to continue to engage with government – directly and via the Green Building Council of Australia and Property Council of Australia – sharing our views and experiences towards the effective development of standards and disclosure protocols.

### **Local government requirements**

Local government requirements vary widely across Australia and the UK. Requirements are becoming increasingly prescriptive and complex, building upon state and national requirements. In Australia, some councils are looking to incentivise beyond state requirements, rewarding the use of voluntary sustainable building tools such as Green Star. In the UK, the Merton Rule has been adopted by a number of councils, mandating the use of renewable energy on-site (mandating up to 20% of the total project's energy demand to be provided through renewable energy) to reduce CO<sub>2</sub>e emissions.

### **United Kingdom Climate Change Act 2008**

The United Kingdom (UK) Climate Change Bill became law in November 2008. The purpose of the Act is to enable a transition towards a low carbon economy, signalling the UK's level of commitment to reducing global emissions.

Provisions of the Act include legally binding targets (26% by 2020 and 80% by 2050 against a 1990 baseline) and a carbon budgeting system, capping emissions over a series of five year periods.

### **United Kingdom Carbon Reduction Commitment**

The United Kingdom Carbon Reduction Commitment (CRC) is the UK's first mandatory emissions trading scheme, and supports the goals of the UK Climate Change Act. It is estimated that around 5,000 organisations will initially fall within the scope of the CRC.

The scheme is compulsory for organisations using more than 6,000 MWh/year of half-hourly metered electricity. The intention of the legislation is to encourage large organisations to reduce their fixed source energy consumption.

Commencing in April 2010, the CRC will require companies to purchase carbon allowances to cover their projected carbon emissions for each coming 12 month period. At the close of each period, companies will be required to disclose their actual electricity usage. Organisations will then be ranked according to energy efficiency achievement, with revenue from the scheme redistributed to participants based on this performance.

To prepare for the likelihood of such a requirement, Stockland UK commenced collating and reporting on carbon data in 2008. We are currently reviewing whether we are required to fully participate in the CRC (based on defining our extent of operational control).

We do know, however, that we are required to commence energy use disclosure under the CRC in 2010. The CRC requires reporting for all half-hour meters (HHM) settled on the half-hourly market. We have 25 HHMs within assets across our portfolio.

### **United Kingdom Climate Change Levy (CCL)**

The Climate Change Levy is a tax on the use of energy in industry, commerce and the public sector. The aim of the levy is to encourage users to improve energy efficiency and reduce emissions of greenhouse gases. Stockland is exposed to the CCL through the procurement of energy for commercial properties.

### **United Kingdom Energy Performance Certificates**

Since 1 October 2008, all buildings when bought, sold or rented now require an Energy Performance Certificate (EPC). Larger public buildings are also required to display an energy certificate. This work is part of European legislation, the Energy Performance of Buildings Directive, which all member states must adopt. Stockland UK has formed an EPC Sub-Committee of the Stockland UK CR&S Employee Committee in order to meet these requirements.

### **United Kingdom Local government requirements**

Local government requirements vary widely across the UK. Requirements are becoming increasingly prescriptive and complex. In the UK, the Merton Rule has been adopted by a number of councils, mandating the use of renewable energy on-site (requiring that up to 20% of the total project's energy demand be provided through renewable energy) to reduce CO<sub>2</sub>e emissions.

### **Further information**

Regulation has become increasingly complex. Reporting requirements from different government departments and levels vary significantly. Stockland, through the Property Council of Australia (PCA), has advocated the harmonising of reporting requirements such as EEO and NGERs. Similarly, Stockland supports COAG's intention to streamline state-based residential energy efficiency requirements.

We also recognise that, with the pace of regulatory response to climate change, there is increasing uncertainty in the form of future building regulations.

### **2.1 IS YOUR COMPANY EXPOSED TO PHYSICAL RISKS FROM CLIMATE CHANGE?**

We consider our company to be exposed to physical risks.

Over the past year, our awareness of risks associated with climate change continues to grow.

Our appreciation of risks associated with climate change remains grounded in the assessment set out in the IPCC's Climate Change 2007: Synthesis Report (Fourth Assessment Report).

Likely impacts on property, reflecting the IPCC report findings, include:

- **Warmer/hotter days and fewer cold days** (virtually certain): reduced energy demand for heating; increased demand for cooling; and declining air quality in cities. Implications for the property sector are increased demand for cooling leading to increased demands on ventilation and air conditioning equipment and higher operating costs due to increased plant wear and tear and increased energy consumption. In residential communities, increased demand for cooling will lead to the likelihood of greater uptake of air conditioning, leading to greater peak demand on energy, potentially threatening security of energy supply at peak periods.
- **Warm spells/heat waves** (very likely): heat waves in Australia are virtually certain to increase in frequency and intensity, leading to a reduction in the quality of life for people in warm areas without appropriate housing. Implications for the property sector are increased demand for cooling and for climate responsive buildings, particularly housing; and potential increased demand for energy.
- **Heavy precipitation events** (very likely): disruption of settlements, commerce, transport and societies due to flooding, pressures on urban and rural infrastructures, loss of property. Implications for the property sector are increased humidity, leading to increased demands on air conditioning equipment; increased frequency of mould impacting on air quality; and increasing demand for building maintenance. Overall, while there may be a decrease in total precipitation in Australia as a result of climate change, there is a risk that when rainfall occurs it will be of increased intensity, leading to increased risk of flooding. Risk of coastal flooding will also be exacerbated by rising sea levels. Increased inundation may require improvements to existing assets, and lead to increased building standards, such that roofing, structural and drainage systems are sufficiently resilient. Increased flooding and flood intensity pose a direct risk to Australia's built environment and the property sector as a whole. Residential and commercial buildings that are situated close to the coast or in flood prone areas will be at greater risk of flood damage as a result of climate change. Existing buildings may need to be adapted to improve flood proofing, while building occupants may be required to relocate if faced with the risk of increased flooding frequency and intensity.

## Physical risks (continued)

On-site water management would need to be designed to cope with more extreme events, reducing the threat of flooding and mitigating downstream impacts.

- **Area affected by drought increases** (likely): water shortage for settlements, industry and societies. Drought in Australia is likely to increase the risk of fire. The IPCC indicates that it is virtually certain that fires will be more intense and frequent: "In south-east Australia, the frequency of very high and extreme fire days is likely to rise 4–25% by 2020." Increased fire risk will primarily affect residential buildings located close to bushland. Building safety and planning regulations regarding fire risk may be changed to address increased fire risk. Drought will also lead to sustained water restrictions and increased requirement to report on water performance. Scarcity of water has led to investment by utilities in desalination plants. The combined result of water scarcity and the cost of new technology is leading to increased water pricing. This will also lead to increased building standards and planning requirements (e.g. increased setbacks from vegetated areas in response to increased bushfire risk).
- **Intense tropical cyclone activity increases** (likely): disruption by flood and high winds; withdrawal of risk coverage in vulnerable areas by private insurers; potential for population migrations; and loss of property. Weather related events contribute to a large portion of insurance claims. Increased frequency and impact of extreme weather increases would lead to the risk of an increase in insurance premiums and the possibility of not being able to insure property in vulnerable locations.
- **Increased incidence of extreme high sea level** (likely): Costs of coastal protection versus costs of land-use relocation; potential for movement of populations and infrastructure. The initial impact on property from sea level rises is likely not to be from the gradual rise in average sea level but from increased extreme weather events leading to storm surge. Rising sea levels will exacerbate the impact of storm surges and coastal flooding, as well as leading to increased rates of erosion and subsidence. Coastal properties face the risk of erosion and subsidence. Coastal erosion and subsidence have already threatened property on the North Coast of NSW. Sea level change poses a physical risk to built form, as well as a planning risk for the wider property sector. There is potential for reduced ability to develop coastal land, due to increased concerns with flood risk.

With predictions for a greater number of days falling beyond long-standing design parameters, amenity and functionality of assets may be impacted. We are taking this into account on new developments as we design for a changing climate.

As part of our FY10 CR&S Strategy, we are now undertaking a series of climate change risk studies. Our first research studies are examining:

- sea level rise and storm surge risk in coastal areas; and
- exposure of our communities and assets to bushfire risk.

In late 2008 our CR&S Board Committee requested our insurance brokers to address the committee on risks associated with climate change. Our brokers shared data on recent severe weather events in Australia, and discussed risk mitigation currently being undertaken by our organisation. In response to increased weather event risks, we undertook a review of our assets. In particular, we have reviewed our shopping centres in North Queensland. These centres are increasingly subject to high winds, and heavy inundation, and are at risk of cyclone impact. Works to centre roofs have subsequently been undertaken, improving capacity to withstand these increasingly frequent weather events.

## Other risks

### 3.1 IS YOUR COMPANY EXPOSED TO OTHER RISKS AS A RESULT OF CLIMATE CHANGE?

We consider our company to be exposed to other risks.

We see that there is the risk of indirect impacts associated with climate change, particularly through the introduction of Australia's emissions reduction scheme, the Carbon Pollution Reduction Scheme.

We expect to see the cost of energy rapidly increase in the coming years. We have engaged advisers to model predicted energy costs to help inform our business decisions, particularly around investing in energy efficiency solutions such as co/tri-generation.

We also expect that the cost of carbon intensive building materials will increase. We recognise that this will vary, as a consequence of compensation to emissions intensive trade exposed industries.

With increased demand on energy and water services in response to changing climate conditions and other needs, security of energy and potable water supply is a growing risk. It is important that we prepare for these possibilities (as well as increased utility costs) through exploring decentralised energy supply and water supply. This might involve establishing this infrastructure within a residential community, or a shared low-carbon energy supply among a cluster of buildings located in an urban precinct.

With increasing regulation and growing government and community engagement on climate change, planning approval risk may also increase.

Over the past year, we have continued to engage with our supply chain on sustainability, including climate change risk and carbon management, identifying shared opportunities and risks. One of our goals is to better understand our carbon footprint through our supply chain, and identify opportunities to reduce emissions.

In some facets of our business, we see that customers are increasingly engaged on sustainability, with growing expectations around the performance of assets. Some tenant groups, including government, have stated the aim to only occupy buildings that meet minimum sustainability (energy efficiency) requirements. Earlier in 2007 we interviewed a range of our office tenants, with responses widely confirming interest in sustainable workspaces.

