mirvac

CARBON DISCLOSURE PROJECT 2009 (CDP7)

RESPONSE TO THE CARBON DISCLOSURE PROJECT 2009 (CDP7) QUESTIONNAIRE

BAY CENTRE, NSW

MAY 2009

CONTENTS

FOREWORD

I am pleased to present this response, Mirvac's fourth, to the Carbon Disclosure Project (CDP) request.

In each of our past responses, Mirvac has commented on the uncertainty in the climate change regulatory space and disappointingly, this uncertainty remains unresolved. At the time of drafting this response, Prime Minster Rudd announced his intention to delay the introduction of the Carbon Pollution Reduction Scheme until 2011 and further compensate high polluting industries. The amended Bill is yet to pass through Parliament which further adds to the ongoing uncertainty and limits future business planning.

I call on Government at all levels and across party lines to work collaboratively to simplify and expedite the policy reform process, and in turn, allow businesses to focus on finding and implementing solutions.

Nevertheless, we continue to pursue our program to improve the energy and greenhouse gas (GHG) performance of our business and respond to the climate change risks and opportunities as we perceive them. Our focus remains on where we can deliver the most impact; the efficient operation of the large number of assets that we own across the commercial, retail, industrial and hotel sector. I remain confident that our diverse skill base, early mover advantage and on-going performance improvement program will deliver real environmental and financial returns in the long run.

Through participation in the CDP we continue to fine tune the capture and analysis of energy and GHG information and I am pleased that our data accuracy has shown continuous improvement, with 99% of reported data from this year captured by direct measurement, up significantly from only 66% in 2007.

For queries regarding our response, please contact our Group Sustainability Manager, Shauna Coffey on +61 2 9080 8507.

Nicholas Collishaw, Managing Director

INTRODUCTION

THE MIRVAC GROUP

Established in 1972, Mirvac has more than 37 years of experience in the real estate industry and has an unmatched reputation for delivering quality products across all of its businesses.

Investment

Mirvac Property Trust (MPT), part of the stapled entity of Mirvac Group, has a diverse portfolio of 57 investment grade assets. The portfolio includes commercial offices, retail centres, industrial properties, hotels and car parks, leased to quality tenants including leading Australian and international companies.

Mirvac's integrated business approach includes using the specialised in-house asset management team - Mirvac Asset Management - that is responsible for all leasing and property management across the entire portfolio.

Hotels & Resorts
Mirvac Hotels & Resorts are renowned for an uncompromising level of service and attention to detail and have approximately 5,300 rooms under management across 42 properties in Australia, New Zealand and the South Pacific, making it one of the largest Australian-owned hotel groups.

Retail
Mirvac's Retail team manage retail assets across Australia, including Orion Springfield Town Centre, Broadway Shopping Centre and Rhodes.

Investment Management
Mirvac's Investment Management team supports the Group's core activities – Investment and Development. They are involved in both listed and unlisted funds with more than 34,000 institutional and retail investors.

Development

Mirvac is one of the leading brands in the Australian development and construction industry and has a proven track record of delivering innovative and quality products that exceed customers' expectations.

For over 37 years, Mirvac has produced some of Australia's most renowned residential projects including Magenta Shores on the Central Coast, NSW; Walsh Bay in Sydney, NSW; Ephraim Island on the Gold Coast, QLD; Yarra's Edge, VIC; and The Peninsula at Burswood in Perth, WA. Meticulous planning, knowledge, and a stringent control of design and construction means customers receive the quality they expect and deserve.

Mirvac Design
As an integrated real estate group, Mirvac is able to exercise total control over the entire development process, from concept to completion. Mirvac Design specialises in architecture, urban design, interior design, landscape architecture and graphic design.

MIRVAC AND SUSTAINABILITY

Mirvac's commitment to corporate responsibility and sustainability means managing environmental, social and economic risks and responsibilities and capitalising on opportunities to deliver sustainable development and investment outcomes for the benefit of stakeholders and the broader community.

Recent actions in support of this commitment include:

› Receiving a number of Green Star ratings – Orion Springfield shopping centre in South-East QLD was awarded a world leadership 6 star Green Star rating (Shopping Centre Design – Pilot); 5 Rider Boulevard, Rhodes Waterside, NSW achieved a 4 star Green Star rating (Office Design V2); 101 Miller Street, North Sydney NSW achieved a 5 star Green Star rating (Office Design V2); and the Mirvac designed Bond University's Mirvac School of Sustainable Development in QLD gained a 6 star Green Star rating (Education – Pilot).

5 Rider Boulevard Rhodes Waterside, NSW

- Adoption of the MirvacPlus Residential Sustainability Scorecard delivering a consistent minimum level of environmental and social outcomes across all future residential developments.
- Growing the Mirvac Foundation to connect with those most in need in the communities in which we operate. In the Foundation's inaugural year, the theme Mirvac has chosen to support is homelessness.
- Ongoing support of the Bond University Mirvac School of Sustainable Development, whose graduates will be industry leaders in implementing responsible and practical sustainability management initiatives in the built environment.
- Maintaining listings on the United Kingdom's FTSE4Good Global Index, and 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 recognises that acting in a responsible and sustainable manner creates new opportunities, enhances investor value, and improves social and environmental returns.

For further details on Mirvac's sustainability commitments and performance, please see www.mirvac.com.

RISKS AND OPPORTUNITIES

1. REGULATORY RISKS

1.1. Is your company exposed to regulatory risks related to climate change?

Mirvac must comply with various Local, State and Federal climate change-related regulatory schemes, including building codes, planning regulations, the Energy Efficiency Opportunities program (EEO) and the National Greenhouse and Energy Reporting Scheme (NGERS).

The multitude and diversity of these schemes, along with the rate at which new schemes are being developed has created the following regulatory risks for Mirvac:

Increased cost of compliance

Each regulatory scheme requires a unique response, and occupies a significant portion of Mirvac core sustainability staff's time. Smaller operators which do not exceed regulatory reporting thresholds, those with less diverse business structures (geographically or operationally), or those in different industry sectors may have lower climate change-related compliance costs.

Mirvac is required to complete energy efficiency opportunity assessments for 80% of total energy use before July 2011. The EEO assessment process incorporates seven inter-related stages purposefully structured to force engagement in energy efficiency opportunity identification and decision making beyond the technical operations staff. An energy audit is only part of the assessment process; the other elements of project planning, communications management, identifying potential opportunities based on energy audit data, detailed investigation of opportunities, determination of the business response and communicating outcomes, including preparation of formal public and Government reports, all require staff time from across all business units.

Experience to date with the EEO requirements has established a cost of energy audits between $0.90 - $1.50/ m^2 NLA for commercial, retail and industrial properties and up to $9,000 for hotels depending on the size of the property. Indicative pricing has not yet been established for car parks. Mirvac has approximately 1.68 million m^2 of commercial, retail and industrial space, 47 hotels, and car parks with a total of 1,930 parking bays which will require auditing prior to July 2011. Based on current energy audit price experience (and discounting changes in property portfolio), this is a cost between $1.5-2.5 million for commercial, retail and industrial properties, and up to $423,000 for hotels. This cost, added to the internal management and engagement time for the other assessment elements is significant for core sustainability staff.

Mirvac seeks to recover EEO assessment costs from the tenant where possible, as determined by factors including the nature of the property, the lease structure in place and potential impacts on tenant satisfaction. Mirvac has also sought to mitigate assessment costs in two ways. A competitive tender process is underway to select a consultant to service a large number of assets over the next two years allowing for improved economies of scale and price negotiation. Additionally, Mirvac is recruiting extra internal resources to undertake some assessments in-house.

Alongside, but not aligned with EEO is the NGERS and its duplicate compliance burden. Given the lack of specificity of existing guidelines on application in the property industry, Mirvac has been heavily engaged with other property sector peers to develop Industry Guidelines to provide a consistent, best practice, principles-based approach to reporting, in line with the framework of the legislation and the NGERS Guidelines. Critically for the property industry, the Industry Guidelines apply the definition of operational control, clarify the definition of a facility and classify and provide a methodology to determine incidental emissions. This will allow comparability amongst property sector players.

Regulatory uncertainty

The rate at which climate change-related regulation is being developed creates a complex and uncertain operating environment.

In the period of drafting this response, the Federal Government made two significant climate change policy announcements.

Orion Town Centre, QLD

The Communiqué released from the 30 April 2009 meeting of the Council of Australian Governments (COAG), reaffirmed the Governments' commitment to introducing a comprehensive National Strategy for Energy Efficiency commencing mid-2009. Five key measures targeting buildings have been agreed:

- An increase in the stringency of energy efficiency requirements for all classes of commercial buildings in the Building Code of Australia from 2010;

  This will have yet to be quantified cost implications for commercial buildings.
- The phase-in of mandatory disclosure of the energy efficiency of commercial buildings and tenancies commencing in 2010;

  This will formalise the requirement for NABERS Energy ratings on the majority of Mirvac office assets with associated initial and annual cost impacts. If, as currently proposed, the scheme includes tenancies within the disclosure regime of the building owner, cost impacts will be higher, but not yet quantified, for no additional benefit.
- An increase in energy efficiency requirements for new residential buildings to 6 stars, or equivalent, nationally in the 2010 update of the Building Code of Australia, to be implemented by May 2011, as well as new efficiency requirements for hot-water systems and lighting;

  This will increase costs of new homes, but has the ongoing benefits of reduced utility costs for occupiers, improved thermal comfort and, assuming it applies sector wide, will require all builders to deliver to a standard that many are already doing voluntarily without realising margin improvement.
- The phase-in of mandatory disclosure of residential building energy, greenhouse and water performance at the time of sale or lease, commencing with energy efficiency by May 2011;

  This will have minimal impact on Mirvac other than to potentially drive demand for higher energy and water efficient homes.
- To reform the current rating and assessment processes for building energy efficiency standards to be outcomes-based and allow comparability between residential and commercial buildings.

