

Carbon Disclosure Project 6 (CDP6) Greenhouse Gas Emissions and Climate Change Questionnaire Response



Orion Shopping Centre, Springfield, QLD
Australia's first six star Green Star Shopping Centre

2008

Carbon Disclosure Project 6

Greenhouse Gas Emissions and Climate Change Questionnaire Response



Beachside Leighton, Leighton Beach, WA

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Foreword



The 6th Carbon Disclosure Project (CDP) reporting period coincided with continued growth in public interest in climate change, significant public debate and some dramatic shifts in policy across the Australian economy - Mirvac's primary market. By ratifying the Kyoto Protocol as its first official act, the Rudd Labor Government sent a clear message that decisive action on climate change is emerging as a high priority in Australia, for Government, businesses and the community alike.

The reporting period also coincided with some significant changes within Mirvac with regard to our management of sustainability and climate change issues. Mirvac's continued delivery of world leading sustainable developments 'on the ground' including the 6 star Green Star Orion Springfield shopping centre, was enhanced by the adoption of a Group-wide sustainability strategy structured around six priority areas, with climate change as a key component of the strategy. In December 2008 Mirvac will report progress against the over 100 commitments and targets of the sustainability strategy.

This year marks the third time Mirvac has been invited and has participated in the Carbon Disclosure Project. Participation has allowed Mirvac to better quantify the challenges and opportunities presented by climate change, and driven important strategic decisions regarding how we do business. I am proud that Mirvac's participation in the CDP has continued to be recognised by its nomination to the Australia/New Zealand Climate Disclosure Leadership Index for the past two years running.

This year, along with our standard disclosures, I am pleased to provide discrete asset-level analysis of the current and targeted performance of commercial office assets across Mirvac Property Trust and Mirvac Real Estate Investment Trust, and strategies to achieve these targets. As our strategic focus sharpens, and data systems continue to improve, Mirvac aims to provide similar detail for its remaining business units.

As understanding of the economic impacts of a price on carbon increases, Mirvac continues to position its diverse business assets within a framework of strategies and targets to minimise exposure to such impacts and maximise opportunities across the Group.

A handwritten signature in black ink, appearing to read 'G. Paramor', written in a cursive style.

Greg Paramor
Managing Director

Introduction



The Mirvac Group

Mirvac is a leading integrated real estate group, listed on the ASX with approximately \$28 billion of activities under control across the real estate funds management and development spectrum. Established in 1972, Mirvac has more than 35 years of experience in the real estate industry and has an unmatched reputation for delivering quality products across all of its businesses.

As at 31 December 2007, the Funds Management division had \$13.5 billion of activities under control across internal and external funds management. Internal Funds Management, with a total portfolio value of \$4.2 billion, had investments in 57 properties, covering the commercial, retail, industrial and hotel sectors as well as investments in a number of Mirvac's other managed funds.

External Funds had real estate and infrastructure funds under management of \$9.3 billion, and a managed hotel portfolio of 5,364 rooms across 40 properties in Australia, New Zealand and the Pacific.

Development comprises two principal areas; residential (housing, medium and high density housing, and land sub-division) with \$12.1 billion activities under control and a future pipeline of 29,067 lots; and non-residential with

\$2.2 billion activities under control. Mirvac continues to successfully deliver on its strategy of diversifying into more non-residential development across the commercial, industrial and retail sectors.

An undisputed leader in its field, Mirvac is committed to the provision of exceptional service, outstanding developments, and sound investment opportunities, all of which carry the highly respected Mirvac 'Mark of Quality'.

Mirvac and Sustainability

Mirvac integrates environmental, social and economic considerations to deliver sustainable development and investment outcomes across the Group for the benefit of stakeholders and the broader community.

Sustainability is an essential element in Mirvac's planning, designing, building and managing activities across all property sectors in which it is engaged. Mirvac demonstrates industry leadership in introducing new technologies and practical measures to reduce greenhouse gas emissions and promote energy and water saving practices in such projects as Australia's first solar suburb, Newington, in Sydney, and the world leading retail development, Orion Springfield in southeast Queensland.



Waverley Park 6+ Star Homes, VIC

Mirvac's approach and commitment to sustainability is well recognised. Mirvac has maintained its listing on United Kingdom's FTSE4Good Global Index. A listing in the Australian SAM Sustainability Index (AuSSI) recognises Mirvac as one of the top sustainability-driven companies within the entire Australian economy. Mirvac was awarded the prestigious 2007 Banksia Climate Award in recognition of Mirvac's innovative partnership with GridX Power in the development of Vision Estate at Glenfield, a world first for the residential mass housing sector with power generated by natural gas. Mirvac was also awarded the 2007 HIA Boral Greensmart Estate of the Year for Magenta Shores.

Mirvac is also recognised as having a strong commitment to the next generation of students who need to develop an understanding of the growing importance of sustainability and bring that knowledge into the business world. In June 2006 Mirvac partnered with Bond University to create the Mirvac School of Sustainability and Australia's first tertiary program in sustainable development.

Mirvac continues to develop and consolidate its sustainability strategy, the cornerstone of which includes clear performance objectives, targets and measures that provide the necessary structure for the Group's forward planning and expansion. Mirvac has set itself 100 commitments or performance targets against six sustainability priority areas.

Further details on Mirvac's sustainability commitments including the 2007 Sustainability Report are available from www.mirvac.com.au.

1 Risks and Opportunities

Objective: To identify strategic risks and opportunities and their implications.

A. Risks

I. Regulatory Risks: How is your company exposed to regulatory risks related to climate change?

Increased Domestic Regulation

The trend of the past few years towards climate change-related regulation has rapidly accelerated in the past 12 months, with a range of different legislation, policies, programs, systems and schemes now, or soon to be in effect at the Local, State and Federal levels. These schemes have a variety of foci and administering bodies, and have often been developed in isolation from one another, leading to a non-standard, complex, and duplicative regulatory environment.

Mirvac is exposed to a number of climate change-related regulatory schemes, including various State and Federal building codes, planning and design regulations, and energy and Greenhouse Gas (GHG) emissions programs.

At a Federal level, Mirvac is required to report under the Energy Efficiency Opportunities (EEO) Program, and the National Greenhouse and Energy Reporting System (NGERS).

Under EEO, Mirvac must perform energy efficiency audits on a number of facilities by June 30th 2008, with the balance of audits to be conducted by June 30th 2011.

NGERS requires large energy-using companies to report annually on GHG emissions, reductions, removals and offsets, and energy consumption and production figures. The first report under NGERS is due by August 31st 2009.

Mirvac strongly supports the establishment of a single streamlined system for mandatory corporate reporting of energy use, energy efficiency opportunities and GHG emissions data. Mirvac has engaged with the Department of Resources Energy and Tourism (DRET) as administrators of EEO and the Department of Climate Change (DCC) as administrators of NGERS to advocate for the amalgamation, or at minimum, the full alignment, of NGERS and the EEO.

Programs developed at State and Local level should not duplicate coverage of EEO/NGERS and should structure data requirements to ensure participants can meet all reporting requirements from a single data set. This same requirement should also be met by any programs proposed under the National Framework for Energy Efficiency, including mandatory disclosure of commercial building energy efficiency.

Mirvac expects regulatory schemes will continue to emerge, as Governments at all levels seek to act on climate change. Uncertainty surrounding emerging and existing regulatory schemes, along with increased reporting complexity, and escalating compliance costs represent the biggest regulatory risk to Mirvac. However, Mirvac's strong track record in managing energy and GHG emissions, active participation with industry groups and strong relationship with Government

means that it is well placed to respond to reporting requirements, and contend with potential regulatory amendments and expansion.

While greater disclosure and public scrutiny of the energy performance of individual assets may provide an incentive to improve performance, there is the potential for impacts on asset valuation for poorly performing assets. In recognition of this risk, Mirvac has committed to achieve an average 3 star NABERS Energy rating (previously ABGR) on all commercial buildings in the sustainability performance management and reporting program across Mirvac Property Trust (MPT), and Mirvac Real Estate Investment Trust (MREIT).

Australian Emissions Trading Scheme (AETS)

The Australian Government is establishing an Australian Emissions Trading Scheme (AETS) as the central mechanism in achieving the Government's goal of reducing Australia's GHG emissions by 60 per cent by 2050. Detailed design for the AETS should be finalised by the end of 2008 with the scheme starting no later than 2010. The introduction of an AETS is expected to have a significant economy-wide impact.

At the time of writing, the structure of AETS is still under development and while there is extensive public conjecture, there remains considerable uncertainty around AETS design, with many individual parties and industry sectors advocating for a variety of structure designs and complementary mechanisms.

Analysis of early policy and discussion papers and commentary indicates that property will not be a covered sector under the AETS and would therefore not be subject to an emission cap and not be required to acquire permits under the scheme.

There may be a possibility of complementary mechanism for energy efficiency credits/offsets from the property sector. The March 2008 Garnaut Climate Change Review Discussion Paper¹ did indicate support for a mechanism for credits/offsets generation from reductions in sectors not covered by the scheme, but acknowledges that further investigation was required.

Mirvac is working with both the Green Building Council of Australia and the Property Council of Australia as they advocate a complementary mechanism that would allow for the generation of credits/offsets from energy efficiency initiatives within the property sector as an incentive for accelerated adoption of wholesale energy efficiency improvement.

Although property is unlikely to be a covered sector, significant AETS flow through impacts can be anticipated as a direct result of increased energy prices. As a large energy user (as defined by EEO), Mirvac has significant exposure to increased energy prices and this will need to be managed through the value chain. Indirectly, the relative cost of commodities across the economy will shift in direct proportion to the energy/carbon intensity of the relevant supply chain. Production of some construction materials involves significant GHG emissions, creating further exposure to a price for carbon.

Mirvac manages \$127.2 million in forestry assets across Australia and New Zealand, through the Australia and New Zealand Sustainable Forestry Investors. ASFI and NZSFI were established to leverage the opportunities associated with emissions trading. There is uncertainty as to specific

¹ Garnaut, R., 2008. *Emissions Trading Scheme Discussion Paper*, <http://www.garnautreview.org.au/CA25734E0016A131/pages/reports,-papers-and-specialist-submissions>

1 Risks and Opportunities

rules that will apply to the forestry sector under an AETS in the period from commencement through to 2012, if indeed the sector is allowed to participate at all. Mirvac has argued for forestry's immediate inclusion and will continue to argue throughout the ongoing consultation process.

Under the New Zealand framework for an ETS established in September 2007 pre-1990 forest sector will be a covered sector where owners will incur a liability within the NZ ETS if they remove the trees on their land and introduce a new land use. A yet-to-be determined free allocation of NZU's (credits) will be issued to landowners on a per hectare basis of pre-1990 forest and physically granted in 2010. NZSFI has circa 3,000 Ha of pre-1990 forest out of a total net planted area of circa 9,000 Ha.