Reputational risk is growing, as awareness and emerging evidence of climate change increases. This is particularly important as organisations and investment advisers place increasing value on intangible assets such as image, brand and reputation.

## Regulatory opportunities

### 4.1 DO REGULATORY REQUIREMENTS ON CLIMATE CHANGE PRESENT OPPORTUNITIES FOR YOUR COMPANY?

Regulatory requirements present opportunities for our company.

Stockland aims to go beyond compliance in relation to sustainability. We have long demonstrated this level of commitment.

We see emerging Australian state-based energy efficiency trading schemes as an opportunity. In some cases, these schemes recognise our efforts in improving energy efficiency in buildings, while other schemes incentivise residents and building occupants to select energy efficient equipment.

The NSW Energy Savings Scheme rewards energy efficiency, and will replace the NSW Greenhouse Gas Abatement Scheme (GGAS). We anticipate participating in the scheme, attaining certificates for improving energy efficiency in existing buildings, reflected in increased National Australian Built Environment Rating System (NABERS) Office Energy scores.

In 2004, Stockland took the step to trial the NSW Government's emerging BASIX tool, and was the first developer to achieve compliant housing at its Bridgewater Residential Community, South Camden. This experience provided confidence that we could deliver more sustainable development, and improved energy efficiency, and created a wider sense of our corporate responsibilities. It also confirmed our capacity to work with government to understand sustainable design and establish minimum standards.

In response to current and emerging reporting standards, we have continued to improve our carbon data management. As a consequence, we have had a smooth path as we prepare to comply with the federal government's National Greenhouse and Energy Reporting System (NGERS). Preparation for NGERS has also required us to commence collecting emissions data from civil contractors on our residential projects. For the first time, we are now creating a picture of emissions associated with site preparation.

We also track NABERS Energy ratings across our office portfolio. We communicate our metrics publicly through the Carbon Disclosure Project and our annual CR&S report. Our NABERS reporting program now means that we are prepared for the introduction of mandatory disclosure of energy efficiency performance of office buildings. Our experience has enabled us to share insights and useful feedback to the federal government as it finalises the design of this reporting requirement.



## Regulatory opportunities (continued)

Our participation in the Energy Efficiency Opportunities (EEO) program, through greater scrutiny of energy use, has led to implementation of energy efficiency opportunities in our commercial portfolio, leading to the reduction of greenhouse gas emissions.

As a natural extension of the EEO program, we are applying the same principles of reporting and identification of opportunities to water saving in our office and retail portfolios.

Through early preparation for reporting, we have been able to collect data in a robust manner and tailor our data management system in a cost effective and innovative manner. What gets measured is more likely to be managed. We recognise that the power of our comprehensive reporting program will enable us to better identify energy efficiency opportunities across our portfolio.

Our commitment to sustainability measurement and transparency has led to government agencies inviting Stockland to provide feedback on emerging plans and regulation. We value this opportunity to share our experiences and contribute to help find the most effective means of delivering on the government's intent.

## Physical opportunities

### 5.1 DO PHYSICAL CHANGES RESULTING FROM CLIMATE CHANGE PRESENT OPPORTUNITIES FOR YOUR COMPANY?

Physical changes present opportunities for our company.

Stockland considers there is significant opportunity in demonstrating market leadership through early adoption of sustainable design solutions for new assets, and tackling the challenge of improving eco-efficiency and climate change resilience of existing assets. More critically, however, energy efficiency programs can lead to significant savings over the medium to longer term. A price on carbon will provide some support for the business case for energy efficiency initiatives.

We are seeing evidence in the market place of growing interest in green buildings. Earlier in 2008, our Commercial Property business engaged an independent market researcher to interview existing and prospective tenants. The research found that relationship, service and sustainability were the key dimensions of interest and value. Quotes from interviewees included: "It's a no brainer", "You have to recognise that we can't go on consuming resources forever" and "Customers are interested in Green Star rated sites... it makes business sense".

Reasons explaining the need for environmentally sustainable workspaces included:

- Medium to long-term financial savings; an abhorrence towards waste (water, energy, etc.);
- Good corporate citizenship: doing their bit;
- Pressure from clients and employees; and
- A requirement for many public sector tenants (generally stipulating minimum eco-efficiency ratings).

This feedback supports our business case to (continue to) act, and indicates an emerging willingness to pay. In turn, our tenants expect us to lead by example in how we manage our buildings and report back on our eco performance.

In response to this interest, we have sought feedback on potential tools and incentives, including "green leases" and an innovation fund to reward high performing eco-efficient industrial customers.

We also see scope for emerging opportunities in attracting tenants and customers to more eco-efficient shopping centres. In 2007 we prepared an easy to use green fitout guide to raise awareness with our retailers and designers of how they can create more environmentally responsible tenancies. The guide focuses on energy and water consumption, waste management and the responsible selection of materials. It sets out simple opportunities for eco-efficiency. We have since distributed the guide and embarked on a road show, engaging with (and informally training) tenants nationally. The guide has been met with a positive response, with a number of national retail chains seeking to actively work with Stockland to create more energy efficient stores.

## Physical opportunities (continued)

We have also seen growing interest from current and prospective residents in our residential communities and apartments projects. The water crisis and subsequent restrictions have led to increased awareness of sustainable housing among householders. Stockland has worked with partner project home builders to find the most cost-effective ways to build energy efficient housing, recognising that increased costs can be a barrier for purchasers dealing with the pressures of housing affordability. In NSW, we continue to support the BASIX tool for housing and multi-unit. In WA, with our partner builders and the WA Sustainable Energy Development Office, we created a display village demonstrating 5 Star energy efficiency.

In April 2007 our Sydney employees moved into new offices, Stockhome. Our Sydney office has been designed to be environmentally preferable, with a focus on energy, water, waste, materials, transport and indoor environmental quality. The offices were awarded Australia's first 6 Star Green Star interior in early 2009, and embody Stockland's commitment to sustainability, particularly energy efficient workplaces and office buildings. The public attention that this project has received has enabled us to engage with peers, government and our tenants on the benefits of greener buildings.

We recognise that an early response to the physical dimensions of climate change is important towards 'future-proofing' our business. To ensure that our assets are managed to what we perceive will be future standards, we have:

- Rated our office buildings annually using NABERS, and have improved our ratings on a year-on-year basis, reducing energy costs and retaining government tenants with requirements for high performing NABERS-rated accommodation;
- Continued to actively support the development of the Australian Green Star tool, through sponsorship of new tools. We're particularly excited at the prospect of the Green Star Precinct tool and its potential application to our residential communities. We have attained two Green Star ratings in the past year (each 6 Green Star – World Class) and have two other Green Star registered office developments in progress; and
- Continued to explore "Sustainable Office Buildings of the Future" through inviting leading thinkers to work alongside our employees in meetings and workshop environments to test new ideas, products and services.

## Other opportunities

### 6.1 DOES CLIMATE CHANGE PRESENT OTHER OPPORTUNITIES FOR YOUR COMPANY?

Climate change presents other opportunities for our company.

Stockland recognises that taking action on climate change and integration of the wider concept of sustainability into business activities contributes to engagement of our employees.

Our CR&S function is focused on enabling all employees to contribute to the delivery of our CR&S strategy. Rather than establishing a stand-alone team, our approach is to integrate our CR&S actions such that it is everyone's responsibility.

Through our internal survey (Towers Perrin International Survey Research), our employees continue to tell us that they believe that Stockland is a responsible organisation:

- 92% believe Stockland is socially responsible in the community (2% decline on 2008, 1% decline on 2007, 6% improvement on 2006);
- 93% believe Stockland is environmentally responsible in the community (nil change on 2008 and 2007, 7% improvement on 2006); and
- 86% think Stockland achieves the right balance between its social, environmental and financial responsibilities (nil change on 2008, 2% decline on 2007, 8% improvement on 2006).

Corporate Responsibility and Sustainability is our second highest rated contributor to our overall employee engagement score. This year we attained an employee engagement score of 82% (2008: 83%, 2007: 85%, 2006: 84%, 2005: 82%).

A demonstrated commitment to eco-efficiency can contribute to success when participating in competitive bids where the bid manager places a high value on sustainability. This is typically the case for government land development agencies. We recognise that our track record on achieving sustainability results strongly informs the perception of the capability and reputation of our organisation.

We continue to seek opportunities where we can pilot emerging technology. In the past year we have delivered wind turbines on an office building in an urban environment, and tri-generation in an existing office building. Early testing of technology enables us to trial technology and reporting tools ahead of time, such that we can meet rapidly changing stakeholder expectations.

## Greenhouse gas (GHG) emissions accounting, emissions intensity, energy and trading

### 7.1 PLEASE STATE THE START DATE AND END DATE OF THE YEAR FOR WHICH YOU ARE REPORTING GHG EMISSIONS.

The accounting year for data in this report is 1 July 2007 – 30 June 2008.

### 8.1 PLEASE INDICATE THE CATEGORY THAT DESCRIBES THE COMPANY, ENTITIES, OR GROUP FOR WHICH SCOPE 1 AND SCOPE 2 GHG EMISSIONS ARE REPORTED.

For FY08 data, we have reported emissions where financial control was exercised. This boundary reflects past federal government reporting boundary as set out in the Energy Efficiency Opportunities Act. We are currently shifting our reporting boundary to operation control, however, in order to comply with the Australian federal government National Greenhouse and Energy Reporting System (NGERS). We anticipate that future Carbon Disclosure Project (CDP) submissions will report on emissions where we have operational control, and that we will restate past performance in line with this boundary. We have sought legal and other professional advice to confirm our assessment of our operational control for the purposes of NGERS and other future compliance and voluntary emissions disclosures.

### 8.2 PLEASE STATE WHETHER ANY PARTS OF YOUR BUSINESS OR SOURCES OF GHG EMISSIONS ARE EXCLUDED FROM YOUR REPORTING BOUNDARY.

At a group level, we disclose Scope 1, 2 and 3 emissions.

We report on our emissions for our UK and Australian businesses separately.

As we continue to refine our data capture and management processes, we have restated our data sets for financial year (FY) performance. In the past, we have reported on Calendar Year (CY) performance. The FY06 and FY07 data sets have also been expanded to incorporate office buildings, which were excluded from previous reporting, but which Stockland now has data for. The portfolio also expanded during this time. Buildings that were purchased in this period were included in the revised figures where Stockland had access to 12 months of data, to enable better comparison with present emissions.