  Mirvac has always advocated for alignment and simplification of built environment rating tools.

On 4 May 2009, the Federal Government announced a series of amendments to the Carbon Pollution Reduction Scheme (CPRS), principally a delay in the planned commencement of one year until 1 July 2011, a cap on permit price of $10 per tonne CO_2-e for the first year of the CPRS operation and even further financial assistance to emissions intensive trade exposed industries. This will delay the impact and reduce the size of forecast energy

cost increases. The announcement indicated some additional assistance to business, though further details are not yet available.

Given Mirvac's early-mover advantage in the sustainability field we consider ourselves relatively well positioned to respond to more stringent regulation. However these announcements create additional uncertainty, in terms of the scale and impact of a carbon price, in negotiating forward pricing contracts and conducting long range development project feasibilities; all of which necessitate increased contingencies. Mirvac actively advocates for sensible policy decisions regarding the mitigation of and adaptation to climate change impacts.

Development opposition

Mirvac has closely monitored a number of recent instances in which development projects by non-Mirvac companies have been opposed or rejected on the basis of real or perceived climate change impacts.

Mirvac's development pipeline comprises 29,662 residential lots (3,287 in progress, 26,375 proposed) and 19 non-residential projects (3 in progress, 16 proposed). In total, 21% of these projects/lots are 100% owned by Mirvac, 36.8% are held in joint ventures and 42.2% are held through Project Delivery Agreements or managed funds.

Opposition of a Mirvac development project on climate change (or other) grounds may result in project delays, legal costs, or design changes; all of which impact project profitability. If opposition to a project were upheld on a site already acquired, there is potential for loss, both in land value and development costs incurred to date.

Mirvac is not aware of any current or forthcoming opposition to Mirvac activities on the basis of climate change.

To ameliorate Mirvac's risk exposure, Mirvac works closely with planning authorities, community members, and relevant internal and external specialists to conduct development activities in accordance with best available scientific information and local planning guidelines.

As part of the Approval to Purchase process for a new development site, Development Managers must, in collaboration with the Sustainability Manager – Development Australia, perform a sustainability risk analysis of the proposed project including identification of climate change and other sustainability risks, and make an initial determination of the targeted sustainability performance in line with the MirvacPlus Residential Sustainability

Waverley Park, VIC

Scorecard. The outcomes of this analysis are integrated into the project feasibility assessment element of the documentation. Approvals to Purchase are adjudicated over by the Group Executive Committee.

The MirvacPlus Residential Sustainability Scorecard, delivers a consistent standard of environmental and social outcomes across a range of categories, including energy, water, waste, ecology and construction management for all new residential projects. Initial commitments to sustainability performance are tracked through the Scorecard, with key milestones at Approval to Purchase, Pre Planning Approval application, Pre Marketing, Pre Approval to Commence Construction and Practical Completion.

Mirvac has also established internal sustainability performance standards for all retail and commercial developments within the Mirvac Property Trust and Mirvac Real Estate Investment Trust. Mirvac is working to establish similar standards for other development types.

Government tenant requirements

Government tenants, among others, are increasingly specifying higher environmental standards when leasing office space. These standards differ State-by-State, with the highest set at 4.5 star NABERS Energy rating and 5 star Green Star rating for base building performance of new buildings.

Government agencies occupy approximately 12% of Mirvac's commercial office space and deliver approximately $40 million in revenue (approximately 13% of total revenue from commercial tenants). The weighted average lease expiry (WALE) for these tenants is 3.41 years.

To maintain and increase Mirvac's attractiveness to Government tenants, it is imperative that high quality office space with suitable sustainability performance ratings is available for lease. Failure to provide such space will mean Mirvac will not meet Government leasing requirements and will face a narrower pool of available tenants. Delays in leasing vacant space represent a significant cost to Mirvac.

Mirvac is in the process of conducting official NABERS Energy ratings for commercial office assets, having already ascertained indicative performance from unofficial ratings. Based on the outcomes of unofficial ratings, Mirvac has identified one asset which is occupied by Government tenants and is approaching lease renewal which is currently operating below the Government requirements in that State. Mirvac is in the process of implementing energy performance upgrades to meet the required standard and improve the chance of securing a new lease term. A number of other assets with Government leases expiring over the mid-term have begun a similar process to ensure sustainability performance meets tenant requirements.

Indirect regulatory impacts

The Department of Climate Change's December 2008 White Paper "Carbon Pollution Reduction Scheme: Australia's Low Carbon Future"[1] has provided significant detail on the structure and specifics of the forthcoming CPRS.

The White Paper has confirmed that the property sector, and hence Mirvac, are not covered under the CPRS, are not subject to an emission cap, and will not be required to acquit permits under the scheme.

However, as the costs of the CPRS pass through the economy, Mirvac will feel an impact on the cost of business for inputs including electricity, natural gas and other energy, steel, concrete and other carbon-intensive products from commencement (expected mid/end 2011).

In the Investment business, the purchase of electricity is a significant cost in the operation of owned and managed assets. For Premium and A grade office buildings in Australian CBD locations in which Mirvac has a presence, electricity costs, on average, $11.75/$m^2$ which represents 12.32% of operating expenses or 9.42% of total expenditure[2].

A predicted electricity price rise of 18% (based on original Treasury estimates which may now be revised downwards following recently announced changes to compensation structures[3]), adds an average $2.12/$m^2$ to an

1 Government of Australia, 2008, 'Carbon Pollution Reduction Scheme – Australia's Low Pollution Future', White Paper, Volume 1.

2 Property Council of Australia, 2008, Benchmarks 2008: Survey of Operating Costs, Office Buildings.

3 Department of Climate Change, 2009, Deferral of Carbon Pollution Reduction Scheme – May 2009. Online: http://www.climatechange.gov.au/whitepaper/measures/pubs/deferral_of_CPRS.pdf

Rhodes Waterside, NSW

average total expenditure of $135.23/m^2, raising total expenditure by less than 2% and in the majority of cases, this cost will be passed through to the tenant. However, as with EEO assessment costs, the pass through of additional costs to the tenant is determined by factors including the nature of the property, the lease structure in place and potential impacts on tenant satisfaction. As can be interpreted from this relatively small predicted impact, a price on carbon alone does not provide sufficient incentive for implementation of energy efficiency opportunities.

Within the development business, the impact of cost increases is more difficult to ascertain, although some impact is acknowledged and anticipated and currently addressed through allocation of sufficient project contingency. Construction costs are a significant proportion of total development costs, including materials, equipment and labour. Mirvac has recently commenced a project to interrogate a completed project statement of accounts to ascertain specific project sensitivity to climate change-derived price increases. The learnings of this project will be translated, if necessary, to refine contingency allocations.

It should be noted that the positive effect of falling construction labour costs across the country will serve to offset any marginal price increase in building materials. Mirvac is also able to use its significant purchasing power to negotiate with a range of suppliers for the most cost effective option.

Due to the size of our operations, Mirvac is able to negotiate preferable energy contracts, which can cap cost increases. However at present, very few energy retailers are willing to provide energy price quotations beyond the implementation of the CPRS.

An opportunity for competitive advantage arises where pass on of increased costs can be avoided, possibly though investment in efficiency gains and/or distributed co- and tri-generation opportunities to reduce reliance on the grid thereby avoiding and/or absorbing cost.

Forestry Activities

JF Infrastructure (JFI) is a 50/50 joint venture between Mirvac and Leighton Holdings Limited (LHL). JFI manages the Australian Sustainable Forestry Investors Fund (ASFI) and the New Zealand Sustainable Forestry Investors Fund (NZSFI), with activities across Australia and New Zealand.

The treatment of forestry under future emissions trading regulation in Australia and New Zealand remains uncertain, and the result and impact on JFI's earnings are not yet quantifiable.

International Regulatory Exposure

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

Mirvac has a limited number of managed investments in foreign markets, including the United States, New Zealand, Vanuatu and the United Kingdom. The managing agents are responsible for managing Mirvac's regulatory compliance in these markets.

Mirvac will continue to monitor all areas of risk, including regulatory risk in general, and climate change risk specifically.

2. PHYSICAL RISKS

2.1. Is your company exposed to physical risks from climate change?

As a real estate company with extensive fixed property assets, including land earmarked for future development, 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 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; and
- Increased bushfire risk.

As discussed above, Mirvac's sustainability risk assessment process and internal sustainability scorecards are key ways of reducing exposure to the physical risks of climate change.

Mirvac also relies on guidance from relevant planning authorities, and the Australian Building Codes Board regarding the management of physical risks of climate change. To date, changes or amendments in planning regulations and building codes have focused on new buildings. Mirvac expects the next logical point of focus will be existing building stock. Mirvac has not yet conducted a physical risk assessment of its existing property portfolio beyond any regulatory requirement.

3. OTHER RISKS

3.1. Is your company exposed to other risks as a result of climate change?

At a time of rising awareness of climate change, Mirvac, as one of Australia's largest property companies, is exposed to increased scrutiny of business activities and efforts to manage climate change impacts. Failure to meet performance expectations may result in damage to Mirvac's reputation, loss of consumer/investor confidence, or social licence to operate. This is recognised as an immediate-term risk. Mirvac's sustainability strategy is founded on the notion of meeting or exceeding stakeholder expectations of performance. The implementation of this strategy is a key method of reducing reputational risk exposure.

In our CDP6 response, Mirvac forecast changes in how climate change risks are quantified and priced by key industries, such as insurance. In line with this forecast, this year Mirvac were warned by their incumbent insurer to expect premium increases of 5% to 10% due to the economic climate, our claims history, and risks associated with some business activities, based on their locations.