Mirvac awaits greater detail on the AETS, including the Garnaut Climate Change Review Draft Report, Minister Wong's Green Paper, and the Wilkins Review. Expectations are high that these reports will provide business with a clear picture of Australia's future policy direction, allowing more detailed and reliable business impact modelling.

International Regulatory Exposure

Mirvac has not identified any current material regulatory risk facing the business in any overseas markets in which it operates.

Mirvac has a limited number of assets in foreign markets, including the United States, New Zealand, Vanuatu and the UK. Mirvac's US assets, which form its largest overseas holding, are managed by an external agent. This agent is responsible for managing Mirvac's regulatory compliance in the US market.

As operations continue to expand overseas, including into the UK, and UAE, Mirvac will continue to closely monitor all areas of risk, including regulatory risk in general, and climate change risk specifically.

II. Physical Risks: How is your company exposed to physical risks from climate change?

The science of climate change has come into sharper focus over the past 12 months, with the release of the Intergovernmental Panel on Climate Change's (IPCC) 4th Assessment Report², along with a number of key Australian research papers, such as CSIRO's Climate Change in Australia - Technical Report³.

The IPCC restated in the 4th Assessment Report that warming of the climate systems is unequivocal, as evidenced through observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level.

As a real estate company with extensive fixed property assets, Mirvac recognises the potential for wide physical risk exposure from climate change, and thus pays close attention to emerging research detailing where and how these impacts may manifest. Mirvac has identified the potential

² Intergovernmental Panel on Climate Change, 2007. *Climate Change 2007: Synthesis Report*, http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf

³ CSIRO, Australian Bureau of Meteorology, 2007. *Climate change in Australia: Technical Report 2007*, <http://www.climatechangeinaustralia.gov.au/resources.php>

for physical risk across its property portfolio, in particular in the following areas:

- Increased risk of damage from flooding – greater storm events and changes to flood zones
- Increased risk of coastal inundation by rising sea levels
- Increased likelihood of blackouts in electricity demand constrained areas
- Increased energy consumption and costs due to higher temperatures
- Increased risk of damage due to more intense tropical cyclones and storms
- Increased bushfire risk

Recognising this risk, Mirvac has committed to conducting a high level physical risk mapping exercise of its current portfolio, using best available science, and modern assessment techniques to identify vulnerable assets. This exercise will focus on maintaining asset integrity and value over the long term.

Mirvac has also established a Mirvac Scorecard to establish and assess sustainability performance across all developments and promote action beyond compliance, commencing with residential – houses, multi unit dwellings and land subdivision. The Scorecard stipulates a variety of mandatory measures, or ‘Mirvac Standards’, including the application of a ‘sustainable site selection’ checklist giving consideration to physical climate change risks as described. The Scorecard also provides incentives to reach more ambitious targets. This Scorecard is being trialled at a number of sites, with a view to implement it across all new developments in the near future.

In conducting development activities, Mirvac relies on local planning authorities to zone land and implement development controls in accordance with local conditions, including the physical impacts of climate change. Mirvac applauds the efforts of a number of Councils, including the 15 members of the Sydney Coastal Councils Group⁴, who have begun conducting detailed local assessments of physical climate change risks. Mirvac encourages all planning authorities to follow suit, and to incorporate their findings into relevant planning regulations.

As mentioned above, Mirvac manages \$127.2 million in forestry assets across Australia and New Zealand, through ASFI and NZSFI. These assets are potentially at risk from:

- Changed weather regimes
- Water security and drought
- Changed growth regimes
- Long-term auditing and verification of carbon benefits
- Impacts from disease and pathogens
- Fire damage and loss of assets and carbon benefits

Mirvac has a detailed risk management strategy pertaining to these assets, which includes geographic dispersion of assets, diversity of tree age and species, water budgeting, and pest management among other measures.

⁴ Preston, B., Smith, T., Brooke, C., Gorddard, R., Measham, T., Withycombe, G., McKinnes, K., Abbs, D., Beveridge, B., and Morrison, C., 2008. *Mapping Climate Change Vulnerability in the Sydney Coastal Councils Group*, Prepared for the Sydney Coastal Councils Group. <http://www.sydneycoastalcouncils.com.au/system-approach-to-regional-climate-change-adaptation-strategies-in-metropolises/downloads.php>

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III. General Risks: How is your company exposed to general risks as a result of climate change?

Climate change presents a broad range of risks to Mirvac, across a variety of areas, including regulatory and physical risk, as well as financial, operational and strategic risk.

The rapid rise of public awareness of climate change has led to a shift in the expectations of customer, investors and the community. Businesses in general and the property sector specifically have been identified as key contributors to GHG emissions, and are faced with an increasingly literate public, expecting meaningful and far-reaching action in the short term.

Failure to deliver on public expectations poses a risk to corporate reputation, and may lead to a loss of consumer confidence or social licence to operate. Similarly, companies seen to be underperforming in this area may also experience reduced ability to attract and retain talent.

As the physical risks of climate change become more accurately quantified at a local level, Mirvac expects to see changes in the insurance industry, including higher insurance premiums for at-risk assets and locations. In an extreme case, this may lead to an asset or business activity being deemed uninsurable. At the same time, asset owners able to demonstrate strong management systems and proactive measures to reduce climate change risk may enjoy reduced premiums.

As previously discussed, Mirvac anticipates significant AETS flow through impacts as a direct result of increased energy prices. The relative cost of commodities across the economy will shift in direct proportion to the energy/carbon intensity of the relevant supply chain.

Companies with low carbon intensities, in absolute terms and relative to their industry, will obtain a clear competitive advantage in a low carbon economy. As reported in the Carbon Disclosure Project Report 2007 - Australia and New Zealand⁵, when calculating cost of carbon as a percentage of EBITDA, Mirvac has a relatively low intensity compared to other large reporting organisations. This fact, coupled with Mirvac's strong history of managing energy use and GHG emissions, will position Mirvac to maximise this advantage.

⁵ Thrive Sustainability Services, 2007. *Carbon Disclosure Project Report 2007: Australia and New Zealand*, <http://www.cdproject.net/currentreports.asp>

IV. Risk Management: Has your company taken or planned action to manage the general and regulatory risks and/or adapt to the physical risks you have identified?

As mentioned above, Mirvac has recently released a detailed, Group-wide sustainability strategy, and will report progress against over 100 targets and commitments in six sustainability priority areas in December 2008. Mirvac's Group Sustainability Manager is responsible for overseeing action against this strategy.

Over the past 12 months, Mirvac's dedicated sustainability team has grown, through the appointment of a Group Sustainability Projects Coordinator, and Sustainability Managers for Mirvac Real Estate Services, and in Development activities in Western Australia, Victoria, New South Wales and Queensland.

In addition to these new positions, Mirvac has established Sustainability Committees at the Group-level and in each State, as well as across a number of business units including Funds Management and Hotels and Resorts. These committees are drawn from representatives across the organisation, and are responsible for implementing specific actions under the Group Sustainability Strategy. Consideration of the regulatory, physical and general risks posed by climate change falls within the responsibilities of these committees. Please see question 4(A)(II) for additional details on Mirvac's Sustainability Committee structure.

Mirvac also engages in Group-wide risk management, through the Audit, Risk and Compliance Committee (ARCC). The role of the ARCC is to assist the Board in fulfilling its oversight responsibilities in relation to the Group's financial reporting, legal and regulatory compliance, internal controls and risk management as well as the internal and external audit functions. Also reporting to the ARCC is the Compliance Committee which has direct responsibility for monitoring and reviewing the Compliance Plans of Mirvac Group entities that hold Australian Financial Service (AFS) licences, and overseeing their adherence to all applicable laws and regulations.

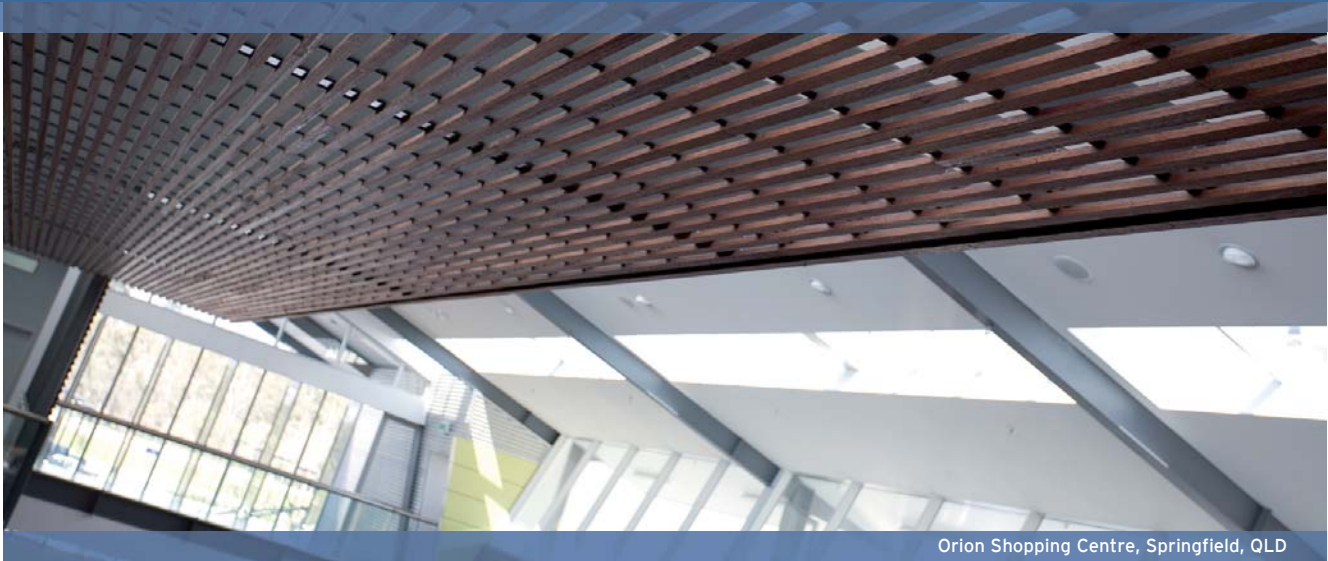
Recognising the need for quality data, Mirvac is also investing in comprehensive data capture and reporting systems. Please see questions 2(E) and 3(A)(IV) for details.

V. Financial and Business Implications: How do you assess the current and/or future financial effects of the risks you have identified and how those risks might affect your business?

In addition to the financial and business implications discussed above (questions 1(A)(I) - 1(A)(IV)), Mirvac is developing a strategy to assess business sensitivity to climate change risks in general, and emissions trading specifically.

Mirvac will seek to model various supply chain and energy price scenarios on individual projects and business activities to determine the impacts of costs increases. This review will provide Mirvac with valuable business planning information, allowing us to adequately prepare for the introduction of the AETS.

1 Risks and Opportunities



Orion Shopping Centre, Springfield, QLD

B. Opportunities

I. Regulatory Opportunities: How do current or anticipated regulatory requirements on climate change offer opportunities for your company?

Mirvac's commitment to leadership in sustainability, diverse skill base, and early mover advantage means it is well positioned to take advantage of opportunities arising from current or future regulation.