We do not yet have complete data for our UK business. This business accounts for approximately 7% of Stockland's total emissions. We have begun to collect electricity data dating back to January 2007 for 23 of the UK properties that we own where we are responsible for paying for the electricity consumption. These 23 UK properties account for a total of 95% of our budgeted annual electricity spend for our UK assets. Properties with only partial-year data were extrapolated to derive a 12 month figure.

Having now made a start, we will continue to improve our data collection to enable us to more fully disclose our emissions, and assess the outcomes of energy reduction initiatives. We have initiated a process to commence collection waste data across our UK portfolio.

#### Scope 1

Incorporates fuel use in our vehicle fleet, and gas burned in our office buildings and retail centres.

This data captures base building gas purchased for office and retail assets owned and managed by Stockland, where Stockland is responsible for base-building electricity purchases. At the time of assurance (July – September 2008), data for retail consumption for the first six months of 2008 was unavailable, and for the purposes of this disclosure it has been reported as equal to the corresponding period last financial year.

#### Scope 2

Covers base building electricity purchased for our office, industrial and retail assets.

We report on the base-building electricity consumption and resulting GHG emissions from the office buildings and retail centres that we own. Tenant usage is not included. The reported portfolio includes those assets for which Stockland is responsible for procuring base building electricity, and covers 100% of assets under this classification. This means that only the assets on Stockland's balance sheet which have not been included for reporting purposes are those assets for which Stockland does not procure energy, including those assets that are currently under construction, are externally managed by a third party, or have the tenants procuring all energy.

We have not reported on emissions from Stockland's office tenancies (where Stockland is the office tenant). The GHG emissions for our four largest tenancies were 1,621,578 kgs of CO<sub>2</sub> for CY07. We are in the process of improving our systems to be able to report centrally on all Stockland office tenancies and include this data in future disclosure as part of our Scope 2 emissions.

#### Scope 3

Covers transmission and production losses from purchased electricity, gas and fuel, emissions from employee travel (flights and car hire) and emissions from solid waste to landfill.

We recognise that our waste data is incomplete. There is no waste data for FY06. For our Australian office portfolio, we have accurate data for a number of our NSW sites and two Queensland sites. For our retail portfolio our waste data collection is missing some data points. For our industrial portfolio we have collected waste data for NSW and some Queensland sites only. We are currently improving our waste data collection and reporting, and have made improved reporting a requirement of our new waste management contracts.

## Methodology

### 9.1 PLEASE DESCRIBE THE PROCESS USED BY YOUR COMPANY TO CALCULATE SCOPE 1 AND SCOPE 2 GHG EMISSIONS INCLUDING THE NAME OF THE STANDARD, PROTOCOL OR METHODOLOGY YOU HAVE USED TO COLLECT ACTIVITY DATA AND CALCULATE SCOPE 1 AND SCOPE 2 GHG EMISSIONS.

We have used the Australian federal government's Department of Climate Change National Greenhouse Accounts (NGA) Factors Workbook (January 2008) to calculate Scope 1, 2 and 3 emissions for our Australian business from the following sources:

- Electricity;
- Gas;
- Waste; and
- Fuel: petrol, diesel, LPG and ethanol 10%.

The 2008 WRI Workbook CO<sub>2</sub> Mobile has been used to calculate emissions from air travel.

The 2008 WRI Workbook 2008 Electricity Purchased has been used to calculate emissions for our UK business.

Data for each asset and/or activity is collected through billing via a range of systems. This data is uploaded into our CCAP (Climate Change Action Plan) tool, where the above protocols and associated factors are applied.

### 9.2 DETAILS OF ANY ASSUMPTIONS MADE.

Please refer to 8.2 above.

### 9.3 THE NAME AND LINKS TO ANY CALCULATION TOOLS USED.

Please refer to 9.1 above.

### 9.4 THE GLOBAL WARMING POTENTIALS YOU HAVE APPLIED AND THEIR ORIGIN.

Please refer to 9.1 above.

### 9.5 THE EMISSION FACTORS YOU HAVE APPLIED AND THEIR ORIGIN.

Please refer to 9.1 above.

## Scope 1 direct GHG emissions

### 10.1 TOTAL GROSS GLOBAL SCOPE 1 GHG EMISSIONS IN METRIC TONNES OF CO<sub>2</sub>-e.

3,201

### 10.2 PLEASE BREAK DOWN YOUR TOTAL GROSS GLOBAL SCOPE 1 GHG EMISSIONS BY COUNTRY OR REGION.

Country	Scope 1 Metric tonnes CO <sub>2</sub> -e
Australia	3,201

### 10.3 PLEASE BREAK DOWN YOUR TOTAL GROSS GLOBAL SCOPE 1 GHG EMISSIONS BY BUSINESS DIVISION.

Business division	Scope 1 Metric tonnes CO <sub>2</sub> -e
Office	1,937
Retail	262
Vehicle Fleet	1,002

### 10.4 PLEASE BREAK DOWN YOUR TOTAL GROSS GLOBAL SCOPE 1 GHG EMISSIONS BY FACILITY.

N/A

### 10.5 PLEASE BREAK DOWN YOUR TOTAL GROSS GLOBAL SCOPE 1 GHG IN METRIC TONNES OF THE GAS AND METRIC TONNES OF CO<sub>2</sub>-e BY GHG TYPE.

N/A

## Scope 2 indirect GHG emissions

### 11.1 TOTAL GROSS GLOBAL SCOPE 2 GHG EMISSIONS IN METRIC TONNES OF CO<sub>2</sub>-e.

137,924

### 11.2 PLEASE BREAK DOWN YOUR TOTAL GROSS GLOBAL SCOPE 2 GHG EMISSIONS BY COUNTRY OR REGION.

Country	Scope 2 Metric tonnes CO <sub>2</sub> -e
Australia	129,238
United Kingdom	8,686

### 11.3 PLEASE BREAK DOWN YOUR TOTAL GROSS GLOBAL SCOPE 2 GHG EMISSIONS BY BUSINESS DIVISION.

Business division	Scope 2 Metric tonnes CO <sub>2</sub> -e
Office and Industrial	69,117
Retail	60,121
United Kingdom	8,686

## Scope 3 other indirect GHG emissions

For each of the following categories, please:

- Describe the main source of emissions
- Report emissions in metric tonnes of CO<sub>2</sub>-e
- State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

### 13.1 EMPLOYEE BUSINESS TRAVEL

Emissions source	Scope 3 Metric tonnes CO <sub>2</sub> -e
Car hire	79
Air travel	1,078

Please note that emissions associated with our car fleet have been reported under Scope 1.

The methodology used was the Australian government's Department of Climate Change National Greenhouse Accounts (NGA) Factors Workbook (January 2008) to calculate Scope 3 emissions from fuel, including petrol, diesel, LPG and ethanol 10%.

The 2008 WRI Workbook CO<sub>2</sub> Mobile has been used to calculate emissions from air travel.

### 13.2 EXTERNAL DISTRIBUTION/LOGISTICS

Our principal activity is the ownership, management and development of property, including office, industrial, and retail properties, retirement living, apartments and residential communities.

## Scope 3 other indirect GHG emissions (continued)

### 13.3 USE/DISPOSAL OF COMPANY'S PRODUCTS AND SERVICES

Emissions source	Scope 3 Metric tonnes CO <sub>2</sub> -e
Solid waste to landfill from the operation of property assets	18,542

Our waste data is incomplete. For the office portfolio, we have accurate data for a number of our NSW sites, and two Queensland sites. For our retail portfolio, our data collection covers all of our assets, but the quality is variable. We have estimated 9% of retail FY08 waste to landfill data, based on the corresponding period of the previous year.

The methodology used was the Australian government's Department of Climate Change National Greenhouse Accounts (NGA) Factors Workbook (January 2008) to calculate Scope 3 emissions from waste.

### 13.4 COMPANY SUPPLY CHAIN

We have commenced engagement with our supply chain to gain a better understanding of those emissions our operation influences and/or generate up or downstream.

Over FY08 we procured services and products from over 4,000 suppliers. We recognise that our suppliers form an extension of our business. Through engaging with our partners, we are exposed to shared risks and responsibilities, including those associated with climate change. We've commenced engagement with our suppliers, where 10 of our top 100 suppliers have been engaged in a process designed to align our sustainability values.

To give us an understanding of the commitment of our top 100 suppliers, we reviewed their published statements in the areas of corporate governance, social responsibility and environmental management, including climate change risk and carbon management. This group of suppliers represents 63% of our total annual spend.

We are now focused on working closely with our civil works contractors to collate emissions data, as we prepare to comply with the Australian federal government's National Greenhouse and Energy Reporting System (NGERS). We are currently finalising an inventory of emissions associated with this dimension of our supply chain.

## Emissions avoided through use of goods and services

### 14.1 IF YOUR GOODS AND/OR SERVICES ENABLE GHG EMISSIONS TO BE AVOIDED BY A THIRD PARTY, PLEASE PROVIDE DETAILS INCLUDING THE ESTIMATED AVOIDED EMISSIONS, THE ANTICIPATED TIMESCALE OVER WHICH THE EMISSIONS ARE AVOIDED AND THE METHODOLOGY, ASSUMPTIONS, EMISSION FACTORS (INCLUDING SOURCES), AND GLOBAL WARMING POTENTIALS (INCLUDING SOURCES) USED FOR YOUR ESTIMATIONS.

The ongoing improved energy efficiency of our office and retail portfolios not only reduces base building emissions, but also assists tenants with saving energy. Generally, we don't collect energy data for tenancies due to privacy concerns.

We encourage our office tenants to understand their performance, through rating their energy efficiency using the NABERS Energy – Tenancy tool, as part of the national CitySwitch Green Office program supported city-based local governments.

During FY08 we partnered with CitySwitch to provide tenant forums. Forums were held in 2008–09 in Sydney, Melbourne and Perth, encouraging tenants to join the CitySwitch energy efficiency program, which involves committing to annual benchmarking and reporting, while targeting minimum standards.

We also encourage our retail tenants to improve energy efficiency, particularly at fitout stage, with environmentally sustainable design (ESD) guidance provided in our Retail Design and Fitout Guide. The guide has been designed to raise awareness with our retailers and their shop-fitters and designers as to how they can become more environmentally responsive. The guide focuses on reducing energy and water consumption, improving waste management and the responsible selection of materials.