To respond, Mirvac invited tenders from alternative insurers, which ranged from an approximate 5% increase, to a 10% decrease relative to previous expenditure. This placed Mirvac in a strong bargaining position, and allowed us to work with the existing insurer to reach a renewal position and maintain an already strong relationship.

4. REGULATORY OPPORTUNITIES

4.1. Do regulatory requirements on climate change present opportunities for your company?

Mirvac's track record in delivering sustainable development outcomes, diverse skill base, and early mover advantage means it is well positioned to take advantage of opportunities arising from current or future regulation.

The increased Government focus on climate change has resulted in a raft of funding and incentive programs to assist industry in mitigating and adapting to climate change impacts. Under the New South Wales Department of Climate Change Green Business Program, Mirvac was awarded approximately $112,000 in funding to pursue

energy savings programs across three Mirvac properties. One of these properties, Bay Centre in Pyrmont, was recently awarded a 5 star NABERS Energy rating, representing exceptional energy efficiency performance.

Another property, 101 Miller Street in North Sydney was recently awarded a 5 star Green Star rating (Office Design V2) representing Australian excellence, and has modelled NABERS Energy performance of 5 star + 40% (official rating due after 12 months of operation). The improved energy performance of 101 Miller Street, along with other elements of the refurbishment have resulted in faster leasing, higher rents, and fewer lease incentives than forecast, along with increased investment and protection of asset value. This project has clearly shown that reducing energy and greenhouse gas emissions creates tangible benefits beyond improved environmental performance.

Regulatory programs such as the NSW Energy Saving Scheme offer Mirvac the opportunity to earn revenue through energy demand reductions. This scheme replaces the demand side abatement component of the existing NSW Greenhouse Gas Abatement Scheme (GGAS), and will commence in July 2009. Scheme specifics have not been finalised, though early indications show that Mirvac will be able to offset at least a portion of the cost of reducing energy use across NSW assets. At present, no comparable scheme operates in other States or nationally.

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

The increased focus on climate change in planning regulation has favoured Mirvac relative to many other property companies, particularly due to our long history of sustainable developments, and extensive in-house expertise. Sustainability, in design and operation, has become a critical component of many development bids, and is a tie-breaker in many cases. Without outstanding sustainability offerings in the development proposal and this strong track record, Mirvac may not have been selected as preferred tenderer for the $1.7 billion Green Square, NSW redevelopment, or been short-listed for the $2.5 billion Barangaroo redevelopment in Sydney.

5. PHYSICAL OPPORTUNITIES

5.1. Do 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 have not been a focus for Mirvac. We will continue to examine business opportunities as they arise, including those linked to physical changes resulting from climate change.

As a national developer, one possible area of business opportunity for Mirvac is to meet changing demands for property, as certain geographical areas and specific properties become affected by the physical impacts of climate change.

6. OTHER OPPORTUNITIES

6.1. Does climate change present general opportunities for your company?

The growth of the Carbon Disclosure Project over recent years, in terms of responding companies and signatory investors is proof that investors are interested in how companies manage climate change impacts. As climate change impacts manifest (in terms of price increases, physical impacts and so on), it is likely that this interest level will increase further.

However, an interest in climate change information does not necessarily equate to investments in companies with strong performance in this area. At present, it is difficult to judge how, if at all, investors are including climate change-related information into their investment decisions. It is likely that for even the most climate change-oriented investors, climate change performance will be one of many criterion considered when making investment decisions.

That said, 12 of Mirvac's top 20 investors, who held approximately 25% of total Mirvac securities (as at 31 March 2009) participate in the CDP and/or are signatories to the United Nations Principles of Responsible Investment. While this is certainly no guarantee that their investment is influenced by Mirvac's sustainability credentials, it does indicate that they too see strong sustainability performance as key to long-term success.

Bond University Mirvac School of Sustainable Development, QLD

GREENHOUSE GAS (GHG) EMISSIONS ACCOUNTING, EMISSIONS INTENSITY, ENERGY AND TRADING

7. REPORTING YEAR

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 to 30 June 2008.

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 Dow Jones Sustainability Index.

Mirvac's responses under CDP4 and CDP5 were based on the 2005 and 2006 calendar years respectively. Mirvac's response under CDP6 was based on the 2007 financial year.

Details of the 2009 financial year will be available in November 2009 and Mirvac will make this information publicly available.

8. REPORTING BOUNDARY

8.1. Please indicate the category that describes the company, entities or group for which Scope 1 and Scope GHG emissions are reported.

- 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).

Mirvac's response under CDP7 covers emissions from companies, assets and activities over which operational control is exercised. This includes the following subsidiary business units and activities:

197 Salmon Street Pty Ltd, Mirvac ARF Pty Ltd, Mirvac Domaine Property Funds Limited, Mirvac Funds Limited, Mirvac Funds Management Limited, Mirvac Property Funds Australia Limited, Mirvac REIT Management Ltd, Mirvac Hotels Pty Ltd, Mirvac Parking Management, Mirvac Projects Pty Ltd, Mirvac Queensland Pty Ltd, Mirvac Victoria Pty Ltd, Mirvac WA Pty Ltd, Mirvac corporate offices, Mirvac business travel.

8.2. Please state whether any parts of your business or sources of GHG emissions are excluded from your reporting boundary

Mirvac collects GHG emissions data from electricity, gas, on-site fuels and refrigeration in accordance with reporting requirements under the (Australian) National Greenhouse and Energy Reporting Scheme (NGERS). This scheme requires companies to report energy and GHG emissions on the basis of operational control.

Hence, business activities over which Mirvac does not have operational control, or did not exercise that NGERS definition of operational control in the reporting period, or do not take place in Australia are not included in this data collection process, and subsequently do not appear in this report. Specifically this applies to:

- A limited number of Australian properties over which Mirvac does not have operational control.
- The Mirvac Industrial Trust, which has a 100% (from March 2009) interest in 66 US industrial assets.
- Four hotels in New Zealand and one in Vanuatu. Three New Zealand hotels and the Vanuatu hotel are managed (and not owned) by Mirvac. The remaining New Zealand property is part of the Travelodge Group, a wholesale investment fund co-owned by Mirvac Real Estate Investment Trust (49% interest), Mirvac Property Trust (1%) and another investor (50%) and managed by an external party.
- A limited number of Mirvac Investment Management joint ventures: JF Infrastructure Yield Fund; Mirvac Aqua Income Fund; Mirvac Aqua High Income Fund; Mirvac Aqua Enhanced Income Fund; Mirvac Aqua Senior Debt Pool; Mirvac Aqua Construction Debt Pool; Mirvac Aqua Mezzanine Debt Pool; Quadrant Fund; California Community Mortgage; Core Mortgage Funds 1 & 2; Institutional Commercial Mortgage Fund No's 2 – 5; City Regeneration Fund.

It should also be noted that emissions from contractor activities on Mirvac controlled sites are not included in this report, though will be included in NGERS reporting.

In accordance with NGERS, Mirvac has changed the way it reports emissions from refrigerants, to include only gases covered under the Kyoto Protocol, which exceed 1000 Global Warming Potential (GWP) and 100kg/unit. Previous reports have included all refrigerants used on Mirvac sites.

Refrigeration emissions data from properties which are externally managed are not currently available and are excluded from this report. This applies to 33 Australian properties.

Mirvac reports GHG emissions from Mirvac owned/leased vehicles and vehicles which are leased to staff members, including a portion of emissions from private use. At present, vehicle emissions cannot be divided into work and private use, and as such, Mirvac discloses total emissions as part of the company emissions profile.

Mirvac's travel guidelines indicate that air travel is to be booked through a corporate travel provider. Limited instances of air travel booked outside this agreement are not included in this report.

Waste data are available for a limited number of Mirvac properties, due to a variety of waste contractor arrangements across the group and their varying ability to provide reportable data. For the reporting period waste data was available for 44 MAM-managed assets (generally for only 6 months of the reporting year) and all construction activities, except for Mirvac Homes (NSW) activities.

Table 1: Report Coverage

Emission Source	CDP4	CDP5	CDP6	CDP7
Scope 1 – Direct Emissions				
Natural Gas – Investment Division	✓[1]	✓[1]	✓[2]	✓
Natural Gas – Development Division				✓
Refrigerants – Investment Division	✓[1,3]	✓[1]	✓[1]	✓[8]
On-site fuel use – Investment Division		✓[1]	✓[1]	✓
On-site fuel use – Development Division		✓[3]	✓[3]	✓
Group Vehicle Use	✓[4]	✓[4]	✓	✓
Scope 2 – Indirect Emissions				
Electricity – Investment Division	✓[1]	✓[1]	✓[2]	✓
Electricity – Development Division		✓[3]	✓[3]	✓
Electricity – Corporate offices			✓	✓
Scope 3 – Other Indirect Emissions				
Electricity[5]		✓[1]	✓[2]	✓
Gas[5]		✓[1]	✓[2]	✓
Air Travel	✓[6]	✓[6]	✓	✓
Fuel[5]			✓	✓
Waste disposal – Investment and Development		✓[1]	✓[7]	✓[7]

1 Properties managed by Mirvac Asset Management (MAM).

2 Includes actual data for MAM 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 business unit.

7 Data not available from all sites

8 Includes only refrigerants which are reportable under NGERS. Previous reports included all refrigerants. See 8.2 for details.

9. 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.

For all emissions sources excluding air travel, Mirvac has used the Australian Government Department of Climate Change National Greenhouse Accounts (NGA) Factors (http://www.climatechange.gov.au/workbook/pubs/workbook-nov2008.pdf) as the standard guideline on methodology of calculating Scope 1, Scope 2, and Scope 3 GHG emissions.

Electricity, natural gas, on-site fuel use, and refrigerants data are all reported directly from each Mirvac property and project. Transport fuel uses are reported at the group level from transport lease providers.