Aligned with increased climate change regulation has been an increase in funding and grants from State and Federal Governments to pursue climate change-related projects. Under the New South Wales Department of Climate Change Green Business Program, Mirvac was recently awarded approximately \$1.3 million in funding to pursue energy savings programs, including a tri-generation system at a new development in Newcastle, and building upgrades to three Sydney commercial properties. When further details are released, Mirvac will review opportunities under the Federal Government \$90 million Green Building Fund offered as part of the Clean Business Australia initiative.

As previously stated, Mirvac strongly supports the establishment of a single streamlined system for mandatory corporate reporting of energy use, energy efficiency opportunities and GHG emissions data. Mirvac has a sound track record in tracking and reporting energy use, which positions it well to meet mandatory requirements, however mandatory reporting has provided added incentive to maintain and improve energy and GHG emissions data systems and introduced higher levels of focus and discipline at operational levels. Please see question 2(E) for more information on data management at Mirvac.

Through EEO, Mirvac has identified a range of energy efficiency opportunities across audited sites, and in accordance with upgrade plans, has begun efforts to realise these opportunities. As audits continue across the portfolio, Mirvac expects the number of identified opportunities will grow substantially.



Predicted increases in electricity, fuel and materials cost will impact on project feasibilities, including new projects, upgrades, and redevelopments. Higher energy costs may lead to shorter payback periods on energy efficiency projects and Mirvac will regularly review investment decisions to take into account such changes. Mirvac will continue to monitor regulatory drivers and energy costs, and maintain a proactive approach to energy and GHG emissions-focused projects.

Mirvac is investigating opportunities around proposed photovoltaic (PV) feed-in tariffs, where small scale energy generators may be paid fixed, or premium prices to sell electricity to the grid. Mirvac will report on these opportunities as investigations progress.

II. Physical Opportunities: How do current or anticipated physical changes resulting from climate change present opportunities for your company?

From a whole of business perspective, the anticipated physical changes resulting from climate change are not considered to present extensive business opportunities for Mirvac.

However, this is an area in which Mirvac continues investigations and closely monitors emerging research into how the effects of climate change will impact various locations across Australia. The CSIRO's *Climate Change in Australia: Technical Report 2007*⁶ and various Department of Climate Change reports⁷ show areas of Australia likely to experience changes in temperature, rainfall and storm patterns, increased number and frequency of droughts, sea level rise along with other physical changes.

As these changes manifest, they will have an impact on where and how we live, work and recreate. The establishment of new developments may be required to deal with changing population dynamics. As a national developer with broad experience in residential, retail, commercial, industrial and hotel development, Mirvac is well positioned to deliver the required services to meet emerging needs.

Research from the CSIRO⁸ has indicated that under various emissions scenarios, climate change will have limited impact on electricity demand in Sydney and Melbourne, compared to other locations across Australia. Mirvac's assets, located mainly in and around Sydney and Melbourne, will not experience such severe electricity demand issues as properties in other locations, thus reducing some elements of supply chain risk.

While also posing risks, climate change may have a positive impact on Mirvac's forestry assets, through increased rainfall and warmer temperatures, leading to improved growth. However, Mirvac is not aware of any scientific studies which provide sufficient detail to assess the physical impacts on these assets locations.

⁶ CSIRO, Australian Bureau of Meteorology, 2007. *Climate change in Australia: Technical Report 2007*, <http://www.climatechangeinaustralia.gov.au/resources.php>

⁷ Australian Government, Department of Climate Change, 2008. *Impacts and Adaptation Publications*, <http://www.climatechange.gov.au/impacts/publications/>

⁸ CSIRO Atmospheric Research, 2002. *Climate Change and Australia's Coastal Communities*, <http://www.cmar.csiro.au/e-print/open/CoastalBroch2002.pdf>

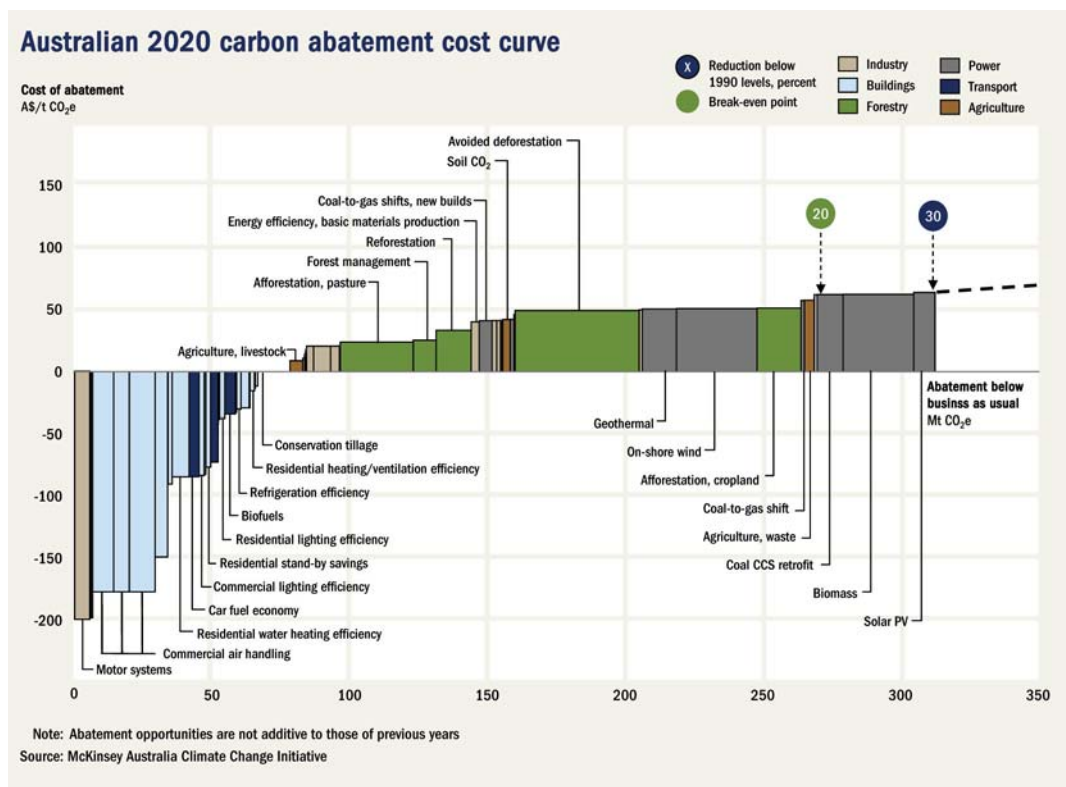
1 Risks and Opportunities

III. General Opportunities: How does climate change present general opportunities for your company?

Much has been said about the capacity of the property industry to make deep cuts in energy and GHG emissions, through low and negative costs measures. In February 2008, McKinsey and Company released *An Australian Cost Curve for Greenhouse Gas Reduction*⁹, a highly influential report looking at where, and at what costs Australia can reduce GHG emissions.

McKinsey concluded that by 2030, a total of 60Mt of carbon-reduction opportunities can be found in the built environment, all at low or negative costs on an economy wide basis. Most of these opportunities (~50Mt) will be available by 2020, and many can be implemented today.

Figure 1: Australian 2020 Carbon Abatement Cost Curve



However, the existence of carbon-reduction opportunities, even at a negative cost to the economy as a whole, does not automatically provide the impetus to pursue these savings. Mirvac has identified a number of key barriers which must be overcome if these opportunities are to be realised.

⁹ McKinsey and Company, 2008. *An Australian Cost Curve for Greenhouse Gas Reduction*, http://www.mckinsey.com/client/service/ccsi/pdf/Australian_Cost_Curve_for_GHG_Reduction.pdf



Specifically:

- There are split incentives for pursuing energy efficiency in the property sector, in that the costs and benefits are not shared equally between developers, building owners, managers, tenants and other stakeholders in a building life cycle.
- Adopting energy efficiency strategies requires upfront investment by businesses and households to become more energy efficient, with payback achieved gradually, often accruing over the medium to long term, as savings on energy bills. The availability of capital for implementation of opportunities may limit investment.
- High levels of reporting and more sophisticated technology requires higher levels of skill and management, leading to higher salary costs.
- Cost calculations do not include difficult to quantify, though potentially significant transaction costs, such as management time, to implement such changes.

As McKinsey points out, two key levers here are better aligning building stakeholders' incentives to improve energy efficiency and using direct regulation to establish appropriate building codes and standards. Fiscal incentives to reward best practice in new developments and in retrofitting the existing stock must also play a role.

At this stage, it is unclear whether the AETS or complementary measures will allow the creation of carbon offsets through demand site abatement initiatives, such as building upgrades. Experience under the NSW Greenhouse Gas Abatement Scheme has shown the need for simple, yet verifiable processes to certify carbon offsets from building upgrades to limit transactional costs. Should this be achieved, and depending on the market value of these offsets, this may help mitigate the barriers stated above.

IV. Maximizing Opportunities: Do you invest in, or have plans to invest in products and services that are designed to minimize or adapt to the effects of climate change?

As discussed above, Mirvac has established a detailed sustainability strategy, which includes over 100 clear performance objectives, targets and measures against six priority areas, including environmental impact and climate change. A number of these targets relate to Mirvac's plans to minimise and adapt to the effects of climate change.

1 Risks and Opportunities

For full details of Mirvac's commitments, please see the 2007 Sustainability Report, available for download from www.mirvac.com.au.

For details on progress against a number of targets, including plans to reduce energy use across Mirvac Property Trust and Mirvac Real Estate Investment Trust, please see question 3(A). Progress against the remainder of Mirvac's targets will be reported in the 2008 Sustainability Report.

V. Financial and Business Implications: How do you assess the current and/or future financial effects of the opportunities you have identified and how those opportunities might affect your business?

Amongst the business opportunities identified and discussed above, Mirvac is placing greatest focus on energy efficiency and is working to formalise an energy efficiency analysis and decision making process for identified opportunities. As part of that process, roles, responsibilities and accountabilities for people involved in the energy assessment and the business response have been allocated as follows:

1. The Group Sustainability Manager is responsible for energy efficiency opportunity identification, evaluation and business case development process at the Group level.
2. The National Engineering and Operations Manager and the MRES Sustainability Manager are responsible for MRES managed properties with input from Building Managers and external consultants.
3. Fund Managers are responsible for meeting energy efficiency performance targets set by the Group Sustainability Manager for assets in funds under management. Fund Managers authorise actions or expenditure necessary to achieve the performance targets based on advice from the National Engineering and Operations Manager, the MRES Sustainability Manager, Building Managers, external managing agents and external consultants.
4. The National Hotels & Resorts Technical Services Manager with assistance from MRES tracks energy data and identifies energy efficiency opportunities. External consultants with expertise in energy efficiency are engaged where required. Approval for capital expenditure must be given by the asset owner, either the Fund Manager on behalf of the fund or the external third party owner.
5. Development Managers are responsible for energy efficiency opportunity identification, evaluation and business case development through the use of a 'sustainability scorecard' to rate each development process. Project performance is reported through the State and Group Executive Committee.