Between February and April 2008, we rolled out our 'Green is the new Black' road show across four states (NSW, Victoria, Western Australia and Queensland). Meetings to introduce the guide were held with all of our centre management, development management, leasing, design and delivery teams. The roll-out was also extended to our external stakeholders, our tenants and retailers and their designers, and to representatives of the Australian Shop and Office Fitting Industry Association.

The immediate focus of the roll-out was to raise awareness of the simple, practical and effective initiatives that can be implemented in retail fitout at no or limited cost.

## Carbon dioxide emissions from biologically sequestered carbon

---

**15.1 PLEASE PROVIDE THE TOTAL GLOBAL CARBON DIOXIDE EMISSIONS IN METRIC TONNES CO<sub>2</sub>-e FROM BIOLOGICALLY SEQUESTERED CARBON.**

N/A

## Emissions intensity

---

**16.1 PLEASE SUPPLY A FINANCIAL EMISSIONS INTENSITY MEASUREMENT FOR THE REPORTING YEAR FOR YOUR COMBINED SCOPE 1 AND 2 EMISSIONS, INCLUDING A DESCRIPTION OF THE MEASUREMENT,**

A.  
Tonnes Scope 1 and 2 emissions per AUD million net profit (before certain significant items)

B.  
Tonnes Scope 1 and 2 emissions per AUD million total revenue

---

### 16.1.1 THE UNITS

Total Scope 1 and 2 emissions FY08: 132,439 tonnes CO<sub>2</sub>-e

A Stockland net profit FY08: 674 AUD million  
= 196 tonnes emissions/AUDm net profit

B Stockland gross revenue FY08: 2,684 AUD million  
= 49 tonnes emissions/AUDm gross revenue

---

### 16.1.2 THE RESULTING FIGURE.

674

---

**16.2 PLEASE SUPPLY AN ACTIVITY RELATED INTENSITY MEASUREMENT FOR THE REPORTING YEAR FOR YOUR COMBINED SCOPE 1 AND 2 EMISSIONS, INCLUDING A DESCRIPTION OF THE MEASUREMENT,**

The most appropriate measure of emissions intensity for a property organisation is on a per square metre basis for individual property asset classes.

Stockland also undertakes and discloses NABERS energy and water ratings for its office portfolio. The NABERS rating is an indicator of emissions intensity, and is an important benchmark and tool in the Australian property marketplace.

Electricity and gas consumption for those office assets for which Stockland procures base building electricity are divided by the floor area of those assets. Only those assets with a full 12 month data set are included. The industrial site for which Stockland procures electricity has been excluded from this metric due to its extremely large NLA compared to usage of electricity.

Base building electricity and gas procured by our retail portfolio is divided by the GLA of the portfolio. Only centres with a full 12 month data set are included.

### 16.2.1 THE UNITS, AND

A:  
kgCO<sub>2</sub>-e per m<sup>2</sup> (total floor area (NLA) of office buildings)  
FY08: 113

Percentage reduction – office  
FY06–08: 17%

B:  
kgCO<sub>2</sub>-e per m<sup>2</sup> (total floor area (GLA) of retail assets)  
FY08: 77

Percentage reduction – retail  
FY06–08: 13%

### 16.2.2 THE RESULTING FIGURE.

113

#### Further information

In FY07, for our office portfolio average, we set a target of 3.6 Star NABERS energy. In FY08 we attained an average rating of 2.9. In FY09, we have now managed to lift our average to reach our target of 3.6 Stars.

### 17.1 DO EMISSIONS FOR THE REPORTING YEAR VARY SIGNIFICANTLY COMPARED TO PREVIOUS YEARS?

Yes, total Scope 1 and 2 emissions for our Australian operations have been reduced by 5%.

We are focused on raising the environmental performance of our entire portfolio, rather than developing isolated 'green flagships'.

Existing buildings represent approximately 98% of all buildings in Australia; only around 2% of buildings are newly developed each year. We continue to concentrate on improving the environmental performance of our existing building stock, undertaking systematic modifications and working to improve our management practices.

We have also worked towards improving our environmental performance for those assets that are jointly owned, and externally managed. In some cases, performance has improved, but we recognise that there is more to do to improve the performance of a greater proportion of assets. To help address this we have nominated a number of joint owned assets for participation in the Australian federal government's Energy Efficiency Opportunities (EEO) program, where we will investigate and report on initiatives to improve energy efficiency.

In improving our existing office and industrial portfolio, initiatives have included:

- Submetering major energy using plant and equipment;
- Lighting control upgrades;
- Building management system upgrades and control strategies;
- Installation of water-efficient devices; and
- Air conditioning system upgrades.

Over the past year, the retail business has continued to focus on improving the overall environmental performance of our portfolio. This has included:

- Working towards better electricity and water efficiency in all operating centres, including setting targets for annual reduction measures for operating centres, and providing the tools and skills to identify and implement efficiency opportunities;
- Reducing intensity of electricity and potable water consumption in our operating centres, with efficiency initiatives undertaken in 20 of our operational centres during the past year;



## Emissions history (continued)

- Reviewing the amount of waste generated in the construction and operation of our centres;
- Improving our data management. We've now extended this to start collecting data on refrigerant usage across our retail portfolio;
- Developing tools and programs to help us improve our environmental performance and measurement across our retail portfolio. This has included delivery of eco-efficiency workshops for our operating centres, preparation of design and construction guidelines for our development centres and implementing initiatives to assist with the fitout and operation of specialty tenancies; and
- Participating in the development of the NABERS Energy Retail Tool (to monitor energy performance of operating assets) and the GBCA's Green Star Retail Design Pilot Tool.

We have completed a three-part series of Energy Efficiency Opportunities (EEO) training workshops. These were attended by 137 members of our shopping centre management teams in 10 regions nationally. As an outcome of the workshops, each management team produced an energy and water efficiency plan for their centre.

Over the past year, we have invested \$3.2 million in energy and water-efficiency upgrades at 20 of our shopping centres in five states. These upgrades are being undertaken by contractors EcoSave Pty Ltd and we have forecast savings of 5.3 million kWh of electricity per year and 80.3 million litres of water a year. Over FY08, the centres undergoing works reduced electricity consumption by 4.2 million kWh and water by 72 million litres.

This represents reductions of 12% for electricity and 14% for water in these 20 sites over FY08.

---

### 17.1.1 ESTIMATE THE PERCENTAGE BY WHICH EMISSIONS VARY COMPARED WITH THE PREVIOUS REPORTING YEAR.

5% reduction.

## External verification/assurance

---

### 18.1 HAS ANY OF THE INFORMATION REPORTED IN RESPONSE TO QUESTIONS 10–15 BEEN EXTERNALLY VERIFIED/ASSURED IN WHOLE OR IN PART?

Yes, it has been externally verified/assured in whole or in part.

---

### 18.2 IF SO, PLEASE STATE THE SCOPE/BOUNDARY OF EMISSIONS INCLUDED WITHIN THE VERIFICATION/ASSURANCE EXERCISE.

Scope 1 – please refer to 10.1

Scope 2 – please refer to 11.1

Scope 3 – for employee business travel, please refer to 13.1

Scope 3 – for use/disposal of company's products, please refer to 13.3

Scope 3 – for company supply chain, please refer to 13.4

---

### 18.3 PLEASE STATE WHAT LEVEL OF ASSURANCE (E.G. REASONABLE OR LIMITED) HAS BEEN GIVEN.

Assurance against the AA1000 assurance standard has been given by Certified Lead Sustainability Assurance Practitioners.

The standard, as applied in FY08, does not distinguish reasonable or limited levels of assurance, but rather adherence to principles of:

- Materiality;
- Completeness; and
- Responsiveness.

As we now prepare for the Australian federal government's National Greenhouse and Energy Reporting System, we are actively engaging with our internal compliance, audit and risk team to apply an internal checking process prior to engagement with our assurance providers.

## Data accuracy

---

### 19.1 WHAT ARE THE MAIN SOURCES OF UNCERTAINTY IN YOUR DATA GATHERING, HANDLING AND CALCULATIONS E.G.: DATA GAPS, ASSUMPTIONS, EXTRAPOLATION, METERING/MEASUREMENT INACCURACIES ETC?, AND

Data accuracy is generally identified by our assurance providers.

---

### 19.2 HOW DO THESE UNCERTAINTIES AFFECT THE ACCURACY OF THE REPORTED DATA IN PERCENTAGE TERMS OR AN ESTIMATED STANDARD DEVIATION?

Data errors have arisen from:

- Manual entering of data; and
- Confusion where Stockland procures energy for the whole asset, and then on-sells energy to tenants. In these circumstances, we need to ensure that we report on base building only, not whole building energy use. Such an error was identified in our assurance program in FY08.

---

### 19.3 DOES YOUR COMPANY REPORT GHG EMISSIONS UNDER ANY MANDATORY OR VOLUNTARY SCHEME (OTHER THAN CDP) THAT REQUIRES AN ACCURACY ASSESSMENT?

Yes, NABERS ratings for office buildings are assessed and certified by a third party.

## Energy and fuel requirements and costs

---

### Cost of purchased energy

---

#### 20.1 THE TOTAL COST OF ELECTRICITY, HEAT, STEAM AND COOLING PURCHASED BY YOUR COMPANY.

\$17,814,000.00 AUD

---

#### 20.1.1 PLEASE BREAK DOWN THE COSTS BY INDIVIDUAL ENERGY TYPE.

Electricity: \$17,814,000.00 AUD

---

### Cost of purchased fuel

---

#### 20.2 THE TOTAL COST OF FUEL PURCHASED BY YOUR COMPANY FOR MOBILE AND STATIONARY COMBUSTION.

N/A

---

## ENERGY AND FUEL INPUTS

### Purchased energy input

---

#### 20.3 YOUR COMPANY'S TOTAL CONSUMPTION OF PURCHASED ENERGY IN MWH.

152,727 MWh

---

### Purchased and self produced fuel input

---

#### 20.4 YOUR COMPANY'S TOTAL CONSUMPTION IN MWH OF FUELS FOR STATIONARY COMBUSTION ONLY. THIS INCLUDES PURCHASED FUELS, AS WELL AS BIOMASS AND SELF-PRODUCED FUELS WHERE RELEVANT.