For air travel, Mirvac has used the emission factors provided from the GHG Protocol CO2 Emissions from Transport or Mobile Sources Calculator (Version 1.3, January 2005), http://www.ghgprotocol.org/calculation-tools/all-tools.

9.2. Please also provide details of any assumptions made

N/A

9.3. The names and links to any calculation tools used.

The Australian Government Department of Climate Change National Greenhouse Accounts (NGA) Factors, http://www.climatechange.gov.au/workbook/pubs/workbook-nov2008.pdf

GHG Protocol CO2 Emissions from Transport or Mobile Sources Calculator (Version 1.3, January 2005), http://www.ghgprotocol.org/calculation-tools/all-tools

9.4. The global warming potentials you have applied and their origin.

For the following Hydrofluorocarbons (HFCs), Global Warming Potential (GWP) figures are taken from the National Greenhouse Accounts (NGA) Factors:

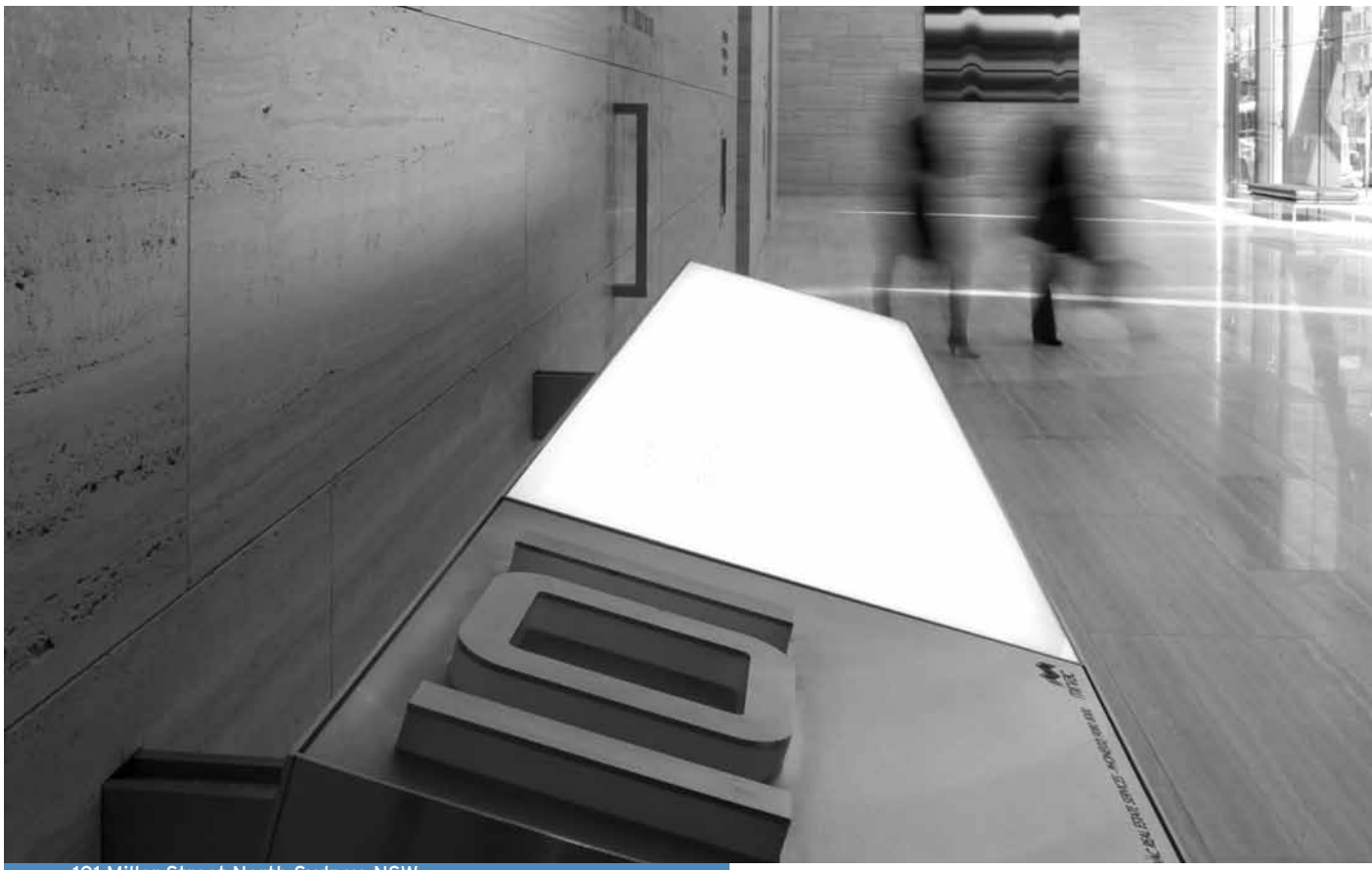
Table 2: Global Warming Potential of HFC Refrigerants

Hydrofluorocarbon (HFC)	Global Warming Potential (GWP)
HFC-32	650
HFC-125	2,800
HFC-134a	1,300
HFC-143a	3,800

GWP for non-HFC refrigerants and blended HFC refrigerants (listed below) have been provided directly from the Australian Government Department of Climate Change:

Table 3: Global Warming Potential of Non-HFC and Blended HFC Refrigerants

Non-HFC and blended HFC Refrigerants	Global Warming Potential (GWP)
CFC-11	4,000
CFC-12	8,100
HCFC-22	1,700
HCFC-123	90
R-404a (blend of HFC-125, HFC-134a, and HFC-143a)	3,260
R-407c (blend of HFC-32, HFC-125, and HFC-134a)	1,526
R-410a (blend of HFC-32 and HFC-125)	1,725
R-507a (blend of HFC-125 and HFC 143-a):	3,300



101 Miller Street North Sydney, NSW

9.5. The emission factors you have applied and their origin.

The Australian Government Department of Climate Change have specified emission factors for Australia in the National Greenhouse Accounts (NGA) Factors as outlined above. The emission factors used by Mirvac are:

Table 4: Scope 1 GHG Emission Factors

Fuel Source	Kg CO_2-e/GJ
Natural gas (small user) – Australia	51.3
Wood combustion – stationary energy	1.3
Petrol combustion – stationary energy	67.1
Diesel combustion – stationary energy	69.5
LPG combustion – stationary energy	59.9
Petrol combustion – transport fuel	67
Diesel combustion – transport fuel	69.8
LPG combustion – transport fuel	60.2

Synthetic gases emissions are calculated by multiplying the charge of HFCs by their respective Global Warming Potential (GWP) and the default annual leakage rate (ALR) per equipment type, listed below:

Table 5: Annual Leakage Rate from Refrigeration Systems

Refrigerant Type	Annual Leakage Rate (%)
Domestic refrigeration	3
Commercial air conditioning – Chillers	9
Commercial air conditioning – Non-chillers	23
Industrial refrigeration	16

Table 6: Scope 2 GHG Emission factors

Purchased Electricity - Australia	Kg CO_2-e/GJ
NSW/ACT	249
VIC	340
QLD	252
SA	233
WA	242
TAS	35

Table 7: Scope 3 Emission GHG factors

Emissions Source	Location	Emission Factor
Fuel combustion (all fuel type) – stationary energy	Australia	5.3 kg CO_2-e/GJ
Fuel combustion (all fuel type) – transport fuel	Australia	5.3 kg CO_2-e/GJ
Natural gas (small user)	NSW/ACT	14.8 kg CO_2-e/GJ
	VIC	5.9 kg CO_2-e/GJ
	QLD	6 kg CO_2-e/GJ
	SA	19.4 kg CO_2-e/GJ
	WA	7.6 kg CO_2-e/GJ
	NT	5.7 kg CO_2-e/GJ
Purchased electricity	NSW/ACT	47 kg CO_2-e/GJ
	VIC	23 kg CO_2-e/GJ
	QLD	38 kg CO_2-e/GJ
	SA	39 kg CO_2-e/GJ
	WA	29 kg CO_2-e/GJ
	TAS	2 kg CO_2-e/GJ
Waste to landfill – Commercial/industrial waste	National	1.7 tonne CO_2-e/tonne waste
Waste to landfill – Construction/demolition waste	National	0.3 tonne CO_2-e/tonne waste
Air travel – Short haul	International	0.2897 kg CO_2-e/mile
Air travel – Medium haul	International	0.2028 kg CO_2-e/mile
Air travel – Long haul	International	0.177 kg CO_2-e/mile

10. SCOPE 1 DIRECT GHG EMISSIONS

10.1. Total gross global Scope 1 GHG emissions in metric tonnes of CO_2-e

Table 8: Scope 1 Emissions (tCO_2-e) 2005-2008

Emissions Source	2005	2006	2007	2008
Natural Gas	4,475	6,923	9,822	8,853
Refrigerants	-	1,441	5,106	991*
Vehicle Travel	2,056	1,883	2,047	2,030
On-Site Fuel	-	423	508	2,696
Total	**6,531**	**10,670**	**17,484**	**14,571**

* As per question 8.2, Mirvac has changed its reporting method for refrigerants, which accounts for the substantial drop in emissions.