Next steps will include documentation of all influencing factors for consideration at each step in the decision making and implementation process.

2 Greenhouse Gas (GHG) Emissions Accounting



Objective: To determine actual absolute Greenhouse Gas emissions.

A. Accounting Parameters

I. Reporting Boundary: Please indicate the category that best describes the company, entities or group for which your response is prepared:

- Companies over which financial control is exercised - per consolidated audited Financial Statements.
- Companies over which operational control is exercised.
- Companies in which an equity share is held.
- Other (please provide details).

Please use the same approach for all answers.

Mirvac's response under CDP6 covers companies, assets and activities over which financial control is exercised. This includes the following subsidiary business units:

- Mirvac Funds Limited, Mirvac AustralianSuper Pty Ltd, Mirvac REIT Management Ltd, 197 Salmon Street Pty Ltd, Mirvac Hotels Pty Ltd, Mirvac Property Funds Australia Limited, Mirvac Funds Management Limited, Mirvac Domaine Property Funds Limited, Mirvac Construction Pty Ltd, Mirvac Construction (QLD) Pty Ltd, Mirvac Construction (VIC) Pty Ltd, Mirvac Construction (WA) Pty Ltd.
- This also includes Mirvac's head offices, along with vehicle and air travel

This represents a substantial increase in report coverage, which is discussed in greater detail under question 2(F).

Detailed data tables of all emissions sources are provided in Appendix 1.

2 Greenhouse Gas (GHG) Emissions Accounting

Table 1: Report Coverage

Emission Source	CDP4	CDP5	CDP6
Scope 1 - Direct Emissions			
Natural Gas - Properties	✓ ¹	✓ ¹	✓ ²
Refrigerants - Properties	✓ ^{1,3}	✓ ¹	✓ ¹
On-site fuel use - Properties		✓ ¹	✓ ¹
On-site fuel use - Development		✓ ³	✓ ³
Group Vehicle Use	✓ ⁴	✓ ⁴	✓
Scope 2 - Indirect Emissions			
Electricity - Properties	✓ ¹	✓ ¹	✓ ²
Electricity - Development		✓ ³	✓ ³
Electricity - Head Offices			✓
Scope 3 - Other Indirect Emissions			
Electricity		✓ ^{1, 5}	✓ ^{2, 5}
Gas		✓ ^{1, 5}	✓ ^{2, 5}
Air Travel	✓ ⁶	✓ ⁶	✓
Fuel			✓ ⁵
Waste disposal - Properties		✓ ¹	✓ ⁷

¹ Properties managed by Mirvac Real Estate Services (MRES)

² Includes actual data for MRES managed properties, and actual and estimated data for externally managed properties

³ Includes actual and approximate data

⁴ Previously listed under Scope 3

⁵ Includes fuel extraction, production, transport and transmission loss

⁶ Excludes Hotels Division

⁷ Data not available from all sites

II. Reporting Year: Please explicitly state the dates of the accounting year or period for which GHG emissions are reported.

The accounting year for data in this report is 1 July 2006 to 30 June 2007.

Adopting the Australian financial year as the standard reporting period allows Mirvac to maintain a single data set for the CDP, Mirvac's Sustainability and Annual Reports, along with a number of other voluntary and mandatory reporting schemes, including EEO, NGERs, FTSE4Good Index, and the Australian SAM Sustainability Index (AuSSI).

Mirvac's responses under CDP4 and CDP5 have been based on the 2005 and 2006 calendar years respectively.

III. Methodology: Please specify the methodology used by your company to calculate GHG emissions.

Emissions Calculations

For all emissions sources excluding air travel, Mirvac has used the Australian Government Department of Climate Change National Greenhouse Accounts (NGA) Factors¹⁰.

For air travel, Mirvac has used the GHG Protocol CO₂ Emissions from Transport or Mobile Sources Calculator (Version 1.3, January 2005)¹¹.

B. Direct and Indirect Emissions – Scope 1 and 2 of the GHG Protocol

I. Are you able to provide a breakdown of your direct and indirect emissions under Scopes 1 and 2 of the GHG Protocol and to analyse your electricity consumption? If so, please provide the following information together with a breakdown of the emissions reported under each category by country where possible. If not, please proceed to question 2b ii:

Scope 1 Direct GHG Emissions

a. Total global Scope 1 activity in metric tonnes CO₂-e emitted.

Table 2: Scope 1 Emissions (tCO₂-e) 2005 – 2007

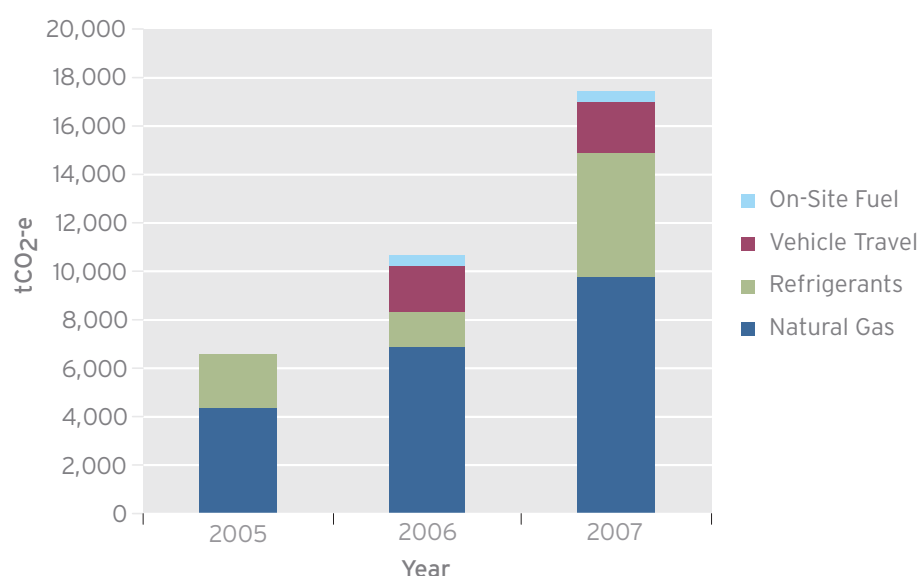
Emissions Source	2005	2006	2007
Natural Gas	4,475	6,923	9,822
Refrigerants	-	1,441	5,106
On-Site Fuel - Properties	-	37	55
On-Site Fuel - Development	-	386	456
Vehicle Travel	2,056	1,883	2,058
Total	6,531	10,670	17,497

¹⁰ Australian Government Department of Climate Change, 2008. *National Greenhouse Accounts (NGA) Factors*, <http://www.greenhouse.gov.au/workbook/pubs/workbook-feb2008.pdf>

¹¹ Greenhouse Gas Protocol, 2005. *CO₂ Emissions from Transport or Mobile Sources Calculator, Version 1.3*, <http://www.ghgprotocol.org/calculation-tools/all-tools>

2 Greenhouse Gas (GHG) Emissions Accounting

Chart 1: Scope 1 Emissions 2005 – 2007



As highlighted above, Mirvac's captured Scope 1 emissions have grown by 6,827 tonnes CO₂-e, or 64% since 2006. The bulk of this change is from emissions from natural gas and refrigerants. Emissions from on-site fuel use and vehicle travel have remained relatively stable against previous results.

These changes are largely the result of Mirvac significantly expanding the scope of its CDP report, to include new and previously unaccounted emissions sources, such as recent acquisitions, and externally-managed assets. Mirvac has reported on emission from 166 properties, up from 63 in the last two reports, along with other emissions sources, such as development activities, and business travel in fleet vehicles.

Mirvac has reported all fuel use by its vehicle fleet, including a proportion of private travel in novated lease vehicles. Until Mirvac is able to accurately separate out the proportion of work and private travel for these vehicles, all fuel use from Mirvac fleet vehicles will be reported as a Scope 1 emission.

For full details on the changes in Mirvac's report coverage, please see question 2(A)(I) and 2(F).

In line with Mirvac's anticipated growth plans, it is expected that overall emissions may also grow. However, normalised emissions (i.e. emissions intensity metrics), rather than absolute emissions provides the truest assessment of overall performance. Please see question 3(B)(II) and Appendix 3 for further details.

Already, Mirvac has set specific energy and emissions targets for various business units, and is working to establish suitable targets for the remainder of the business. Full details of these targets can be found in Mirvac's 2007 Sustainability Report, available for download from www.mirvac.com.au. For information on Mirvac's progress to date against established targets, please see question 3(A).

b. Total Scope 1 activity in metric tonnes CO₂-e emitted for Annex B countries.

17,497 tCO₂-e

Scope 2 Indirect GHG Emissions

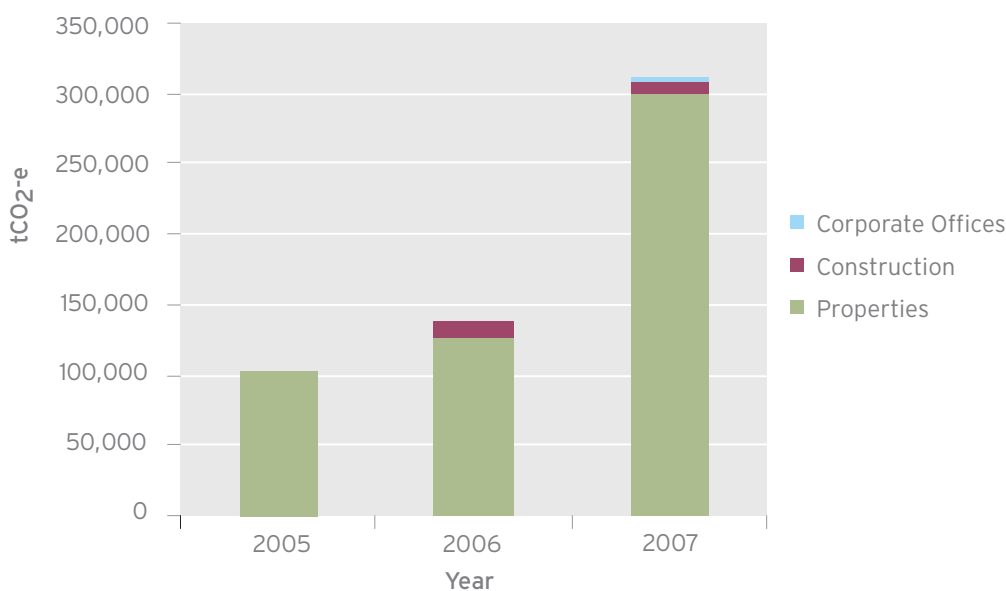
c. Total global Scope 2 activity in metric tonnes CO₂-e emitted.

Table 3: Scope 2 Emissions (tCO₂-e) 2005 - 2007

Electricity Source	2005	2006	2007
Properties	104,078	126,710	299,376
Construction	-	11,338	9,836
Corporate Offices	-	-	1,534*
Total	104,078	138,048	310,746

*Excludes Mirvac's Sydney office due to office relocation during the reporting period.