11,911 MWh

---

20.4.1 PLEASE BREAK DOWN THE TOTAL CONSUMPTION OF FUELS REPORTED IN ANSWER TO QUESTION 20.4 BY INDIVIDUAL FUEL TYPE IN MWH.

Stationary combustion fuels – Natural gas: 11,911 MWh

**ENERGY OUTPUT**

---

20.5 WHAT IS THE TOTAL AMOUNT OF ENERGY GENERATED IN MWH FROM THE FUELS REPORTED IN QUESTION 20.4?

N/A

---

20.6 WHAT IS THE TOTAL AMOUNT OF RENEWABLE ENERGY, EXCLUDING BIOMASS, THAT IS SELF-GENERATED BY YOUR COMPANY?

N/A

**ENERGY EXPORTS**

---

20.7 WHAT PERCENTAGE OF THE ENERGY REPORTED IN RESPONSE TO QUESTION 20.5 IS EXPORTED/SOLD BY YOUR COMPANY TO THE GRID OR TO THIRD PARTIES?

N/A

---

20.8 WHAT PERCENTAGE OF THE RENEWABLE ENERGY REPORTED IN RESPONSE TO QUESTION 20.6 IS EXPORTED/SOLD BY YOUR COMPANY TO THE GRID OR TO THIRD PARTIES?

N/A

---

21.1 DOES YOUR COMPANY OPERATE OR HAVE OWNERSHIP OF FACILITIES COVERED BY THE EU EMISSIONS TRADING SCHEME?

No.

## Emissions trading

### 22.1 PLEASE PROVIDE DETAILS OF ANY EMISSIONS TRADING SCHEMES, OTHER THAN THE EU ETS, IN WHICH YOUR COMPANY ALREADY PARTICIPATES OR IS LIKELY TO PARTICIPATE WITHIN THE NEXT TWO YEARS?

We participate or anticipate participating in trading schemes other than the EU ETS in the next two years.

We anticipate participating in the NSW Energy Savings Scheme. This scheme has been designed to incentivise energy efficiency. We expect that the scheme will operate in a similar manner to the former Greenhouse Gas Reduction Scheme (GGAS), whereby we attained credits in return for an improved NABERS Energy rating.

We are not captured by the federal government's Carbon Pollution Reduction Scheme, however, we are compelled to disclose emissions through the National Greenhouse and Energy Reporting System (NGERS).

## Performance

### 23.1 DOES YOUR COMPANY HAVE A GHG EMISSIONS AND/OR ENERGY REDUCTION PLAN IN PLACE?

Yes, please refer to question 23.3.

### 23.2 PLEASE EXPLAIN WHY.

Climate change is a profound challenge facing society. We know it's time to act. We have seen commitment to take action against climate change continue to gain momentum in Australia in the past year, as demonstrated through emerging government legislation in relation to emissions and energy efficiency.

Our response to the challenge of climate change helps to shape our broader CR&S Strategy. Understanding the potential impacts of climate change on our assets and developments will help us mitigate the risks to our business and reduce our own contribution to climate change.

#### **Climate Change Action Plan**

We continue to progress action in line with our climate change action plan (CCAP). Our CCAP crosses all areas of our CR&S Strategy, from how we manage our buildings, to how we engage with our suppliers and partners, to how we measure our performance.

Our first step has involved measuring and understanding our current emissions. We are now using our CCAP Online Tool, which has been developed to collate data and support reporting. We are now extending the tool to model energy efficiency scenarios. The tool tallies data at corporate, business unit and asset levels. It accommodates changes such as asset acquisition and disposal. Data now extends back to the 2005 calendar year. As well as calculating total emissions, the tool generates 'intensity' metrics, a meaningful metric communicating emissions per m<sup>2</sup> of office/retail space, enabling us to better understand the energy efficiency of assets.

We're also widening our CCAP database to encompass water and waste data. This data is currently coordinated at an asset and business unit level and will be rolled into a corporate database on a monthly basis.

Over the past year we have continued to make progress on our CCAP:

#### **Structure and set emissions targets**

- We have built a robust database – our CCAP Online Tool. We have now completed expansion of the tool to enable scenario modelling, and to assist with setting 'informed' emissions reduction targets. We will use this data to help set 'honest' targets and timeframes for future years.

## Performance (continued)

- Targets we set for FY09 include:
  - Reduce energy consumption in all retail centres by 5% – this target has been met, however, this result is yet to be assured; and
  - Work towards a 3.5 star portfolio NABERS Energy rating for our office portfolio – this target has been met, based on a NABERS review undertaken in early 2009.

### **Capture the short and long-term value of our actions**

- We have continued to invest in a range of energy efficiency solutions across our retail and office portfolios. We know that some solutions will deliver a short-term efficiency improvement, while investing in new technology might come at significant initial cost but will underpin longer term efficiency solutions.
- We have progressed return-on-investment modelling, to better understand achieved and future costs and efficiencies. We've also nearly completed our own evidence-based carbon abatement cost curve, capturing data and costs from past experiences and lessons learnt from our plans supporting our Energy Efficiency Opportunities reports.

### **Commit to effective carbon markets**

- We have engaged in dialogue with government and industry in the development of complementary mechanisms and incentives for carbon abatement/energy efficiency in the property sector.
- We are not currently looking to procure offsets. Our principal focus is to invest in energy efficiency, achieving longer term savings and reducing emissions. We have explored the procurement of green power for offices, responding to tenants' demand for higher rated tenancies – however, we remain focused on continuing to improve energy efficiency and thereby lift ratings. So far, however, we have only temporarily procured green power for our own offices to attain our aspirational NABERS target (due to delays in delivering our tri-generation plant).

### **Provide leadership beyond our direct influence**

- We have embarked on a Sustainable Supply Chain Management program, engaging some of our largest suppliers on environmental performance, including emissions measurement.

### **Commit to innovation – investigating new ways to manage and develop property assets**

- We have undertaken a number of investigations of low-carbon technologies. Redevelopment of our Sydney office (Stockhome) demonstrates what can be done with an existing building.

### **Use meaningful metrics to measure and communicate our performance relative to our peers**

- Our CCAP Online Tool includes intensity metrics. We also remain committed to the annual NABERS review of our office portfolio.

### **Goal setting**

---

#### **23.3 DO YOU HAVE AN EMISSIONS AND/OR ENERGY REDUCTION TARGET(S)?**

Yes.

---

#### **23.4 WHAT IS THE BASELINE YEAR FOR THE TARGET?**

Baselines vary for our targets, based on the range of metrics that we apply.

Baseline year for office portfolio: FY05

Baseline year for retail portfolio: FY06

---

#### **23.5 WHAT IS THE EMISSIONS AND/OR ENERGY REDUCTION TARGET(S)?**

FY10 Target: Office energy reduction by 25%

FY10 Target: Retail energy reduction by 20%

FY12 Target: NABERS Energy 4 Star average

---

#### **23.6 WHAT ARE THE SOURCES OR ACTIVITIES TO WHICH THE TARGET(S) APPLIES?**

The activity to which the target applies is base building electricity consumption.

The NABERS target refers to the tool commonly used to rate energy efficiency of office buildings, based on base building energy use and building occupancy.

---

#### **23.7 OVER WHAT PERIOD/TIMESCALES DOES THE TARGET(S) APPLIES?**

Office – 5 years

Retail – 4 years

As we better utilise our CCAP Online Tool, we plan to model a range of targets and timeframes, and seek business feedback on performance and stretch targets.

### GHG emissions and energy reduction activities

#### 23.8 WHAT ACTIVITIES ARE YOU UNDERTAKING OR PLANNING TO UNDERTAKE TO REDUCE YOUR EMISSIONS/ENERGY USE?

Our CR&S Strategy and our Climate Change Action Plan (CCAP) shape our approach to reducing our impact on the environment. As owners, managers and developers of property, our strategy and plan set out and prioritise our actions.

##### *Towards more sustainable property*

Over the past year, each of our operating businesses have continued to build documents setting out environmental sustainability processes and baseline requirements for property management and development.

##### *Office and Industrial Sustainability Manual*

This sets out policy, processes and accountabilities for dealing with sustainability at various stages of the property cycle from acquisition, through design, construction and delivery to facility management. It is aimed at ensuring we deliver new and major refurbished office buildings that meet minimum environmental rating targets of 4.5 Star NABERS Energy – reflecting the expectations of government tenants, and 4 Star Green Star – in accordance with our commitment to the Green Star Business Partnership (facilitated by the GBCA). The manual is still in draft form and has undergone extensive peer review within the Office and Industrial business and with other internal stakeholders.

##### *Retail Sustainability Charter*

The Retail Sustainability Charter articulates baseline requirements for our retail development projects. It also sets out a number of ways to deliver innovative initiatives on a site-specific basis. The document incorporates the principles embodied in the Green Star suite of tools, developed by the GBCA. The Charter covers nine areas of development, including management, energy, transport, water, materials, land use and ecology, emissions, community engagement and social infrastructure, and innovation. Each area incorporates a number of initiatives which are reviewed on a site-specific basis to ensure the most appropriate and relevant initiatives are embedded at the early stages of design development.

Key sustainability initiatives at all new centres include:

- Focusing on integrated design;
- Managing for optimal performance of all systems upon completion;
- Addressing contractual requirements for environmental, demolition, and construction management processes;
- Maximising energy and water efficiency in design;
- Using low volatile organic compound emission products for all paints, carpets, sealants and adhesives, making healthier spaces with better air quality for tenants and customers;
- Minimising impact on land and ecology;
- Reducing emissions associated with the construction and operation of the centre; and
- Undertaking robust stakeholder engagement and providing accessible, safe and secure amenities for our customers.

##### *Residential Sustainability Policy*

The Residential Sustainability Policy sets minimum sustainability requirements for all new residential community, apartments and retirement living projects, including:

Reducing energy use through:

- Designing for optimal solar orientation;
- Use of energy efficient hot water systems;
- Specifying energy efficient lighting in public areas;
- Connecting houses to natural gas where available; and
- Co-locating services where possible to reduce excavation efforts.

Reducing potable water use through:

- Applying climatically appropriate Water Sensitive Urban Design principles in the public domain;
- Installing/requiring rainwater tanks where climatically appropriate;
- Selecting water-efficient and climatically appropriate plants;
- Preparing site-specific transport plans and designs for alternative transport needs such as cycle ways and footpaths; and
- Developing and implementing site specific community development and stakeholder engagement plans.