10.2. Please break down your total gross global Scope 1 emissions by country or region

Table 9: Scope 1 Emissions (tCO_2-e) 2008 by State

Location	tCO_2-e	Proportion
ACT	435	2.98%
NSW	6,913	47.44%
QLD	1,085	7.45%
TAS	0.29	0.0019%
VIC	3,376	23.17%
WA	731	5.02%
National – Vehicle Travel	2,030	13.93%
Total	**14,571**	**100.0%**

Note: Vehicle travel data cannot be broken date on a state-by-state basis

10.3. Business division

Table 10: Scope 1 Emissions (tCO_2-e) 2008 by Business Units

Business Unit	tCO_2-e	Proportion
Mirvac ARF Pty Ltd	54	0.4%
Mirvac Domaine Property Funds Ltd	105	0.7%
Mirvac Funds Ltd	5,722	39.3%
Mirvac Funds Management Ltd	1,946	13.4%
Mirvac Property Funds Australia Ltd	250	1.7%
Mirvac Real Estate Investment Trust Management Ltd	1,692	11.6%
Mirvac Hotels Pty Ltd	2,205	15.1%
Mirvac Projects Pty Ltd	195	1.3%
Mirvac Queensland Pty Ltd	28	0.2%
Mirvac Victoria Pty Ltd	245	1.7%
Mirvac (WA) Pty Ltd	99	0.7%
National – Vehicle travel	2,030	13.9%
Total	**14,571**	**100.0%**

Note: Vehicle travel data cannot be broken down by business units

10.4. And/or Facility

N/A

10.5. Please break down your total global Scope 1 GHG emissions in metric tonnes of the gas and metric tonnes of CO_2-e by GHG type.

Mirvac's systems for collecting greenhouse gas emissions-related data have been structured to report in tonnes of CO_2 equivalent for our various emissions sources, and not by the original gases. However, approximately 61% of scope 1 emissions are derived from natural gas, 32% from liquid fuels (including petrol, diesel, and LPG) and 7% from refrigerants, which gives an indication of the source greenhouse gases.

10.6. If you have not provided any information about Scope 1 emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 1 GHG emissions information in the future.

N/A

11. SCOPE 2 INDIRECT GHG EMISSIONS

11.1. Total gross global Scope 2 GHG emissions in metric tonnes of CO_2-e

Table 11: Scope 2 Emissions (tCO_2-e) 2005-2008

Emissions Source	2005	2006	2007	2008
Investment Division	104,078	126,710	299,900	249,982
Development Division	-	11,338	9,847	4,383
Corporate Offices	-	-	1,544	2,426
Total	**104,078**	**138,048**	**311,291**	**256,791**

11.2. Please break down your total gross global Scope 2 GHG emissions by country or region

Table 12: Scope 2 Emissions (tCO_2-e) 2008 by State

Location	tCO_2-e	Proportion
NSW	101,702	39.6%
QLD	78,269	30.5%
VIC	51,026	19.9%
WA	14,702	5.7%
ACT	10,573	4.1%
TAS	519	0.2%
Total	**256,791**	**100.0%**

11.3. Where it will facilitate a better understanding of your business, please also break down your total global Scope 2 emissions by business division

Table 13: Scope 2 Emissions (tCO_2-e) 2008 by Business Unit

Business Unit	tCO_2-e	Proportion
Mirvac Funds Ltd	109,957	42.8%
Mirvac Real Estate Investment Trust Management Ltd	47,194	18.4%
Mirvac Funds Management Ltd	40,419	15.7%
Mirvac Hotels Pty Ltd	28,446	11.1%
Mirvac Property Funds Australia Ltd	20,800	8.1%
Mirvac Domaine Property Funds Ltd	3,069	1.2%
Corporate Offices	2,426	0.9%
Mirvac Projects Pty Ltd	1,532	0.6%
Mirvac (WA) Pty Ltd	1,425	0.6%
Mirvac Queensland Pty Ltd	839	0.3%
Mirvac Victoria Pty Ltd	587	0.2%
Mirvac Parking Pty Ltd	96	<0.1%
Total	**256,791**	**100.00%**

11.4. And/or Facility

N/A

11.5. If you have not provided any information about Scope 2 emissions in response to the question above, please explain your reasons and describe any plans you have for collecting Scope 2 GHG emissions information in the future.

N/A

12. CONTRACTUAL ARRANGEMENTS SUPPORTING PARTICULAR TYPES OF ELECTRICITY GENERATION

12.1. If you consider that the grid average factor used to report Scope 2 emissions in question 11 above does not reflect the contractual arrangements you have with electricity suppliers, (for example, because you purchase electricity using a zero or low carbon electricity tariff), you may calculate and report a contractual Scope 2 figure in response to this question, showing the origin of the alternative emission factors and information about the tariff.

N/A

12.2. If you retire any certificates (eg: Renewable Energy Certificates) associated with zero or low carbon electricity, please provide details.

N/A

13. SCOPE 3 OTHER INDIRECT GHG EMISSIONS

For each of the following categories, please:

- Describe the main sources of emissions,
- Report emissions in metric tonnes of CO_2-e
- State the methodology, assumptions, calculation tools, databases, emission factors (including sources) and global warming potentials (including sources) you have used for calculating emissions.

Table 14: Scope 3 Emissions (tCO_2-e) 2005-2008

Emissions Source	2005	2006	2007	2008
Natural gas - extraction and transmission	-	1,727	1,852	1,648
Electricity - extraction and transmission	-	19,785	47,257	37,928
Fuel - extraction	-	-	204	373
Air travel	687	828	1,110	1,398
Waste disposal	-	10,938	21,115	10,002
Total	**687**	**33,278**	**71,538**	**51,349**

13.1. Employee business travel

Mirvac collects information on air travel from across the Group. Mirvac's travel guidelines indicate that air travel is to be booked through a corporate travel provider. Limited instances of air travel booked outside this agreement are not included in this report. Business travel emissions were 1,398 tonnes CO_2-e for the year.

13.2. External distribution/logistics

N/A

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

As per question 8.2, Mirvac tracks its waste emissions from a number of locations. Waste emissions for the year were 10,002 tonnes CO_2-e.

13.4. Company supply chain

As per question 9.1, Mirvac calculates scope 3 emissions from on-site natural gas use, liquid fuels, and purchased electricity. Emissions from these sources were 39,949 tonnes CO_2-e for the year.

13.5. Other

N/A

13.6. If you have not provided information about one or more of the categories of Scope 3 GHG emissions in response to the questions above, please explain your reasons and describe any plans you have for collecting Scope 3 indirect emissions information in the future.

N/A

101 Miller Street North Sydney plant room, NSW

14. 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.

Mirvac is a long-time supporter of energy efficient design and operation across our investment properties and development activities.

Mirvac has been involved in many landmark projects aimed at reducing greenhouse gas emissions, including Newington – Australia's first solar suburb, Vision Estate at Glenfield, which included a residential trigeneration system – a world first for mass replicable housing, and the recently installed trigeneration plant at 101 Miller Street – an Australian first for an existing premium building.

As energy efficiency is a key element in the design and operation of Mirvac property assets, we make a lasting impact on greenhouse gas emissions over the many years of life of the asset.

Given the large number of projects and timescale involved, Mirvac is unable to provide a company-wide estimate of these emissions savings. However as an indication of one particular project, Mirvac's recent work at 101 Miller Street is estimated to save approximately 3,400 tonnes of CO_2-e/annum. This calculation is based on the known performance of the building prior to refurbishment, compared to the projected performance levels post-refurbishment, and is driven largely by switching from grid-sourced electricity to on-site natural gas-fired trigeneration combined with energy efficient refurbishment improvements.

15. CARBON DIOXIDE EMISSIONS FROM BIOLOGICALLY SEQUESTERED CARBON

15.1. Please provide the total global carbon dioxide emissions in metric tonnes CO_2-e from biologically sequestered carbon.

As stated in question 1.1, Mirvac is involved in forestry activities, via the joint venture JFI. The carbon sequestered from these activities has not been quantified.

16. 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,

Mirvac has presented below an emissions intensity measurement based on tCO_2-e (scope 1 and 2) per million dollars of earnings before interest, tax, depreciation and amortisation (EBITDA). For this exercise, Mirvac has calculated EBITDA as $320.145m in accordance with Australian International Financial Reporting Standards (AIFRS) methodology.

Calculating EBITDA in accordance with operating reporting practices (which exclude non-cash items such as asset impairment) would result in a higher EBITDA, and hence a lower ratio of tCO_2-e/$m EBITDA and for this reason was not used.

16.1.1. The units, and

Metric tonnes of CO_2-e for scope 1 and 2 emissions per $m of EBITDA.

16.1 .2. The resulting figure.

847.6 tonnes CO_2-e/$m EBITDA

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,

Emissions intensity for Mirvac properties is calculated based on scope 1 and 2 emissions from gas, other fuels, refrigerants and electricity used at Mirvac Investment properties. Other scope 1 emission sources, such as vehicle travel are excluded from this calculation as they do not relate to property-based emissions.

At present, Mirvac has not determined an appropriate activity-related metric for emissions intensity at construction sites or other business activities. This is particularly relevant in the current financial climate where construction activities may have continued while revenues have declined.

16.2.1. The units, and

Mirvac uses a number of activity related emissions intensity metrics for our property portfolio. These are:

Commercial properties: tCO_2-e/m^2 NLA
Retail properties: tCO_2-e/m^2 GLA
Industrial properties: tCO_2-e/m^2 NLA
Hotels: tCO_2-e/hotel room
Bulky goods properties: tCO_2-e/m^2 GLA
Car parks: tCO_2-e/car space

16.2.2 The resulting figure.

Table 15: Emissions Intensity by Asset Type and Business Unit

Legal Entity	Asset Type	Emissions Metric	Emissions Intensity 2008
Mirvac ARF Pty Ltd	Commercial	tCO_2-e/m^2 NLA	0.0040
Mirvac Domaine Property Funds Ltd	Commercial	tCO_2-e /m^2 NLA	0.0234
	Retail	tCO_2-e /m^2 GLA	0.0529
Mirvac Funds Ltd	Car Park	tCO_2-e /car space	0.6665
	Commercial	tCO_2-e /m^2 NLA	0.1198
	Industrial	tCO_2-e /m^2 NLA	0.0779
	Retail	tCO_2-e /m^2 GLA	0.1931
	Hotel*	tCO_2-e /hotel room	
Mirvac Property Funds Australia Ltd	Bulky Goods	tCO_2-e /m^2 GLA	0.0299
	Commercial	tCO_2-e /m^2 NLA	0.1935
	Retail	tCO_2-e /m^2 GLA	0.0409
	Hotel	tCO_2-e /hotel room	9.9290
Mirvac REIT Management Ltd	Commercial	tCO_2-e /m^2 NLA	0.1521
	Industrial	tCO_2-e/m^2 NLA	0.1135
	Retail	tCO_2-e/m^2 GLA	0.1347
	Hotel	tCO_2-e/hotel room	7.0702
Mirvac Hotels Pty Ltd	Hotel	tCO_2-e/hotel room	11.4762
Mirvac Parking Pty Ltd	Car Park	tCO_2-e/car space	0.4722
Mirvac Group	Bulky Goods	tCO_2-e/m^2 GLA	0.0299
	Car Park	tCO_2-e/car space	0.6179
	Commercial	tCO_2-e/m^2 NLA	0.1303
	Industrial	tCO_2-e/m^2 NLA	0.0891
	Retail	tCO_2-e/m^2 GLA	0.1448
	Hotel	tCO_2-e/hotel room	10.7047

* Excludes the Como Centre commercial, retail, hotel and car park assets. Emissions intensity from this group of assets cannot be apportioned accurately based on asset type.