Chart 2: Scope 2 Emissions 2005 – 2007



As highlighted above, Mirvac's Scope 2 emissions have grown by 172,698 tonnes CO₂-e or approximately 125% since 2006. As with Mirvac's Scope 1 emissions, these changes are largely due to the significant expansion of Mirvac's reporting parameters to include new and previously unaccounted emissions sources such as externally-managed assets. Please see question 2(A)(I) and 2(F) for details.

Capturing emissions data from all sources across the business remains a priority for Mirvac, and is a vital step in reducing emissions. Emissions data from internally-managed assets, which was

2 Greenhouse Gas Emissions Accounting



Cambridge Apartments Cogeneration plant, Chatswood, NSW

reported under CDP5, has been used to establish performance baseline, set emissions targets, and begin implementing reduction plans. Please see question 3(A) for details.

In line with commitments under the Mirvac Sustainability Strategy, and legislative obligations, Mirvac is now working to improve data accuracy for externally managed assets, and implementing similar energy and GHG emissions reductions plans.

Emissions from construction activities have decreased by approximately 13.3% compared to CDP5. While a positive outcome, Mirvac acknowledges that this is likely due to a slight reduction in construction activities and changes in reported data. Mirvac's CDP5 response included estimated electricity figures for Mirvac's construction activities, whereas this year, Mirvac has reported a combination of actual and estimated data.

Mirvac has also begun collecting emission data from corporate offices. While representing a relatively small contribution to the overall emissions profile, collecting and distributing this data allows Mirvac to engage and educate its office-bound workforce on issues of sustainability and climate change - topics that may otherwise fall outside their immediate focus - and make positive steps to reduce their impact. Through these education campaigns, Mirvac has reduced electricity consumption in its corporate offices by 6.3%. Please see Appendix 4 for details.

d. Total Scope 2 activity in metric tonnes CO₂-e emitted for Annex B countries.

310,746 tCO₂-e

Electricity consumption

e. Total global MWh of purchased electricity.

330,324MWh

f. Total MWh of purchased electricity for Annex B countries.

330,324MWh

g. Total global MWh of purchased electricity from renewable sources.

At present, Mirvac does not purchase any electricity from renewable sources.

As discussed under question 3(A), Mirvac focuses closely on demand side abatement initiatives, such as operational and capital upgrades to its asset portfolio. In this way, Mirvac is able to deliver long-term benefit by improving building efficiency, thus reducing electricity demand and cost.

During the past year, the cost of electricity for Mirvac has increased substantially, with renewable electricity representing an approximate 40% further increase above base costs. Under current market conditions, and given the uncertainty surrounding future energy prices, Mirvac has postponed plans to purchase renewable electricity, while maintaining its focus on demand side abatement initiatives.

Mirvac will continue to monitor the electricity market and review its purchasing decision with regard to renewable energy in future.

h. Total MWh of purchased electricity from renewable sources for Annex B countries.

None

II. If you are unable to detail your Scope 1 and Scope 2 GHG emissions and/or electricity consumption, please report the GHG emissions you are able to identify together with a description of those emissions.

N/A

C. Other Emissions – Scope 3 of GHG Protocol:

How do you identify and/or measure Scope 3 emissions? Please provide where possible:

a. Details of the most significant Scope 3 sources for your company

Table 4: Scope 3 Emissions (tCO₂-e) 2005 - 2007

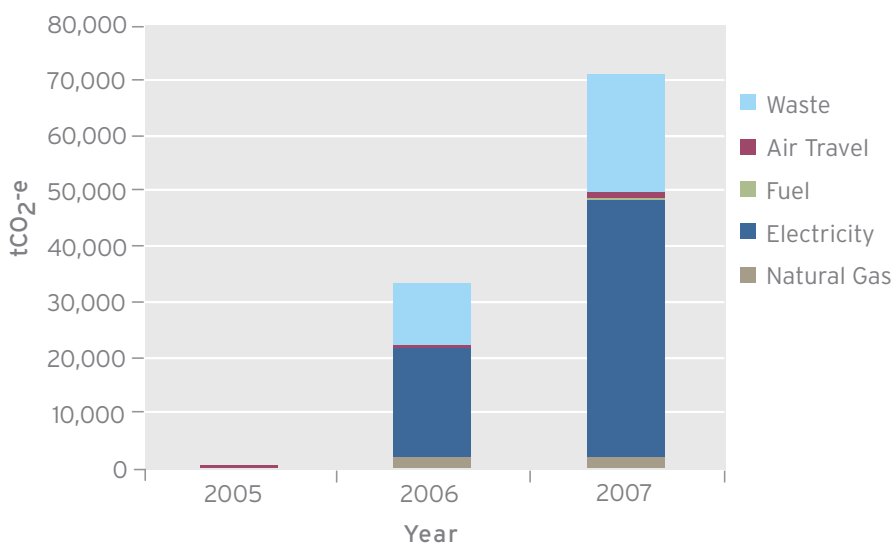
Emissions Source	2005	2006	2007
Natural Gas ¹	-	1,727	1,768
Electricity ²	-	19,785	46,495
Fuel ¹	-	-	207
Air Travel	687	828	1,111
Waste	-	10,938	21,113
Total	687	33,278	70,694

¹ Includes indirect emissions from extraction, production and transportation.

² Includes indirect emissions from extraction, production, transportation and distribution

2 Greenhouse Gas Emissions Accounting

Chart 3: Scope 3 Emissions 2005 - 2007



Mirvac's Scope 3 emissions have grown by 37,416 tonnes of CO₂-e representing an approximate 113% increase against 2006. As discussed under question 2(A)(I) and 2(F), Mirvac has expanded report coverage to include new and previously unaccounted emissions sources, most notably its externally managed assets.

Further information on changes to Mirvac's Scope 3 emissions is detailed below.

b. Details in metric tonnes CO₂-e of GHG emissions in the following categories:

I. Employee business travel.

Table 5: Air Travel 2005 - 2007

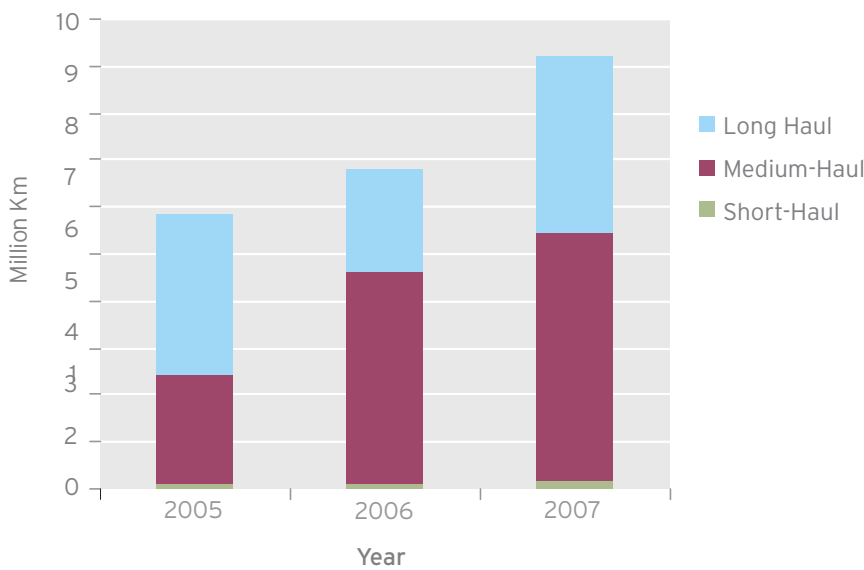
	2005*	2006	2007
Short-Haul (<452Km)	88,325	118,030	152,749
Medium-Haul (452-1600Km)	2,314,523	4,478,445**	5,292,962***
Long-Haul (>1600Km)	3,450,122	2,199,902	3,782,295
Total Km	5,852,970	6,796,377	9,228,006
Total tCO₂-e	687	828	1,111

*Estimated via expenditure

**Includes 1,172,774Kms of aggregated travel data - assumed to be medium-haul.

***Includes 2,198,200Kms of aggregated travel data - assumed to be medium-haul.

Chart 4: Air Travel 2005 – 2007



Emissions from air travel have grown by 283 tonnes CO₂-e, following an increase in air travel by approximately 2.4 million kilometres. This is a 34% increase against 2006.

This year, Mirvac has captured air travel information from its Hotels & Resorts business unit – a previously unaccounted emissions source – representing approximately 450,000 km of travel, and 54 tonnes of CO₂-e.

Mirvac attributes the remainder of its air travel growth to increased business activity, including increased overseas activities.

II. External distribution/logistics.

External distribution and logistics is not deemed a material emissions source for Mirvac's business.

III. Use/disposal of company's products and services.

Table 6: Waste 2006 – 2007

	2006	2007
Waste	6,589	12,719
CO ₂ -e	10,938	21,113

Mirvac has recorded waste disposal figures of 12,719 tonnes, resulting in 21,113 tonnes of CO₂-e. This is an increase of almost 100%, largely due to improved reporting and extended coverage.

2 Greenhouse Gas Emissions Accounting



Mirvac's average recycling rate has remained relatively constant at 25%, however falling short of the target of 50% diversion of all waste to landfill by 30th June 2008.

Mirvac has however made substantial progress in terms of rolling out a national contract through a single service provider, which moving forward will allow substantial improvements in waste management and reporting. Progress against waste management targets will be included in future reports.

IV. Company supply chain.

Mirvac has calculated Scope 3 emissions resulting from the use of electricity, natural gas and other liquid fuels such as diesel across the business, resulting in 48,470 tonnes of CO₂-e. Please see Appendix 1 for details.

Mirvac intends to continue efforts to track and report supply chain and other Scope 3 emissions, and where possible, influence their management and reduction.

c. Details of the methodology you use to quantify or estimate Scope 3 emissions.

As detailed above, Mirvac uses the Australian Government Department of Climate Change *2008 National Greenhouse Accounts (NGA) Factors*¹² to calculate emissions from all sources excluding air travel.

For air travel, Mirvac uses the GHG Protocol CO₂ Emissions from Transport or Mobile Sources Calculator¹³.

Scope 3 emissions factors allow Mirvac to calculate the following:

Table 7: Scope 3 Emissions Coverage

Emissions Source	Scope 3 Coverage
Natural Gas	Indirect emissions from extraction, production and transport.
Electricity	Indirect emissions from extraction, production, transport, transmission and distribution.
Fuel (Diesel, petrol, LPG)	Indirect emissions from extraction, production and transport.
Air Travel	Indirect emissions from the use of transportation sources that are owned or controlled by other entities.
Waste	Emissions associated with disposal of waste

¹² Australian Government Department of Climate Change, 2008. *National Greenhouse Accounts (NGA) Factors*, <http://www.greenhouse.gov.au/workbook/pubs/workbook-feb2008.pdf>

¹³ Greenhouse Gas Protocol, 2005. *CO₂ Emissions from Transport or Mobile Sources Calculator, Version 1.3*, <http://www.ghgprotocol.org/calculation-tools/all-tools>

D. External Verification

I. Has the information reported in response to Questions 2b - c been externally verified or audited or do you plan to have the information verified or audited? If so:

The data in this report has not been externally verified.