## Performance (continued)

The policy states that the residential business will strive to exceed industry best practice and set new corporate benchmarks. The selection of best practice initiatives will be site and project-specific, leading to the best outcome for that particular development.

### **Managing existing assets**

We recognise that we have a responsibility to minimise the environmental impacts of our properties and projects. We are focused on raising the environmental performance of our entire portfolio, rather than developing isolated 'green flagships'. Our goal is to embed a consistent approach to environmental management across the organisation.

Existing buildings represent approximately 98% of all buildings in Australia – only around 2% of buildings are newly developed each year. Over the past year we have concentrated on improving the environmental performance of our existing building stock, undertaking systematic modifications and working to improve our management practices. We have worked towards improving our environmental performance for assets jointly owned and externally managed. In some cases performance has improved but we recognise there is more to do to improve the performance of a greater proportion of assets. To help address this, we have nominated a number of joint owned assets for participation in the EEO program, where we will investigate and report on initiatives to improve energy efficiency.

### **Existing office and industrial portfolio**

Our office and industrial business has a dual approach. We set high targets for new developments and major refurbishments (a minimum of 4 Star Green Star and 4.5 Star NABERS). For the remainder of the portfolio our goal is to gradually improve performance over time.

Our specific initiatives cover:

- Submetering major energy using plant and equipment;
- Lighting control upgrades;
- Building Management System upgrades and control strategies;
- Installation of water-efficient devices; and
- Air conditioning system upgrades.

In late 2007, we installed a centralised web-based data management system to capture information on electricity, gas and water use across the Office and Industrial businesses. The new system, known as the Bill Management Module (BMM), enables us to conduct our own benchmarking and analysis and to accurately report on utility use and carbon emissions.

Around 90% of our office buildings and two of our industrial buildings are covered by the module. It includes electricity, gas and water billing data for all offices and industrial buildings where Stockland has operational and financial control of utilities accounts.

The data from the BMM is now being fed into our CCAP Online Tool for our corporate reporting, enabling us to access and scrutinise emissions data across our asset portfolios.

We have been tracking the energy, water and waste performance of our office portfolio for the past three years.

### **Energy and greenhouse gas emissions performance**

Last year, for our office portfolio average we set a target of 3.6 Star NABERS Energy. Our portfolio average, based on all Stockland owned and managed buildings which were eligible for rating, at close of FY08 was 2.9 Stars. We have since attained an average performance of 3.5 Stars.

A number of our buildings have participated in EP&T's Utilities Reduction Program. This limited group of buildings have improved their energy performance, achieving an average rating of 3.4 Star NABERS Energy.

### **Electricity performance**

We have also been tracking electricity reduction across a subset of our office portfolio through the use of submeters. For FY08 we set an electricity reduction target of 16% for this subset as compared to our FY05 baseline year. We achieved an 18% reduction. This slightly exceeds the target, but does not hit our stretch targets.

### **Waste performance**

During FY08, we exceeded our average recycling (diversion of waste from landfill by weight) target of 70% for those sites where we collected data.

Our ongoing challenge is sourcing waste data for more of our office buildings. Over FY08 we have collected data for 26% of the portfolio. Managing waste is made difficult due to a lack of waste reporting standards. In addition, our data collection across states varies. In NSW we collect data for most sites. By comparison, in Queensland we collect data for only two sites, as for many of our recently acquired buildings the waste contract is managed by the tenant. We don't currently collect waste data for our Victorian, South Australian and Western Australian sites.

We are committed to reporting on waste data for more of our office buildings nationally.

## Performance (continued)

### *Existing retail portfolio*

Over the past year, the retail business has continued to focus on improving the overall environmental performance of our portfolio.

This has included:

- Working towards better electricity and water efficiency in all operating centres, including setting targets for annual reduction measures for operating centres, and providing the tools and skills to identify and implement efficiency opportunities;
- Reducing intensity of electricity and potable water consumption in our operating centres, with efficiency initiatives undertaken in 20 of our operational centres during the past year;
- Reviewing the amount of waste generated in the construction and operation of our centres;
- Improving our data management. We've now extended this to start collecting data on refrigerant usage across our retail portfolio;
- Developing tools and programs to help us improve our environmental performance and measurement across our retail portfolio. This has included delivery of eco-efficiency workshops for our operating centres, preparation of design and construction guidelines for our development centres and implementing initiatives to assist with the fitout and operation of specialty tenancies; and
- Participating in the development of the NABERS Energy Retail Tool (to monitor energy performance of operating assets) and the GBCA's Green Star Retail Design Pilot Tool.

We have completed a three-part series of Energy Efficiency Opportunities training workshops. These were attended by 137 members of our shopping centre management teams in 10 regions nationally.

As an outcome of the workshops, each management team produced an energy and water efficiency plan for their centre.

Over FY08 we invested \$3.2 million in energy and water-efficiency upgrades at 20 of our shopping centres in five states. These upgrades are being undertaken by contractors EcoSave Pty Ltd and we have forecast savings of 5.3 million kWh of electricity per year and 80.3 million litres of water a year. Over FY08, the centres undergoing works reduced electricity consumption by 4.2 million kWh and water by 72 million litres. This represents reductions of 12% for electricity and 14% for water in these 20 sites over last year. The results of these works are currently being externally verified.

### ***New developments and major redevelopments***

Expectations of the environmental performance of new buildings have increased substantially. Our customers and tenants, including government, are increasingly interested in creating and tenancing 'greener buildings'. New developments give us an opportunity to create buildings with significantly improved environmental performance.

Rather than creating isolated 'green flagships', we've focused on establishing minimum standards for our new developments. While our Office and Industrial Sustainability Manual and our Retail Charter were developed separately over the past year, the integration of the two businesses provides opportunities to align these documents.

### ***New developments***

In October 2007, we became a signatory to the Green Building Council of Australia's 'Green Star Business Partnership'. Under this agreement, we have committed to ensuring all new developments, major refurbishments and office interiors meet a minimum 4 Star Green Star rating in buildings we own or in which we are a tenant.

Projects registered for Green Star include:

- Garden Square, Mt Gravatt;
- Trinit, Macquarie Park; and
- Edmund Barton Building, Canberra.

### ***Research and innovation: sustainable office building of the future***

With the support of our CR&S Board Committee, we've been working on a research project exploring the 'Sustainable Office Building of the Future'. We commenced this project by considering three future scenarios in the year 2020:

- 'Greenification' of an existing office building (typical of our current portfolio of CBD office buildings) with all tenants vacated;
- 'Greenification' of an existing office building with most tenants in place; and
- Creation of new 'green' office buildings.

The project involved workshops with our sustainability managers, commercial architects and a services engineer from Group Design and Delivery, many of our office and industrial development and project managers and many members of the Commercial Property leadership team.

We also invited a small number of external experts to 'stretch' our thinking.

We explored the business case for greener office buildings, and the importance of 'incubating' innovative solutions.



## Performance (continued)

We set out five steps to guide our approach to managing our office portfolio into the future. That we:

1. Continue to scan the market for emerging solutions, and work with engaged and innovative partners
2. Maintain our commitment to improving our eco-efficiency performance across our existing office portfolio, supported by clear targets
3. Integrate incubator initiatives as part of our development projects, as a hands-on and pragmatic means of research and learning for our organisation
4. Consider creating and/or investing in buildings that are more readily adaptable
5. Organise our business to respond to the challenge of maintaining a commercially successful office portfolio well into the future – addressing emerging risks and meeting the expectations of our future tenants and their employees as well as our investors and regulators.

### Case Study: Stockhome

Two years ago we relocated our Sydney offices to Stockhome – a workplace designed to embody sustainability principles. Early this year we attained Australia's first 6 Star Green Star rating for an interior.

Some environmental initiatives are ongoing, such as our commitment to the CitySwitch Green Office (previously 3CBDs), a tenant energy program. Participation in this program involves commitment to achieving and maintaining a minimum 4 Star National Australian Built Environment Rating System (NABERS) Energy rating. As a goal for Stockhome, we committed to surpassing our CitySwitch commitment. We intended to achieve this rating by using tri-generation (on-site gas-fired electricity generation) as an energy source for the tenancy. This technology will be in place by the end of December 2008, and in the interim we are exploring purchasing green power to achieve this rating. We track the energy consumption of the tenancy through an energy report each month.

Prior to switching our tri-generation plant, our tenancy was using over 30% less energy than a 2.5 Star NABERS Energy tenancy. Achieving these energy ratings has been a challenge. Energy efficiency in a workspace is closely related to employee behaviours, such as lighting, computers and after hours load. To address this, our representative Stockhome Sustainability Committee develops and promotes sustainability principles and practices among people in our Sydney office. This has the added effect of further engaging our employees around our commitment to sustainability.

The committee educates and engages our employees around:

- More efficient use of resources;
- Ways we can achieve our target environmental ratings; and
- Actions in the workplace that can help reduce environmental impacts.

When we moved to our new Sydney office in April 2007, scans performed by our Information Technology (IT) team showed that just 52% of employees turned off their computers at night. Through some simple measures we have increased the nightly switch-off rate of computers to 84%. We've also configured our multi-function devices to power down into sleep mode after 45 minutes of non-activity, instead of four hours. We currently have a trial underway to reduce this to 25 minutes. Our actions were a factor in the manufacturer's decision to take the steps in reducing the default standby mode to five minutes and sleep mode to 15 minutes for office devices prior to delivery. This is an example of how we can work with our stakeholders to achieve improved environmental performance.

In November 2006, prior to our office relocation, an evaluation of the 'occupant experience' in the existing office space was undertaken as the first stage of a pre- and post-occupancy review. The purpose of the pre-occupancy review was to provide an internal benchmark against which to compare our new office.

We have since completed our post-occupancy survey. Over 200 employees provided feedback on overall satisfaction with comfort, temperature, lighting and air quality, design, image, how well the facilities meet workplace needs, and perceived health and productivity benefits.

While detailed analysis will not be delivered until later this year, early results indicate the user experience of Stockhome is significantly better than our former Sydney office. On average, our people assessed that their productivity has increased as a consequence of improved indoor environmental conditions, and a high proportion of employees rated the sustainable design features incorporated into the workspace as being important to them.

These results are now contributing to our understanding of the benefits of sustainable workplaces, informing our future commercial office development projects.