During the past year, Mirvac has improved the accuracy and coverage of emissions intensity metrics by reducing data estimation and including emissions from on-site fuel use and refrigerants. Additionally, our method of calculating emissions intensity has changed, to provide a more accurate representation of average emissions intensity across asset type, business unit and the Mirvac Group. As a result of these changes, previously reported figured are no longer considered comparable and have not been reported. Mirvac will use the 2008 emissions intensity data as a baseline for comparing future emissions intensity performance.

17. EMISSIONS HISTORY

17.1. Do emissions for the reporting year vary significantly compared to previous years?

Yes, reported emissions in 2008 are lower than 2007 by 19.4%, due to a number of factors which are discussed below. However due to the nature of our business, in which assets may be bought and sold, and construction activities are commenced and completed, emissions intensity metrics provide the truest assessment of overall performance, rather than total emissions. Please see Mirvac's response to Q16.2.2 for information on emissions intensity.

The factors which have influenced changes in our overall emissions are discussed below:

- In 2007 approximately 34% of the data relating to electricity, gas and fuel use was estimated due to lack of data availability. In 2008, less than 1% of data from these sources has been estimated. The substantial drop in emissions from these sources is largely attributed to improvements in data quality.
- 13 properties which were included in our CDP6 report have been excluded from this report, due to asset sales, or changes in our reporting boundary.
- This year, Mirvac has reported on 189 properties and 61 development sites, compared to 166 properties and 38 development sites under CDP6.
- In accordance with NGERS, Mirvac has changed the way it reports emissions from refrigerants, to include only gases covered under the Kyoto Protocol, which exceed 1000 Global Warming Potential (GWP) and 100kg/unit. Previous reports have included all refrigerants used on Mirvac sites, which accounts for the substantial drop in reported emissions from refrigerants.
- Mirvac has recorded a decline in emissions from energy used in our construction activities, due to reduced project activity relative to the previous year.
- Waste data was available for only 44 MAM-managed properties (generally for only 6 months) compared to 53 properties last year. However, we have for the first time, included waste data from Mirvac's construction activities in all locations except Mirvac Homes NSW. Due to a variety of waste contractor arrangements across the group and their varying ability to provide reportable data, waste reporting is not available at all locations.

17.1.1 Estimate the percentage by which emissions vary compared with the previous reporting year.

Table 16: Emissions History (tCO_2-e) 2005-2008

Year	2005	2006	2007	2008	% Change
Scope 1	6,531	10,670	17,484	14,571	-16.7%
Scope 2	104,078	138,048	311,291	256,791	-17.5%
Scope 3	687	33,278	71,538	51,349	-28.2%
Total	**111,296**	**181,996**	**400,313**	**322,711**	**-19.4%**

18. 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?

The data in this report have not been externally verified.

Data pertaining to electricity, natural gas and other on-site fuel sources from internally- and externally-managed properties have been compiled for reporting under the Energy Efficiency Opportunities Program in compliance with data confidence requirements.

18.2. If so, please state the scope/boundary of emissions included within the verification/assurance exercise.

N/A

18.3. State what level of assurance, (eg: reasonable or limited) has been given.

N/A

18.4. Provide a copy of the verification/assurance statement.

N/A

18.5. Specify the standard against which the information has been verified/assured.

N/A

18.6. If not, please state whether you have plans for GHG emissions accounting information to be externally verified/assured in the future.

Mirvac may seek to have future reports externally verified.

19. DATA ACCURACY

19.1. What are the main sources of uncertainty in your data gathering, handling and calculations (eg: data gaps, assumptions, extrapolation, metering/measurement inaccuracies etc)?

Electricity data are captured using computer monitored, real time smart meters for 74 out of 86 locations managed internally by Mirvac Asset Management (MAM) where MAM is responsible for electricity usage. This represents approximately 52% of Mirvac's total electricity consumption (total monitored electricity via smart meters is 143,194 MWh versus total electricity consumption is 274,210 MWh).

Smart meters for natural gas have been installed at 14 out of 27 MAM-managed assets where natural gas is connected, representing approximately 25% of total gas use (total monitored natural gas via smart meters is 42,460 GJ versus total natural gas consumption of 172,574 GJ).

Data from the remaining assets without smart meters, including all construction sites and externally managed assets, and from other emissions sources such as on-site fuel use and refrigerants, are captured manually by property managers and other relevant staff, via meter readings and invoices. Emissions data from these sources are liable to human error, which creates a degree of data uncertainty.

Additionally, natural gas data accuracy has proven problematic, in that our natural gas providers rely heavily on estimated consumption figures when direct measurement is not available. Mirvac is working with providers to use direct measurement as the first priority, and measurement by Mirvac as the second priority. Estimation should only be used failing these first two options.

Smart metering is not likely to be utilised at construction sites, due to the time-limited nature of construction projects, or for on-site fuel and refrigeration, meaning that manual collection and collation will continue to be required.

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

This year, scope 1 and 2 emissions data included in this report (excluding vehicle travel, and refrigerants) have been calculated to within 95% accuracy through the EEO reporting process. The accuracy of other emissions sources included in this report has not been calculated.

Mirvac has begun using a specialised database to hold and interrogate emissions data, which reduces error once data have been input, and provides a robust and secure emissions history. At present data input happens centrally from collated data sources, though Mirvac is seeking to allow data owners at each location to input data directly to reduce double handling.

19.2. How do these uncertainties affect the accuracy of the reported data in percentage terms or an estimated standard deviation?

Data relating to electricity, gas and fuel use are calculated to within overall 95% accuracy.

19.3. Does your company report GHG emissions under any mandatory or voluntary scheme (other than CDP) that requires an accuracy assessment?

Yes.

Mirvac reports electricity, gas and fuel use via the (Australian) Energy Efficiency Opportunities Program, which requires 95% accuracy.

Mirvac is required to report GHG emissions under the (Australian) National Greenhouse and Energy Reporting Scheme (NGERS) for the first time in 2009. Mirvac's first report will be based on financial year 2009 (Mirvac's CDP7 response is based on financial year 2008 data). NGERS requires reporting to within 95% accuracy.

19.3.1. If so, please provide the name of the scheme

As above

19.3.2. The accuracy assessment for GHG emissions reported under that scheme for the last report delivered.

As above

Cambridge Apartments cogeneration plant, Chatswood, NSW

20. ENERGY AND FUEL REQUIREMENTS AND COSTS

Cost of purchased energy

$25.7 million (electricity and natural gas only). Of this, costs were tracked for 95.6% of total electricity and 93.9% of total gas, with an average cost applied for the remaining balances. Energy costs for other fuel types were not recorded.

20.1. The total cost of electricity, heat, steam and cooling purchased by your company.

$24 million (electricity only)

20.1.1 Please break down the costs by individual energy type.

Electricity – $24m

Cost of purchased fuel

20.2. The total cost of fuel purchased by your company for mobile and stationary combustion.

$1.7 million (natural gas only)

20.2.1. Please break down the costs by individual fuel type.

Natural gas – $1.7 million

Other fuel types – costs not tracked

Energy and fuel inputs

Purchased energy input

20.3. Your company's total consumption of purchased energy in MWh

274,210MWh (electricity only)

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.

59,228MWh

20.4.1. Please break down the total consumption of fuels reported in answer to question 20.4 by individual fuel type in MWh.

Table 17: Energy use from Stationary Combustion

Source	Energy Use (MWh)
Natural Gas	47,937
Diesel	7,724
Petrol	120
LPG	3,438
Wood	8

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 MWh of renewable energy, excluding biomass, that is self-generated by your company?

0MWh

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. EU EMISSIONS TRADING SCHEME

21.1. Does your company operate or have ownership of facilities covered by the EU Emissions Trading Scheme (EU ETS)?

No.

21.2. The allowances allocated for free for each year of Phase II for facilities which you operate or own. (Even if you do not wholly own facilities, please give the full number of allowances)

N/A

21.3. The total allowances purchased through national auctioning processes for the period 1 January 2008 to 31 December 2008 for facilities that you operate or own. (Even if you do not wholly own facilities, please give the total allowances purchased through auctions by the facilities for this period).

N/A

21.4. The total CO_2 emissions for 1 January 2008 to 31 December 2008 for facilities which you operate or own. (Even if you do not wholly own facilities, please give the total emissions for this period)

N/A

22. 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.

Mirvac does not participate directly in any emissions trading scheme. Please refer to question 1.1 for details of expected indirect impacts from the forthcoming Australian Carbon Pollution Reduction Scheme, which is scheduled to commence in mid/late 2011.

22.2. What is your overall strategy for complying with any schemes in which you are required or have elected to participate, including the EU ETS.