Electricity and natural gas data from internally- and externally-managed properties has been compiled for reporting under the Energy Efficiency Opportunities Program with assistance from specialist energy consultants Energetics. Data submitted under the EEO program is subject to EEO audit processes.

II. Please provide a copy of the audit or verification statement or state your plans for verification.

Pending the roll-out of new data management systems, Mirvac may seek to have future reports externally verified.

III. Please specify the Standard or Protocol against which the information has been or will be audited or verified.

N/A

E. Data Accuracy

Does your company have a system in place to assess the accuracy of GHG emissions inventory calculation methods, data processes and other systems relating to GHG measurement? If so, please provide details. If not, please explain how data accuracy is managed.

Data Capture and Collation

Data on electricity purchased, use of gas and fuel, refrigerants, and waste from properties managed by Mirvac Real Estate Services (MRES) was self-reported by property managers and other relevant staff.

Data on electricity and gas from externally managed properties has been self-reported by external property managers. Where this information was not available, energy use has been estimated by specialist consultants using MRES data as a benchmark, and in line with known building characteristics including size, location and condition.

Fuel data from Mirvac Development was supplied by relevant service providers. Electricity data from Mirvac Development was obtained from account records, or where unavailable via estimation from expenditure. For details see question 2(A)(I).

Data on vehicle use and air miles was supplied by relevant service providers.

2 Greenhouse Gas Emissions Accounting

Data Accuracy

This decentralisation of data does create a level of uncertainty around the data which was acknowledged in Mirvac's response under CDP5. This year, Scope 1 and 2 emissions data included in this report (excluding vehicle travel, refrigerants and corporate offices) has been calculated as being accurate to within 8.9% through the EEO reporting process. The accuracy of other emissions sources included in this report has not been calculated.

Over the past 12 months, Mirvac has trialled a number of software solutions and undertaken extensive internal analysis to better understand its data needs, locations and reporting responsibilities.

Mirvac recently invested in a specialised software package capable of delivering against its needs, and has appointed a dedicated staff member to oversee the system design and roll-out. The roll-out of this software package has begun and is expected to be operational by late 2008.

Once finalised, Mirvac's data capture and reporting system will allow key data holders, including building and construction managers, accounts personnel and engineering managers to regularly log a broad range of sustainability information into the system, and will also allow direct input via utility meters. Please see question 3(A) for details.

This will allow detailed and tailored reporting at a variety of levels and will mitigate many of Mirvac's data management challenges.

F. Emissions History

Do the emissions reported for your last accounting year vary significantly compared to previous years? If so, please explain the reasons for the variations.

In line with Mirvac's anticipated growth plans, it is expected that overall emissions may also grow. However, as discussed under question 2(B)(I), emissions intensity metrics provide the truest assessment of overall performance. Please see question 3(B) and Appendix 3 for details of Mirvac's emissions intensity.

Already, Mirvac has set specific energy and emissions targets for various business units, and is working to establish suitable targets for the remainder of its business. Full details of these targets can be found in Mirvac's 2007 Sustainability Report, available for download from www.mirvac.com.au. For information on Mirvac's progress to date against established targets, please see question 3(A).

Table 8: Emissions History (tCO₂-e) 2005 - 2007

Year	2005	2006	2007
Scope 1	6,531	10,670	17,497
Scope 2	104,078	138,048	310,746
Scope 3	687	33,278	70,694
Total	111,296	181,996	398,937

Mirvac's total emissions have risen by 216,941 tonnes CO₂-e since 2006, representing an increase of approximately 119%. These variances can be attributed to the following factors:

1. Change in property holdings

Since reporting under CDP5, there have been a number of disposals and acquisitions, substantially changing Mirvac's property holdings.

These include the September 12 acquisition of the remaining 50 per cent stake in Domaine Property Funds Limited. As at 30 June Domaine had \$750 million in committed assets under management across five unlisted property trusts.

This also included the October 10 acquisition of the remaining 50 per cent in Property Funds Australia Limited (PFA). PFA is the responsible entity of the PFA Diversified Property Trust, a listed trust which owns a portfolio of Australian investment grade assets currently valued at \$687 million.

Data from these assets has been included, where possible, in this report.

2. Increased Property Portfolio Coverage

Previously, reports on Mirvac's property portfolio have only included data from internally-managed assets. This report, Mirvac has also included data from externally managed assets, including 12 properties from the Tuckerbox Hotel Trust, 19 properties from the PFA Diversified Property Trust, and 17 properties under Mirvac Domaine Property Funds Limited.

In total, Mirvac has reported data from 166 properties, up from 63 last year and the year prior, along with other emissions sources.

3. Changes to Emissions Coverage

Along with its standard disclosures, this year, Mirvac has also included flight data from its Hotels Division, and scope 3 emissions from all electricity, gas and fuel purchased. Please see question 2(C)(c) for details.

Unfortunately, waste data was available for 53 sites only. Mirvac has recently appointed a single national waste service provider, which moving forward will allow regular and detailed reports on Mirvac's waste streams, as well as improved waste management .

To more accurately report emissions, Mirvac has elected to report vehicle use data under Scope 1, instead of Scope 3 emissions, as was previously the case. Historical emissions charts included in this report have been updated to reflect this change.

G. Emissions Trading

I. Does your company have facilities covered by the EU Emissions Trading Scheme? If so:

No. However, please see Mirvac's response to question 1(A)(I) for details on Mirvac's exposure to other emissions trading and regulatory schemes.

2 Greenhouse Gas Emissions Accounting



a. Please provide details of the annual allowances awarded to your company in Phase I for each of the years from 1 January 2005 to 31 December 2007 and details of allowances allocated for Phase II commencing on 1 January 2008.

N/A

b. Please provide details of actual annual emissions from facilities covered by the EU ETS with effect from 1 January 2005.

N/A

c. What has been the impact on your company's profitability of the EU ETS?

N/A

II. What is your company's strategy for trading or participating in regional and/or international trading schemes (eg: EU ETS, RGGI, CCX) and Kyoto mechanisms such as CDM and JI projects?

Please refer to questions 1(A)(III), 1(B)(III) and 2(G)(I) for discussion on Mirvac's exposure and approach to various emissions trading schemes, including the forthcoming AETS.

H. Energy Costs

I. Please identify the total costs in US \$ of your energy consumption eg from fossil fuels and electric power.

Mirvac does not report on energy costs, due to commercial sensitivities and as cost is not considered a meaningful measure of energy performance.

II. What percentage of your total operating costs does this represent?

N/A

III. What percentage of energy costs are incurred on energy from renewable sources?

N/A

3 Performance

Objective: To determine performance against targets and plans to reduce GHG emissions.

A. Reduction Plans

I. Does your company have a GHG emissions reduction plan in place? If so, please provide details along with the information requested below. If there is currently no plan in place, please explain why.

Mirvac is involved in a broad range of activities to minimise and adapt to the effects of climate change. In addition to programs and initiatives discussed in Section 1, full details of Mirvac's sustainability commitments and targets can be found in the 2007 Sustainability Report, available for download from: www.mirvac.com.au.

A brief case study of efforts to reduce energy use in corporate offices through the Mirvac Sustainability@Work program is provided in Appendix 4.

Mirvac's flagship action to reduce GHG emissions from property assets is a commitment to achieve an average 3 star NABERS Energy rating (formerly Australian Building Greenhouse Rating - ABGR) on all commercial buildings in the Sustainability Performance Management and Reporting Program across the Mirvac Property Trust (MPT), and Mirvac Real Estate Investment Trust (MREIT). Required operational changes and commissioning of the necessary upgrade works to achieve the 3 star rating are to be complete by September 2008. Please see Appendix 2 for data tables.

The NABERS Energy rating scheme has been in place for ten years, and has achieved significant recognition across the property sector. Mirvac was an early adopter of the scheme, and has extensive experience using this tool. A 3 star rating represents current market best practice. An unofficial rating has been calculated for all covered properties, resulting in an average rating of 2.8 stars for MPT and 2.1 stars for MREIT. The upgrade program will focus primarily on electricity and gas reductions through efficiency measures.

II. What is the baseline year for the emissions reduction plan?

2007 Australian financial year

III. What are the emissions reduction targets and over what period do those targets extend?

Mirvac has committed to achieve an average 3 star NABERS Energy rating (previously ABGR) on all commercial buildings in the Sustainability Performance Management and Reporting Program across MPT and MREIT. A number of milestones have been set and are detailed below. Required operational changes and commissioning of the necessary upgrade works to achieve the 3 star rating are to be complete by September 2008. The bulk of works is expected to be complete by June 2009.

Official NABERS Energy ratings will be available 12 months after completion of works.

3 Performance

IV. What activities are you undertaking to reduce your emissions eg: renewable energy, energy efficiency, process modifications, offsets, sequestration etc? What targets have you set for each and over what timescales do they extend?

MPT and MREIT 3 star Sustainability Performance Management and Reporting Program

1. Data Quality

The first step in realising the MPT and MREIT 3 star NABERS Energy rating commitment is quality data.

A number of Mirvac sites monitor electricity consumption via a sophisticated metering and software system. By July 2008 all MRES managed properties will have electricity metering in place, with gas and water meters rolling out progressively during the year. This program allows Mirvac to monitor consumption at each location at a gross level and address any deviations from base.

These programs enable Mirvac to take a portfolio wide approach to reporting and resource reduction strategies.

2. Define the Program Boundaries

To focus attention where the greatest gains can be achieved, properties that meet the following criteria have been excluded from the sustainability performance management and reporting program.

- The property is undergoing major refurbishment during FY08
- The property is or will be less than 75% occupied between now and end FY09
- The property is intended to be disposed of or demolished between now and end FY09
- The ownership or leasing structure of the property is such that Mirvac does not have operational control of the base building energy use, or does not have access to the required data

With these exclusions, the project will cover 24 properties totalling almost 300,000m² of Net Lettable Area (NLA) of commercial office space.

3. Operational Opportunities

The utilities meters, installed during the first phase of this project allow detailed profiling of current energy use. These profiles, coupled with ongoing external monitoring will allow Mirvac to identify and pursue operational efficiencies, such as optimising heating and cooling systems.

Preliminary estimates indicate an average 11% saving in energy consumption across the targeted locations. This program will commence in early July to ensure that the bulk of the opportunities have been identified and implemented before September 2008.



4. Capital Upgrades and Improvements

Beyond operational upgrades, Mirvac recognises that capital upgrades will be required to meet the targeted 3 star average portfolio rating. Work has already begun to identify and cost the capital upgrades required at each facility.

V. What investment has been or will be required to achieve the targets and over what time period?

The expected costs of the sub-metering installations are between \$900,000 and \$1,500,000 with ongoing monitoring services and associated IT services between \$150,000 and \$250,000 per annum.