### Case Study: Tri-generation system at Stockhome

As an energy demand reduction initiative, the installation of a tri-generation system has been the last major element of our 'Stockhome' Sydney office relocation project. The tri-generation system is delivering at least a 20% reduction in greenhouse gas emissions for Stockhome and is assisting our tenancy reach its target Green Star and NABERS Energy tenancy ratings.

## Performance (continued)

This is the first time that tri-generation has been integrated into a refurbished existing building in the City of Sydney.

At Stockhome, the major components of the tri-generation plant (comprising a gas-fired generator and absorption chiller) are located on the roof of the existing retail plant room. Electricity is supplied to both the Stockhome tenancy and Piccadilly Tower, and hot and chilled water is supplied to the retail centre.

The system is providing approximately 30% of the electrical load requirement for the base building tower, and the Stockhome tenancy shares this energy.

We will look to learn from this project, understanding the possibilities and challenges associated with installing a tri-generation plant and then share our expertise with our customers and government. The system is projected to achieve a reduction of 1,100 tonnes of CO<sub>2</sub> per annum.

### Case Study: 601 Pacific Highway

Our 601 Pacific Highway asset was completed in 1988 and comprises 13 office levels, with a total area of 12,690 m<sup>2</sup>, and is conveniently located near St Leonards train station.

### Energy

In 2005, we undertook our first NABERS Energy rating for this asset, achieving 1.5 Stars. To improve our energy performance, we commenced improvement works in 2006.

In 2007, our rating improved to 3.5 Stars and by FY08 energy consumption had been reduced by 30.1% as compared to our FY05 base year.

Environmental initiatives contributing to these improvements included:

- Undertaking a Building Management System (BMS) and energy audit;
- Optimising air conditioning schedules to match occupant usage;
- Cleaning of cooling coils allowing for the variable air volume air conditioning system to be reduced by 20 per cent;
- Removing 50 per cent of tenancy lighting in toilets (saving 400 kW per year); and
- Altering the lighting schedule to reflect tenant occupancy.

In the past year these initiatives have achieved:

- A saving of \$14,040 in electricity costs;
- A reduction of 156,520 kWh in electricity consumption; and
- A reduction of 162,708 kg/CO<sub>2</sub>-e in greenhouse gas emissions as compared to our FY05 baseline year.

### Case Study: 2 Victoria Avenue, Perth

Our new office development in Perth, 2 Victoria Avenue, has been designed to achieve a high NABERS Energy rating and has been registered for a Green Star rating. Extensive automatic louvring in the western façade will provide active solar shading while being configured to maintain the building's extensive views over the Swan River.

Other environmental initiatives include:

- Greywater and stormwater detention and recycling;
- Reuse of fire protection system to drain down water;
- Active chilled beams;
- Water submetering to all base building water provisions including cooling towers, irrigation and surface washdown areas; and
- Secure bicycle spaces provided at dedicated locations.

Among the proposed environmental initiatives on this project was the use of wind-powered electricity turbines on the roof. These were initially refused (local residents were concerned with visual and aural impact); however, they were installed, following a successful appeal.

For us, this reflects the challenges sometimes associated with pioneering sustainability technology and underlines the importance of community consultation throughout the development process.

### Goal evaluation

#### 23.9 WHAT BENCHMARKS OR KEY PERFORMANCE INDICATORS DO YOU USE TO ASSESS PROGRESS AGAINST THE EMISSIONS/ENERGY REDUCTION GOALS YOU HAVE SET?

For our office portfolio, we use NABERS. A score of 2.5 Stars reflects the average energy efficiency performance of an office building in Australia. The federal government requires a NABERS building score of 4.5 Stars as part of their green lease requirements. For us, the average performance of 2.5 Stars sets a minimum baseline, with an average rating of 4.5 Stars an important long-term stretch so that we attract and retain federal government tenants (and many other tenants who increasingly placing value on green workplaces).

### Goal achievement

---

#### 23.10 WHAT EMISSIONS REDUCTIONS, ENERGY SAVINGS AND ASSOCIATED COST SAVINGS HAVE BEEN ACHIEVED TO DATE AS A RESULT OF THE PLAN AND/OR THE ACTIVITIES DESCRIBED ABOVE? PLEASE STATE THE METHODOLOGY AND DATA SOURCES YOU HAVE USED FOR CALCULATING THESE REDUCTIONS AND SAVINGS.

For narrative around savings, please refer to 23.8.

We communicate improved energy efficiency in terms of reduced energy intensity as well as absolute energy reduction:

Office:

Intensity reduction

FY06–07: 6%

FY07–08: 11%

FY06–08: 17%

Energy reduction/increase:

FY06–07: 1,301 tonne increase

FY07–08: 5,651 tonne decrease

FY06–08: 4,350 tonne decrease

Retail:

FY06–07: 7%

FY07–08: 6%

FY06–08: 13%

Energy reduction/increase:

FY06–07: 1,019 tonne decrease

FY07–08: 1,172 tonne decrease

FY06–08: 2,192 tonne decrease

## Performance (continued)

### 23.11 WHAT INVESTMENT HAS BEEN REQUIRED TO ACHIEVE THE EMISSIONS REDUCTIONS AND ENERGY SAVINGS TARGETS OR TO CARRY OUT THE ACTIVITIES LISTED IN RESPONSE TO QUESTION 23.8 AND OVER WHAT PERIOD WAS THAT INVESTMENT MADE?

Emission reduction target/energy saving target or activity	Investment number	Investment currency	Timescale
Energy saving of 5.3 million kWh electricity per year across 20 shopping centres	3,200,000	AUD	1 year

### Goal planning and investment

### 23.12 WHAT INVESTMENT WILL BE REQUIRED TO ACHIEVE THE FUTURE TARGETS SET OUT IN YOUR REDUCTION PLAN OR TO CARRY OUT THE ACTIVITIES LISTED IN RESPONSE TO QUESTION 23.8 ABOVE AND OVER WHAT PERIOD DO YOU EXPECT PAYBACK OF THAT INVESTMENT?

Plan or action	Investment number	Investment currency	Payback
Energy Efficiency Opportunities Plan – Stockland Baulkham Hills Shopping Centre	59,300	AUD	Less than 4 year payback period Energy reduction of 58,000 kWh pa CO <sub>2</sub> emissions reduction by 61 tonnes Energy and water cost savings \$25,115
Energy Efficiency Opportunities Plan – 52 Martin Place, Sydney	62,000	AUD	Less than 4 year payback period Energy reduction of 600,200 kWh CO <sub>2</sub> emission reduction by 636 tonnes Energy cost savings of \$49,600
Energy Efficiency Opportunities Plan – 135 King Street, Sydney	44,000	AUD	Less than 4 year payback period Energy reduction of 322,000 kWh pa CO <sub>2</sub> emissions reduction of 342 tonnes pa Energy cost savings of \$27,000
Energy Efficiency Opportunities Plan – 7 Macquarie Place, Sydney	26,000	AUD	Less than 4 year payback period Energy reduction of 132,000 kWh pa CO <sub>2</sub> emissions reduction by 140 tonnes pa Energy cost savings of \$11,500
Energy Efficiency Opportunities Plan – Wetherill Park Shopping Centre	14,500	AUD	Less than 4 year payback period Energy reduction of 35,000 kWh pa CO <sub>2</sub> emissions reduction by 37 tonnes pa Energy cost savings of \$3,756

---

**23.13 PLEASE ESTIMATE YOUR COMPANY'S FUTURE SCOPE 1 AND SCOPE 2 EMISSIONS FOR THE NEXT FIVE YEARS FOR EACH OF THE MAIN TERRITORIES OR REGIONS IN WHICH YOU OPERATE OR PROVIDE A QUALITATIVE EXPLANATION FOR EXPECTED CHANGES THAT COULD IMPACT FUTURE GHG EMISSIONS.**

We expect to use our CCAP online tool to assist with setting robust longer term targets for Scope 1 and Scope 2 emissions based on evidence from past projects and our participation in the Energy Efficiency Opportunities program.

---

**23.14 PLEASE ESTIMATE YOUR COMPANY'S FUTURE ENERGY USE FOR THE NEXT FIVE YEARS FOR EACH OF THE MAIN TERRITORIES OR REGIONS IN WHICH YOU OPERATE OR PROVIDE A QUALITATIVE EXPLANATION FOR EXPECTED CHANGES THAT COULD IMPACT FUTURE GHG EMISSIONS.**

Please refer to 23.13.

---

**23.15 PLEASE EXPLAIN THE METHODOLOGY USED FOR YOUR ESTIMATIONS AND ANY ASSUMPTIONS MADE.**

N/A

### Planning

---

**24.1 HOW DO YOU FACTOR THE COST OF FUTURE EMISSIONS INTO CAPITAL EXPENDITURES AND WHAT IMPACT HAVE THOSE ESTIMATED COSTS HAD ON YOUR INVESTMENT DECISIONS?**

The cost of future emissions is factored into capital expenditure through annual strategy refreshing and budget setting.

Throughout the year, risks and opportunities are explored – to achieve lower carbon buildings in new projects, and to reduce emissions across our existing portfolio.

During the past year we have modelled likely rising electricity costs (largely attributable to the proposed Carbon Pollution Reduction Scheme) and explored the potential (and cost) to deploy low carbon technology, including co/tri-generation in existing assets and new development projects.

The energy performance of assets is now an important factor in the sale and acquisition of assets, particularly as we look to raise the performance average across the office portfolio.

Our CCAP online tool has been designed to enable us to forecast future emissions. Forecasting emissions will assist with setting business targets and modelling initiatives and thereby will aid decision-making around capital expenditure towards achieving improved energy efficiency.

We have also used CCAP to prepare a Stockland-evidence based carbon abatement cost curve. This is now helping us to better understand where to invest to achieve the most significant emissions reductions across our portfolio.

Investment into eco-efficiency is generally reviewed on the basis of a payback period (five years for our Energy Efficiency Opportunity projects), to ensure the most effective employment of capital. On occasion, funds will be deployed into more costly innovative technology as a means to explore new low carbon technological solutions.

We expect that our emerging capacity to model the effectiveness of eco-efficiency solutions (via our CCAP online tool) will inform target setting and future development and capital expenditure decisions.

### Responsibility

---

#### 25.1 DOES A BOARD COMMITTEE OR OTHER EXECUTIVE BODY HAVE OVERALL RESPONSIBILITY FOR CLIMATE CHANGE?

Yes.