N/A

22.3. Have you purchased any project-based carbon credits?

N/A

22.4. Provide details including the type of unit, volume and vintage purchased and the standard/scheme against which the credits have been verified, issued and retired (where applicable).

N/A

22.5. Have you been involved in the origination of project-based carbon credits?

N/A

22.6. Please provide details including:

- Your role in the project(s),
- The locations and technologies involved,
- The standard/scheme under which the projects are being/have been developed,
- Whether the emissions reductions have been validated or verified,
- The annual volumes of generated/projected carbon credits,
- Retirement method if used for own compliance or offsetting

N/A

22.7. Are you involved in the trading of allowances under the EU ETS and/or project-based carbon credits as a separate business activity, or in direct support of a business activity such as investment fund management or the provision of offsetting services

N/A

22.8. If so, please provide details of the role performed.

N/A

Altitude Tower at Burswood, WA

PERFORMANCE

23. REDUCTION PLANS

23.1. Does your company have a GHG emissions and/or energy reduction plan in place?

Yes

23.2. If not, please explain why.

N/A

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(s)?

2007 Australian financial year

23.5. What is the emissions and/or energy reduction target(s)?

As previously reported, Mirvac has set a target to achieve an average 3 star NABERS Energy rating (formerly Australian Building Greenhouse Rating - ABGR) on all existing commercial buildings in the sustainability performance management and reporting program. A 3 star rating represents current market best practice. Prior to program commencement, the average rating was 2.8 stars for MPT and 2.1 stars for MREIT.

Within the residential development business, the following are included in the MirvacPlus Residential Sustainability Scorecard as mandatory for all new developments:

Land subdivision and build out

- Hot water - non electric storage or heat pump hot water system/s installed where viable alternative energy source is available;
- Cooking - gas cook tops installed (where gas is available);
- Cross ventilation - all primary living spaces have dual aspect;
- Lighting - external lighting controlled by motion detectors; and
- Appliances (where installed) - all appliances to be within 1 star of the maximum star rating commercially available within that appliance type.

Apartments

- Hot water - non electric storage or heat pump hot water system/s installed where viable alternative energy source is available;
- Mechanical ventilation - mechanical ventilation to basement car parking is controlled by CO_2 monitors;
- Cooking - gas cook tops installed (where gas is available);
- Lighting - a minimum of 50% of common area lighting to be fitted with globes that have a minimum luminous efficacy if 25 lumens/Watt; and
- Appliances (where installed) - all appliances to be within 1 star of the maximum star rating commercially available within that appliance type.

Specific targets for other business activities have not been established.

23.6. What are the sources or activities to which the target(s) applies?

As described in 23.5 above.

23.7. Over what period/timescale does the target(s) extend?

In our CDP6 report, Mirvac advised that operational changes for the MPT/MREIT program were expected to be completed by September 2008, with the bulk of capital upgrades completed by June 2009. Due to difficult

operating conditions and increased workloads, Mirvac is behind schedule on this program. Operational changes are still underway, and timeframes for capital upgrades have been extended.

MAM is currently recruiting a suitably skilled person to assist in completing NABERS Energy ratings for these, and other MAM-managed assets, and achieve program targets. An update on this program will be included in Mirvac's 2009 Sustainability Report, due for release later this year.

GHG emissions and energy reduction activities

23.8. What activities are you undertaking or planning to undertake to reduce your emissions/energy use?

Activities in line with targets described in 23.5 above.

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?

The NABERS Energy rating tool has been in place for over 10 years and is widely accepted as the industry standard for rating energy performance of commercial property assets. As mentioned above, Mirvac is in the process of rating relevant assets using this tool as a key method of tracking performance improvements.

Mirvac also regularly monitors changes in electricity and gas use at these and other assets via a specialist consulting service and using in-house systems.

The MirvacPlus Residential Sustainability scorecard is the key method to track performance in residential developments.

Mirvac also uses emissions intensity metrics to track the performance of individual assets, asset classes, and business units. This is particularly useful given that the NABERS Energy rating tool does not apply to all asset or activity types.

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 activities described above? Please state the methodology and data sources you have used for calculating these reductions and savings.

A number of recent project highlights are presented below.

101 Miller Street, North Sydney

Mirvac recently completed an ambitious $40 million upgrade of 101 Miller Street, North Sydney – a 16 year old premium grade commercial property. The transformation included a complete reconfiguration of the lobby, as well as comprehensive upgrades to the large column-free office floors, premium building services and amenities.

In line with the established sustainability credentials of the owners, the ongoing environmental impact of the building was a key consideration for the project. In an Australian first for an existing premium building a state of the art trigeneration plant has been installed at 101 as a partnership with Cogent Energy and with support from the NSW Government.

The plant, combined with other energy saving features has produced a simulated NABERS Energy rating of 5 star + 40% CO_2 saving. 101 Miller Street was recently awarded a 5 star Green Star rating (Office Design V2) – representing Australian Excellence. As mentioned in question 14.1, this project is estimated to save approximately 3,400 tonnes of CO_2-e/annum. This calculation is based on the known performance of the building prior to refurbishment, compared to the projected performance levels post-refurbishment, and is driven largely by switching from grid-sourced electricity to on-site natural gas-fired trigeneration combined with energy efficient refurbishment improvements.


Bay Centre


Sebel Citigate Albert Park


Harmony 9


5 Rider Boulevard

Bay Centre, Pyrmont
Mirvac's Bay Centre in Pyrmont, NSW has been awarded a 5 star NABERS Energy rating, following a program of operational changes, including careful tuning of building operations. Bay Centre is the first Mirvac Property Trust asset to be awarded the highest rating under the NABERS scheme.

Most significantly, Bay Centre was originally designed to achieve a 4.5 star rating, with conventional wisdom indicating that a 5 star performance could only be achieved with modern air conditioning technologies. The performance of Bay Centre shows that combining well designed and proven building technology with high quality, dedicated building operations can produce the highest levels of energy efficiency without replacing the air conditioning system.

Bay Centre also received a 3.5 star NABERS Water rating which represents current market best practice in water efficiency.

Sebel Citigate Albert Park, Melbourne
The Mirvac Wholesale Hotel Fund (MWHF) owned Sebel Citigate Albert Park Melbourne has received Mirvac's first, and Australia's second ever, NABERS Hotel Energy and Hotel Water ratings, awarded 3.5 stars for energy and 4.5 stars for water. All MWHF's hotels will be officially certified over the next few months.

Mirvac head office, Sydney
Mirvac's head office tenancy at 60 Margaret Street, Sydney has achieved a 4.5 star NABERS Energy rating, representing excellence in energy use. The rating was achieved after 12 months of monitoring since taking occupancy of all floors. Mirvac's result is well in front of the current market average tenancy rating of 2-2.5 stars.

Mirvac Victoria "Harmony 9" Home
Mirvac Victoria has recently launched its carbon neutral 9 star energy rated home "Harmony 9", the first of its kind and an Australian leader in environmentally sustainable design. Currently under construction in Waverley Park's new display village the 9.2 star energy rated home incorporates numerous leading edge sustainability features and sets a new level of innovation, adaptability and sustainable design.

5 Rider Boulevard, Rhodes
Mirvac's recently completed commercial building at 5 Rider Boulevard in Rhodes, NSW was recently awarded a 4 star Green Star rating (Office Design V2), representing best practice. Mirvac has entered into a pre-commitment agreement with the NSW Department of Environment and Climate Change to achieve and maintain a 4.5 star NABERS Energy rating for the base building. Extensive sub-metering of base building and tenancy services will assist in fine tuning performance from this asset.

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 above and over what period was that investment made?

See Appendix 2 for detail cost breakdown and timelines.

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?

See Appendix 2 for detail cost breakdown and timelines.

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.

Mirvac's future emissions profile is directly linked to the composition of our asset portfolio. Due to the nature of our business, in which assets may be bought and sold, and construction activities are commenced and completed, it is difficult to forecast future emissions.

Mirvac continues to deliver on its stated strategy to focus on rationalising Investment Management's product mix and recently announced the settlement of the sale of Domaine Property Funds.

Mirvac is progressing negotiations with a number of parties on identified non-core funds, and expects to make further announcements to the market in relation to unconditional sales agreements before 30 June 2009. The outcome of these negotiations may impact on Mirvac's emissions portfolio.

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.

See above.

23.15. Please explain the methodology used for your estimations and any assumptions made.

N/A

24. PLANNING

24.1. How do you factor the cost of future emissions into capital expenditures and what impact have those estimated cost had on your investment decisions?

Under EEO, Mirvac is required to conduct energy efficiency audits for 80% of total energy use before July 2011. The EEO program requires participants to demonstrate consideration of identified energy efficiency opportunities by senior managers, which in Mirvac's case are the Asset and Fund Managers for each relevant business unit.

All opportunities with a potential four year payback or better are categorised into 'opportunities for implementation' or 'opportunities for further investigation'.

Mirvac must:

- Demonstrate clear lines of accountability, appropriate resources and timeframes for all energy efficiency opportunities that a corporation decides to implement or investigate further.
- Implement mechanisms for reviewing, monitoring and reporting on outcomes to learn from experience and allow public reporting.
- Show that management responsible for resource allocation make informed decisions on the assessment based on investment quality information.
- Document reasons for not pursuing specific opportunity areas.
- Present information for public disclosure to the Board for review and approval.

The outcomes of these assessments are considered as part of capital and operational budget setting, in line with asset life cycle and strategic planning.

GOVERNANCE

25. RESPONSIBILITY

25.1. Does a Board Committee or other executive body have overall responsibility for climate change?

No

25.2. If not, please state how overall responsibility for climate change is managed and indicate the highest level within your company with responsibility for climate change.