In total, approximately \$2.7 million has been approved for operational and capital upgrades, installation of sub-metering, monitoring and IT services. Please see Appendix 2 for details.

In addition, approximately \$40 million has been allocated to an extensive refurbishment of 101 Miller Street, North Sydney. The refurbishment includes the installation of a state of the art tri-generation system, aimed at achieving a 5 star NABERS Energy rating.

Further funding will be allocated as additional projects are identified.

VI. What emissions reductions and associated costs or savings have been achieved to date as a result of the plan?

This program commenced in early 2008, and as such no preliminary results are available.

By September 2010, Mirvac expects to achieve savings of 12,341 tonnes CO₂-e/annum, representing a 29.4% reduction in GHG emissions from properties within the sustainability performance management and reporting program.

3 Performance

B. Emissions Intensity

I. What is the most appropriate measurement of emissions intensity for your company?

As a diversified real estate funds management and development organisation, there is no single emissions intensity metric that applies to the entire Group.

A suite of robust rating tools have emerged in certain sectors, such as NABERS Energy rating tools for commercial and hotel assets, which, as discussed above, Mirvac uses extensively. Mirvac also measures tonnes CO₂-e/m² NLA for commercial and industrial properties, tonnes CO₂-e/m² GLA for retail properties, and tonnes CO₂-e/room for hotel assets.

Mirvac's emissions intensity has risen for commercial, retail and hotels, and fallen for industrial assets. In part, this is due to the expansion of Mirvac's reporting coverage, to include an additional 103 properties, some of which have poorer energy performance than previously measured assets. The inclusion of estimated data for a number of assets may also have impacted on the outcomes.

As data systems improve, Mirvac will seek to benchmark specific assets over time, providing a more accurate picture of emissions intensity trends. Please see Appendix 3 for more information on Mirvac's emissions intensity.

Table 9: Emissions Intensity

Area	Metric	2006	2007
Commercial	tCO ₂ -e/m ² NLA	0.114	0.127
Retail	tCO ₂ -e/m ² GLA	0.123	0.132
Industrial	tCO ₂ -e/m ² NLA	0.0006	0.002
Hotels	tCO ₂ -e/ hotel room	16.317	18.404

Mirvac has examined a number of emissions intensity metrics to rate construction activities. However, due to their diverse and dynamic nature, and the lack of comparability between projects, a suitable metric has not yet been identified.

Mirvac also regularly uses the Green Building Council of Australia's suite of tools to inform its designs.

II. Please state your GHG emissions intensity in terms of total tonnes of CO₂-e reported under Scope 1 and Scope 2 per US \$m turnover and EBITDA for the reporting year.

Due to the nature of Mirvac's business, in which profit and GHG emissions are not considered directly relational, Mirvac does not report GHG emissions relative to turnover or EBITDA.

III. Has your company developed emissions intensity targets? If so:

a. Please state your emissions intensity targets.

Please see 3(A)(I).

Mirvac also targets an average 4 star NABERS Energy rating for all head office tenancies.

Mirvac will develop emissions intensity targets for other business areas over time.

b. Please state what reductions in emissions intensity have been achieved against targets and over what time period.

Please see 3(A)(I).

Mirvac will report on progress against other emissions targets in the 2008 Sustainability Report.

If not, please explain why.

N/A

C. Planning

Do you forecast your company's future emissions and/or energy use? If so:

Yes.

I. Please provide details of those forecasts, summarize the methodology used and the assumptions made.

Through the MPT and MREIT 3 star Sustainability Performance Management and Reporting Program, Mirvac expects to achieve savings of 12,341 tonnes CO₂-e/annum, representing a 29.4% reduction in GHG emissions from properties within the program by September 2010. This program has been the focus of Mirvac's greenhouse reduction program within existing assets, lessons learnt in forecasting emissions and planning efficiency improvements will be expanded across the portfolio over time.

When undertaking refurbishments and new developments, Mirvac uses a range of rating tools to assess the current, and forecast the future energy performance of the assets, including AccuRate for residential developments and NABERS Energy for commercial buildings and soon hotels.

When planning refurbishments and new developments, Mirvac actively investigates energy options, including low and zero emissions energy sources. These options are assessed on a case by case basis, to determine costs, the impact on Mirvac's emissions profile and the benefit to tenants and asset value.

II. How do you factor the cost of future emissions into capital expenditure planning?

As detailed under question 1(B)(V) Mirvac is working to formalise an energy efficiency analysis and decision making process which will include consideration of the cost of future emissions into capital expenditure planning.

III. How have these considerations made an impact on your investment decisions?

Overall environmental performance, of which energy use is a key element, has impacted on Mirvac's investment decisions.

Mirvac has committed all new commercial office property within Mirvac Property Trust and Mirvac Real Estate Investment Trust to be a minimum 5 star Green Star and 4.5 star NABERS Energy rating. In acquisitions of existing assets, energy performance is considered as part of the due diligence process.

4 Governance

Objective: To determine responsibility and management approach to climate change.

A. Responsibility

Does a Board Committee or other executive body have overall responsibility for climate change? If not, please state how overall responsibility for climate change is managed. If so:

I. Which Board Committee or executive body has overall responsibility for climate change?

Mirvac’s Group Executive Committee has overall responsibility for managing Mirvac’s impact, and response to climate change.

II. What is the mechanism by which the Board or other executive body reviews the company’s progress and status regarding climate change?

Mirvac has established Sustainability Committees at the Group-level and in each State, as well as across a number of business units including Funds Management and Hotels and Resorts. These committees are drawn from representatives across the organisation, with the responsibility to manage and report on a broad range of sustainability issues, including climate change. The State Committees report directly to the Group Sustainability Committee, and their State Executive Committees.

The Group Sustainability Committee, chaired by Mirvac’s Group Sustainability Manager is responsible for overseeing action against Mirvac’s sustainability strategy, targets and commitments. This Committee works closely with the Health Safety Environment Steering Committee, both of which report directly to the Group Executive Committee on a monthly basis.

Mirvac’s Group Sustainability Manager also provides regular formal and informal progress reports to Mirvac’s Managing Director and Executive Directors.

Figure 2: Mirvac’s Sustainability Committee Structure



B. Individual Performance

Do you assess or provide incentive mechanisms for individual management of climate change issues including attainment of GHG targets? If so, please provide details.

All Mirvac Engineering and Operations employees that manage the energy performance of Mirvac assets have key performance indicators (KPIs) to manage energy and find savings where applicable. Allowances are made for not achieving targets where factors are beyond the control of any individual, such as market forces, regulatory burden or tenant energy use.

At this stage, no other individual performance assessment or incentive mechanisms are in place.

C. Communications

Please indicate whether you publish information about the risks and opportunities presented to your company by climate change, details of your GHG emissions and plans to reduce emissions through any of the following communications:

I. The company's Annual Report or other statutory filings, and/or

Mirvac's Annual Report includes high level information on Mirvac's commitment to sustainability, including climate change.

Historically, specific information on risks and opportunities, GHG emission and reduction plans are not included in the Annual Report.

As listed under question 1(A)(I), Mirvac reports on GHG emissions and reduction plans under a range of Legislative schemes.

To download Mirvac's Annual Reports, and other statutory filings, please see www.mirvac.com.au

II. Formal communications with shareholders or external parties, and/or

Mirvac communicates with shareholders and external parties as needed on an ad hoc basis. Examples include via bid documents for new business, development applications and in line with investment mandates for investment funds.

III. Voluntary communications such as Corporate Social Responsibility reporting.

In early 2008, Mirvac released its second Sustainability Report, detailing efforts to transition from a project-based approach, to strategic Group-wide activities-focused approach.

Please see www.mirvac.com.au for details

Mirvac has participated in the Carbon Disclosure Project, and been listed on the Climate Disclosure Leadership Index for the past 2 years.

If so, please provide details and a link to the document(s) or a copy of the relevant excerpt.

Please see www.mirvac.com.au for details.

4 Governance



D. Public Policy

Do you engage with policymakers on possible responses to climate change including taxation, regulation and carbon trading? If so, please provide details.

Mirvac regularly engages with policymakers directly, and via industry bodies such as the Property Council of Australia and the Green Building Council of Australia, on climate change issues, including taxation, regulation and carbon trading.

Recently, Mirvac participated in public consultations on the National Greenhouse and Energy Reporting System Regulations Policy Paper, and on proposed amendments to the Energy Efficiency Opportunities Regulations 2006.

Details of Mirvac's submission to the DCC is available from <http://www.greenhouse.gov.au/reporting/regulations/submissions.html>

Mirvac's submission to DRET is not yet publicly available.

Mirvac also partnered with eight of Australia's major corporate organisations urging Government and business to work together to take immediate and decisive action in addressing climate change.

The Australian Business & Climate Group (the Group) comprising Deloitte, Anglo Coal, ANZ, BP, Mirvac, Rio Tinto, Santos, Swiss Re, VicSuper and Westpac came together in unison to call for urgent development of a coordinated national response to the challenge of climate change.

The Group's first report *'Stepping Up: Accelerating the Deployment of Low Emission Technology in Australia'*, which was released on the 31st August 2007 at the 3rd Australian-New Zealand Climate Change and Business Conference in Brisbane, recommends a National Low Emission Technology Strategy as an integral component of a National Climate Change Response. This report is available for download from the ABCG website www.businessandclimate.com.

Implementation of a National Low Emission Technology Strategy will require substantial private sector involvement and institutional investment to meet future infrastructure requirements, nationally and internationally in which Mirvac is currently well positioned to participate.