---

#### 25.2 PLEASE STATE HOW OVERALL RESPONSIBILITY FOR CLIMATE CHANGE IS MANAGED AND INDICATE THE HIGHEST LEVEL WITHIN YOUR COMPANY WITH RESPONSIBILITY FOR CLIMATE CHANGE.

Overall responsibility for climate change is managed in four ways:

- Highest level: Stockland's Board and the Board's Corporate Responsibility and Sustainability Committee;
- Executive Committee;
- Professional Sustainability Managers within corporate and business unit roles, leading strategic responses to climate change and other facets of sustainability. This team is indirectly led by the General Manager CR&S (reporting to the Executive Committee), who is also responsible for engagement with other senior leaders, including the General Manager, Health, Safety and the Environment, and the Chief Risk Officer; and
- All employees have a responsibility for sustainability performance. This is reflected in all employees' balanced scorecards comprise a sustainability objective (KPI).

---

#### 25.3 WHICH BOARD COMMITTEE OR OTHER EXECUTIVE BODY HAS OVERALL RESPONSIBILITY FOR CLIMATE CHANGE?

Our Board constituted a CR&S Committee on 9 August 2005.

The current members of the committee are:

- Mr G Bradley, Chairman, Stockland, Non-executive Director;
- Mr N Greiner, Deputy Chairman, Stockland; Chairman, CR&S Committee, Non-executive Director;
- Mr B Neil, Non-executive Director; and
- Mr M Quinn, Managing Director, Stockland, Executive Director.

The Secretary of the committee is Ms K Munsie, Executive General Manager, Corporate Affairs. The General Manager, CR&S, the General Manager, Health Safety and Environment and the Executive General Manager Human Resources and other senior executives and managers attend by invitation.

The purpose of the CR&S Committee is to assist the Board in overseeing our commitment to operate our businesses ethically, responsibly and in a sustainable way.

The CR&S Committee's role includes reviewing the social, environmental and ethical consequences of our current and planned operations. The committee meets at least three times annually, or more frequently as circumstances dictate.

Our Board's CR&S Committee and our Executive Committee have been engaged on the progress of our Climate Change Action Plan. Over the past year, the Committee has made specific requests for briefings related to climate risk, including:

- a presentation from our insurance broker on climate change risks;
- analysis of coastal sites and flood risk; and
- review of bushfire risk.

---

#### 25.4 WHAT IS THE MECHANISM BY WHICH THE BOARD OR OTHER EXECUTIVE BODY REVIEWS THE COMPANY'S PROGRESS AND STATUS REGARDING CLIMATE CHANGE?

##### Board

The CR&S Board Committee overviews Stockland's CR&S Strategy, including our Climate Change Action Plan.

A monthly report on CR&S, including environmental sustainability issues and progress, is submitted to the Executive Committee and to the Board. The Commercial Property business reports track energy efficiency performance.

##### Management

To lead performance within the organisation, Stockland has appointed a number of positions. The purpose of these roles is to integrate sustainability practices into our business.

- General Manager, Corporate Responsibility and Sustainability;
- General Manager, Health, Safety and Environment (HSE);
- National Sustainability Manager, Commercial Property;
- National Sustainability Manager, Residential; and
- Sustainability Manager, Group Design and Delivery.

### Employee CR&S Committee

Stockland's CR&S Strategy is refreshed annually by our Employee CR&S Committee. This strategy is reviewed by the Board's CR&S Committee.

Stockland's Employee CR&S Committee is chaired by the General Manager, CR&S. This committee meets monthly to track progress against the CR&S strategy. Membership of our Employee CR&S Committee comprises our National Sustainability Managers as well as wide representation across the business including government relations, procurement, Health, Safety and Environment (HSE), compliance audit and risk, strategic urban planning and stakeholder engagement.

### Stockland UK

Stockland UK developed a CR&S Strategy and established its Stockland UK Employee CR&S Committee in January 2008. Australian sustainability managers engage monthly with members of the Stockland UK Employee CR&S Committee.

Stockland UK developed a Stockland UK CR&S Strategy in December 2007 and commenced reporting as part of Stockland's 2008 CR&S Report.

### Individual performance

---

#### 26.1 DO YOU PROVIDE INCENTIVES FOR INDIVIDUAL MANAGEMENT OF CLIMATE CHANGE ISSUES INCLUDING ATTAINMENT OF GHG TARGETS?

Yes.

---

#### 26.2 ARE THOSE INCENTIVES LINKED TO MONETARY REWARDS?

A minimum 10% of the short term incentive opportunity, for all employees, is required to be assigned to the achievement of CR&S and HSE objectives. CR&S objectives are generally focused on environmental performance for the coming year, including actions to reduce greenhouse gas emissions for existing assets and built form development projects.

---

#### 26.3 WHO IS ENTITLED TO BENEFIT FROM THOSE INCENTIVES?

All employees are entitled to receive a short term incentive – reflecting performance against their balanced scorecard, comprising finance, people, stakeholders, and CR&S objectives.

In mid 2006, we rolled out a balanced score card performance management system encompassing finance, people, stakeholders, customers and CR&S objectives for all of our employees.

We have also established an energy budget for all assets in our retail portfolio. For FY09 this has been set at 95% of emissions for FY08, and for FY10, 95% of emissions for FY09. Responsibility and reward for achieving these budgets has been built into employees CR&S objectives in their performance scorecard. A series of suggested CR&S objectives have been developed for each of our key job families (e.g. Development Managers). Individual CR&S objectives have been developed for most members of Executive Committee and Senior Leadership Team.

### Communications

---

#### 27.1 DO YOU PUBLISH INFORMATION ABOUT THE RISKS AND OPPORTUNITIES PRESENTED TO YOUR COMPANY BY CLIMATE CHANGE, DETAILS OF YOUR EMISSIONS AND PLANS TO REDUCE EMISSIONS?

We published our first CR&S report in 2006. This report set out our approach to corporate responsibility and sustainability and included greenhouse gas emissions reporting. Our subsequent reports (2007, 2008) include data and assertions assured independently to the AA1000 Assurance Standard and attained Global Reporting Initiative (GRI) level B+.

We are currently preparing our 2009 CR&S Report, due for publication at the same time as our Annual Report in September 2009. We anticipate including and restating data sets for FY06, FY07 and FY08, in terms of total emissions and intensity, to accurately reflect our performance over the past four years.

All our past annual CR&S Reports and Carbon Disclosure Project submissions can be publicly accessed at [www.stocklandsustainability.com.au](http://www.stocklandsustainability.com.au)

---

#### 27.2 IF SO, PLEASE INDICATE WHICH OF THE FOLLOWING APPLY AND PROVIDE DETAILS AND/OR A LINK TO THE DOCUMENTS OR A COPY OF THE RELEVANT EXCERPT OF THE COMPANY'S ANNUAL REPORT OR OTHER MAINSTREAM FILINGS.

No.

### 27.3 VOLUNTARY COMMUNICATIONS (OTHER THAN TO CDP) SUCH AS CORPORATE SOCIAL RESPONSIBILITY REPORTING.

Stockland voluntarily reports on the risks and opportunities presented by climate change, details of our emissions, and plans to reduce our emissions:

FY08 – assured to AA1000AS

FY07 – assured to AA1000AS

FY06 – first report

FY09 reporting is currently underway, and will be assured to the refreshed standard, AA1000AS 2008.

#### Public policy

### 28.1 DO YOU ENGAGE WITH POLICYMAKERS ON POSSIBLE RESPONSES TO CLIMATE CHANGE INCLUDING TAXATION, REGULATION AND CARBON TRADING?

Stockland has long engaged with policy makers in response to current and emerging climate change policy and regulation.

We actively engage with our peers on sustainability and climate change to inform public policy, particularly through the PCA's National Sustainability Roundtable, and the GBCA. We are represented on the Board of both of these organisations. Through our roles in both organisations, we help shape public policy, particularly in relation to sustainability and the property sector.

Over the past year, our involvement in PCA activities on sustainability and climate change has included:

- Collaborative development of an industry view to interpret and address the requirements of the federal government NGERs;
- Presentations at numerous forums and training programs with an emphasis on improving energy efficiency across the sector;
- Contribution to a manual for reporting on sustainability and corporate responsibility performance enabling improved benchmarking of performance; and
- Input to a range of submissions of government, climate change adaptation and proposed energy and carbon reporting requirements. In particular, we have supported efforts to achieve swifter energy efficiency action, and continue to support moves for accelerated (green) depreciation and complementary mechanisms such as white certificates to incentivise energy efficiency.

Our involvement with the GBCA has included:

- Extensive participation in the annual Green Cities Conference, including leading engagement with a range of environmental/social/governance (ESG) investors on sustainability and property;
- Attaining 6 Star ratings for our Sydney offices, "Stockhome" and for 2 Victoria Avenue, Perth. We have since shared lessons learnt through both these projects at GBCA forums;
- Involvement in the Technical Steering Committee responsible for governance for the Green Star suite of tools and membership of the panel of assessors;
- Provision of regular feedback to the Green Star technical team on the efficacy of existing tools; and
- Participation in the shaping of emerging tools, including Green Star Industrial, Green Star Multi-Unit Residential and Green Star Precinct.

We have directly engaged with national policy makers and advisers through participation in meetings via our membership of the PCA, the GBCA, the Investor Group on Climate Change (IGCC) and, more recently, the Built Environment Industry Innovation Council.

We continue to work with government agencies on energy efficiency policy and the development of sustainability rating tools for property:

- We continue to support the NSW Department of Environment and Climate Change on the development of an energy efficiency tool for shopping centres NABERS Energy Retail. We have also participated in the Technical Advisory Group on a NABERS tool for transport, exploring the correlation between emissions, public transport availability and office accommodation.
- We have actively engaged with the Department of the Environment, Water, Heritage and the Arts and officers supporting the Council of Australian Governments (COAG) on the National Strategy for Energy Efficiency.
- We have also sought feedback on our performance and how we can work more effectively with government, specifically from the NSW Department of Energy and Climate Change.

We also actively engage with local government on sustainability and climate change. For example, we continue to support the City of Sydney's Sustainable Sydney 2030 Strategy, including sharing lessons learned in our implementation of tri-generation technology and we remain an advocate of CitySwitch, a local government led initiative, encouraging office tenants to "do their bit" towards energy efficiency.