Appendix 1 - Data Tables

Emission Source	Location	2005		2006		2007	
		Total	tCO ₂ -e	Total	tCO ₂ -e	Total	tCO ₂ -e
Scope 1 Emissions							
Natural Gas (GJ)	Properties	86,959	4,475	133,302	6,923	191,457	9,822
Refrigerants	Properties	-	-	-	1,441	-	5,106
Diesel (L)	Properties	-	-	7,151	24	14,004	38
	Construction	-	-	144,129	386	163,454	441
	Vehicles	-	-	30,447	84	25,323	68
Petrol (L)	Properties	-	-	4,061	9	6,215	14
	Construction	-	-	-	-	6,470	15
	Vehicles	-	2,056	739,986	1,763	706,682	1,625
LPG (L)	Vehicles	-	-	23,131	36	228,062	365
	Properties	-	-	2,202	4	-	-
Kerosene (L)	Properties	-	-	183	<1	550	1
Wood (T)	Properties	-	-	-	-	6	2
Sub-total			6,531		10,670		17,497
Scope 2 Emissions							
Electricity (MWh)	Properties	102,855	104,078	134,405	126,710	317,765	299,376
	Construction	-	-	11,414	11,338	10,985	9,836
	Corporate Offices	-	-	-	-	1,574	1,534
Sub-total			104,078		138,048		310,746
Scope 3 Emissions							
Natural Gas ¹	Properties	-	-	-	1,727	-	1,768
Electricity ²	Properties	-	-	-	18,376	-	44,688
	Construction	-	-	-	1,409	-	1,625
	Corporate Offices	-	-	-	-	-	182
Air Travel (Km)		5,852,970	687	6,796,378	828	9,228,006	1,111
Waste (T)		-	-	6,589	10,938	12,719	21,113
Petrol ¹	Properties	-	-	-	-	-	1
	Construction	-	-	-	-	-	1
	Vehicles	-	-	-	-	-	141
Diesel ¹	Properties	-	-	-	-	-	3
	Construction	-	-	-	-	-	33
	Vehicles	-	-	-	-	-	5
LPG ¹	Vehicles	-	-	-	-	-	23
Kerosene ¹	Properties	-	-	-	-	-	<1
Wood ¹	Properties	-	-	-	-	-	<1
Sub-total			687		33,278		70,694
Total			111,296		181,996		398,937

¹ Fuel extraction, transport and production

² Fuel extraction, transport, production and transmission loss

Appendix 2 - Sustainability Performance Management and Reporting Program

Property Address	State	2007/08		2008/09 Works Programme	
		Current Emissions tCO ₂ -e ¹	Current NABERS Energy Rating ²	Sub-Metering	Operational Changes
650 Chapel Street, South Yarra	VIC	2464.9	-	Jul-Sept 08	Monitoring and reporting
Riverside Quay #1, Southbank, Melbourne	VIC	1743.1	2.5	Jul-Sept 08	Monitoring and reporting
Riverside Quay #2, Southbank Melbourne	VIC	1357.2	2	Jul-Sept 08	Monitoring and reporting
Riverside Quay #3, Southbank Melbourne	VIC	1276.5	3	Jul-Sept 08	Monitoring and reporting
380 St Kilda Road, Melbourne	VIC	3457.8	2.5	Jul-Sept 08	Monitoring and reporting
189 Grey Street, Southbank, Brisbane	QLD	1669.2	3	Jul-Sept 08	Monitoring and reporting
339 Coronation Drive, Brisbane	QLD	3603.3	0	Jul-Sept 08	Monitoring and reporting
164 Grey Street, Brisbane	QLD	710.0	0	Jul-Sept 08	Monitoring and reporting
1 Castlereagh Street, Sydney	NSW	1399.0	3.5	Jul-Sept 08	Monitoring and reporting Optimise cooling plant efficiency
101 - 103 Miller Street, North Sydney	NSW	8421.2	-	Jul-Sept 08	NA - In refurbishment
40 Miller Street, North Sydney	NSW	1532.1	3.5	Jul-Sept 08	Monitoring and reporting
Bay Centre, Pirrama Road, Darling Harbour	NSW	1501.2	4	Jul-Sept 08	Monitoring and reporting Optimise cooling plant efficiency
One Darling Island, Pyrmont	NSW	1142.7	4	Jul-Sept 08	Monitoring and reporting
16 Furzer Street, Phillip	ACT	1075.1	4.5	Jul-Sept 08	Monitoring and reporting
38 Sydney Avenue, Forrest	ACT	951.4	3	Jul-Sept 08	Monitoring and reporting
54 Marcus Clarke Street, Canberra	ACT	640.1	2.5	Jul-Sept 08	Monitoring and reporting
60 Marcus Clarke St, Canberra	ACT	1282.9	3	Jul-Sept 08	Monitoring and reporting
10 Rudd Street, Canberra	ACT	565.0	2.5	Jul-Sept 08	Monitoring and reporting
3 Rider Boulevard, Rhodes	NSW	1,664.6	4	Jul-Sept 08	Monitoring and reporting
599 Doncaster Road, Doncaster	VIC	220.5	3	Jul-Sept 08	Monitoring and reporting
591 Doncaster Road, Doncaster	VIC	286.4	2.5	Jul-Sept 08	Monitoring and reporting
601 Doncaster Road, Doncaster	VIC	288.5	1	Jul-Sept 08	Monitoring and reporting
340 Adelaide Street, Brisbane	QLD	4,417.4	0	Jul-Sept 08	Monitoring and reporting
605 Doncaster Road, Doncaster	VIC	296.9	0	Jul-Sept 08	Monitoring and reporting
Total		41,967			

¹ Current emissions calculated based upon actual energy usage for 2006/07 financial year

² Unofficial ratings based upon NABERS Energy Validation Protocol and using actual energy consumption from utility metering for 2006/07 financial year. Area is based upon property total NLA adjusted where required for occupancy levels over 2006/07 financial year.

³ Forecast emissions based upon anticipated savings from 2006/07 baseline from operational improvements or based upon targeted NABERS Energy rating resulting from planned capital expenditure.

2008/09 Works Programme		2010			
Capital Upgrades	Funding Approved	Forecast Emissions tCO ₂ -e ³	Forecast NABERS Energy Rating	Forecast Emissions Reductions tCO ₂ -e	% Reduction
	Pending	2193.7	-	271.2	11%
	Pending	1551.4	3	191.7	11%
	Pending	1207.9	2.5	149.3	11%
	Pending	1136.1	3.5	140.4	11%
	Pending	3077.4	3	380.4	11%
	Pending	1485.6	3.5	183.6	11%
	Pending	3207.0	0	396.3	11%
	Pending	631.9	0	78.1	11%
Lighting upgrade, for lifts and toilets. Movement sensors in toilets. Install variable speed drives on water pumps	\$92K	1198.6	4	200.4	14.3%
Building refurbishment, including lighting, mechanical services and cogeneration system.	Major refurbishment - Total cost \$40M ⁴	2680.8	5	5740.4	68%
	Pending	1363.6	3.5	168.5	11%
Install heating controls.	\$54.3K	1336.0	4.5	165.2	11%
	Pending	1017.0	4.5	125.7	11%
	Pending	956.8	4.5	118.3	11%
Upgrade BMS	\$811K	846.7	3.5	104.7	11%
Upgrade BMS	Incl. above	569.7	3	70.4	11%
Upgrade BMS	Incl. above	1141.8	3.5	141.1	11%
Upgrade BMS	Incl. above	502.8	3	62.2	11%
	Pending	1,405.1	4.5	259.5	15.6%
	Pending	196.2	3.5	24.3	11%
	Pending	254.9	3	31.5	11%
	Pending	256.7	2	31.8	11%
Major plant and BMS upgrade	Budget approved by end 08 FY	1,144.2	4.5	3,273.2	74.1%
	Pending	264.3	1	32.6	11%
	~\$2.7 million*	29,626.2		12,340.8	29.4%

⁴ Includes funding for initiatives not linked to energy/GHG emissions savings

* Does not include \$40 million allocated to a major refurbishment of 101-103 Miller Street, North Sydney, which includes initiatives not linked to energy savings. \$2.7 million covers initiatives linked directly to energy savings, as well as sub-metering, monitoring and IT services.

Appendix 3 - Emissions Intensity

Asset Class	Emissions Metric	Location	2006	2007
Commercial	tCO ₂ -e/m ² NLA	ACT	0.153	0.116
		NSW	0.101	0.124
		VIC	0.124	0.142
		QLD	-	0.140
		WA	-	0.113
		TAS	-	0.016
		Average		0.114
Retail	tCO ₂ -e/m ² GLA	ACT	-	0.123
		NSW	0.167	0.151
		VIC	0.026	0.104
		QLD	-	0.132
		WA	0.441	0.042
		Average		0.123
Industrial	tCO ₂ -e/m ² NLA	ACT		
		NSW	0.006	0.002
Average			0.006	0.002
Hotels	tCO ₂ -e/room	NSW	12.961	17.108
		VIC	22.930	26.483
		QLD	21.837	17.009
		WA	11.044	15.353
		TAS	1.253	-
		SA	14.394	14.823
		NZ	5.246	-
Average		16.317	18.404	

Appendix 4 - Mirvac's Sustainability@Work Program

Background

Focusing on employee participation, the Mirvac Sustainability@Work (S@W) program aims to reduce the environmental impacts of its office-based activities and embed a culture of sustainability within the Mirvac workforce.

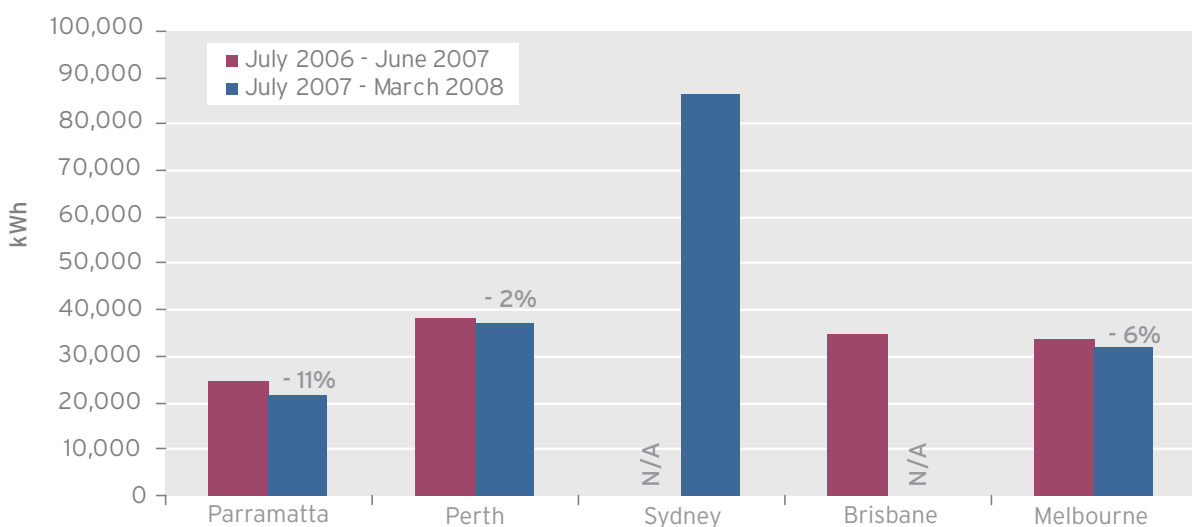
The program targets reductions in energy use, greenhouse gas emissions, water consumption and waste generation, to lessen the environmental impacts of the materials used in Mirvac offices and to create a shift to more sustainable transport options.

Progress

The S@W team tracks and regularly reports to staff on head office electricity use via regular emails, posters, competitions and education campaigns.

Through education, and simple steps to change behaviours, this program has achieved an average monthly electricity reduction of 6.3%, representing a saving of approximately 6 tonnes of CO₂-e per month.

Chart 5: Average kWh/Month



While these savings are relatively small compared to the group-wide emissions profile, the S@W program offers invaluable education to Mirvac employees, and highlights how simple steps can achieve meaningful change.

As Mirvac seeks to integrate sustainability performance within the roles of all Mirvac employees, the S@W program offers its office-bound staff with key opportunities to play a role in reducing their immediate impact.

Whilst all reasonable care has been taken in preparation of this brochure, the information contained herein is believed, but not guaranteed, to be correct at the time of printing. This brochure does not constitute an offer on contract. Mirvac Limited ABN: 92 003 280 699.

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