Mirvac's Board recently gave in-principle approval to expand the responsibilities of the Board Health Safety Environment sub-committee to include sustainability. Climate change action is considered an important element of Mirvac's sustainability agenda. It is expected that this process will be formalised by the end of the 2009 financial year and implemented thereafter.

This change is expected to provide the Board with greater clarity surrounding Mirvac's sustainability performance, and expedite efforts under the established sustainability strategy.

Currently, Mirvac's Group Sustainability Manager is responsible for management of sustainability across the Mirvac Group and reports to Mirvac's Chief Operating Officer.

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

See above. At present, Mirvac's Group Executive Committee has responsibility for Mirvac's response to climate change.

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

Mirvac's Group Sustainability Manager provides monthly reports to Mirvac's Executive Committee on sustainability performance, including climate change impacts. Regular formal and informal progress updates are also provided to Mirvac's Managing Director and Senior Executives.

26. INDIVIDUAL PERFORMANCE

26.1. Do you provide incentives for individual management of climate change issues including attainment of GHG targets?

Key performance indicators relating to sustainability and climate change have been established for Mirvac's Managing Director and will come into effect from 1 July 2009.

All Mirvac engineering and operations (E&O) employees that manage the energy performance of Mirvac assets have key performance indicators 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. Additionally, a $5000 cash bonus is available for the E&O staff member that provides the best personal contribution to sustainability.

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

26.2. If so, are those incentives linked to monetary rewards?

See above.

26.3. Who is entitled to benefit from those incentives?

See above

27. 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?

Yes

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.

Mirvac's Annual Report includes high level information on Mirvac's commitment to sustainability, including climate change, and our detailed emissions profile.

Mirvac reports on GHG emissions and reduction plans under a range of legislative schemes. To download Mirvac's Annual Reports, and other statutory filings, including Mirvac's public Energy Efficiency Opportunities Report, please see www.mirvac.com

27.3. Voluntary communications (other than CDP) such as Corporate Social Responsibility reporting.

In early 2009, Mirvac released a Sustainability Progress Report – the third of its kind – detailing recent activities under Mirvac's sustainability strategy.

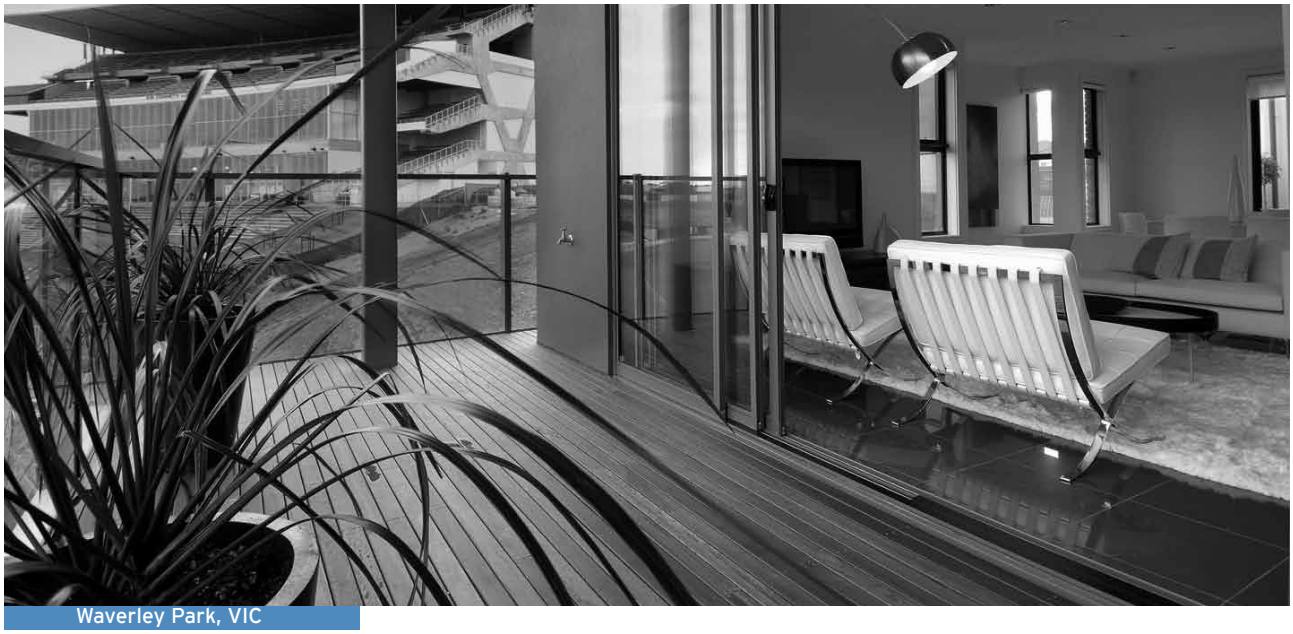
To access Mirvac's Sustainability Reports, and other key sustainability information, please see www.mirvac.com

28. PUBLIC POLICY

28.1. 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 a property industry working group focused on developing sector guidelines for reporting under the National Greenhouse and Energy Reporting Scheme.



Waverley Park, VIC

Royal Newcastle, NSW

APPENDIX 1: DATA TABLES*

Emission	Location	2005		2006		2007		2008	
		Total	tCO_2-e	Total	tCO_2-e	Total	tCO_2-e	Total	tCO_2-e
Scope 1 Emissions									
Natural Gas (GJ)	Investment	86,959	4,475	133,302	6,923	191,459	9,822	168,813	8,660
	Development	-	-	-	-	-	-	3,761	193
Refrigerants	Investment	-	-	-	1,441	-	5,106		991
Diesel (L)	Investment	-	-	7,151	24	14,004	38	578,480	1552
	Development	-	-	144,129	386	163,454	438	139,447	374
	Vehicles	-	-	30,447	84	25,323	68	51,711	140
Petrol (L)	Investment	-	-	4,061	9	6,215	14	12,656	29
	Development	-	-	-	-	6,470	15	-	-
	Vehicles	-	2,056	739,986	1,763	706,682	1,619	649,957	1,547
LPG (L)	Investment	-	-	2,202	4	-	-	481,566	741
	Vehicles	-	-	23,131	36	228,062	360	215,635	343
Kerosene (L)	Investment	-	-	183	<1	550	1	-	-
Wood (T)	Investment	-	-	-	-	6	2	2	<1
Sub-total			6,531		10,670		17,484		14,571
Scope 2 Emissions									
Electricity (MWh)	Investment	102,855	104,078	134,405	126,710	317,764	299,900	266,884	249,982
	Development	-	-	11,414	11,338	10,985	9,847	4,749	4,383
	Corporate Offices	-	-	-	-	1,574	1,544	2,577	2,426
Sub-total			104,078		138,048		311,291		256,791
Scope 3 Emissions									
Natural Gas[1]	Investment	-	-	-	1,727	-	1,852	-	1,625
	Development	-	-	-	-	-	-	-	23
Electricity[2]	Investment	-	-	-	18,376	-	45,167	-	36,945
	Development	-	-	-	1,409	-	1,859	-	623
	Corporate Offices	-	-	-	-	-	231	-	360
Air Travel (Km)		5,852,970	687	6,796,378	828	9,228,006	1,110	12,059,592	1,398
Waste (T)		-	-	6,589	10,938	12,720	21,115	20,759	10,002
Diesel[1]	Investment	-	-	-	-	-	3	-	118
	Development	-	-	-	-	-	33	-	29
	Vehicles	-	-	-	-	-	5	-	11
Petrol[1]	Investment	-	-	-	-	-	1	-	2
	Development	-	-	-	-	-	1	-	-
	Vehicles	-	-	-	-	-	128	-	118
LPG[1]	Investment	-	-	-	-	-	-	-	66
	Vehicles	-	-	-		-	32	-	30
Kerosene[1]	Investment	-	-	-	-	-	<1	-	-
Sub-total			687		33,278		71,538		51,349
Total			111,296		181,996		400,313		322,711

* Numbers rounded to whole numbers for display purposes.

1 Fuel extraction, transport and production.

2 Fuel extraction, transport, production and transmission loss.

APPENDIX 2: MIRVAC BUILDING UPGRADE PROGRAM

Property Address	State	2006/2007 Indicated NABERS Energy Rating[1]	2007/2008	2008/09 Works Programme Operational Changes
650 Chapel Street, South Yarra	VIC	–	–	Operational monitoring and reporting program
Riverside Quay #1, Southbank, Melbourne	VIC	2.5	2.5[2]	Operational monitoring and reporting program
Riverside Quay #2, Southbank Melbourne	VIC	2	1.5	Operational monitoring and reporting program
Riverside Quay #3, Southbank Melbourne	VIC	3	3.5	Operational monitoring and reporting program
380 St Kilda Road, Melbourne	VIC	2.5	2.5	Operational monitoring and reporting program
189 Grey Street, Southbank, Brisbane	QLD	3	3	Operational monitoring and reporting program
339 Coronation Drive, Brisbane	QLD	0	0[3]	Operational monitoring and reporting program, Separate tenant's energy usage.
164 Grey Street, Brisbane	QLD	0	1.5	Operational monitoring and reporting program
1 Castlereagh Street, Sydney	NSW	3.5	3[4]	Operational monitoring and reporting program Optimise cooling plant efficiency Optimise plant scheduling to building occupancy
101 - 103 Miller Street, North Sydney	NSW	–	–	Refurbishment complete
40 Miller Street, North Sydney	NSW	3.5	3[6]	Operational monitoring and reporting program
Bay Centre, Pirrama Road, Darling Harbour	NSW	4	5[7]	Operational monitoring and reporting program Optimise HVAC efficiency
One Darling Island, Pyrmont	NSW	4	4.5	Operational monitoring and reporting program, Optimise plant scheduling to building occupancy. Optimise air handling unit control.
16 Furzer Street, Phillip	ACT	4.5	4.5	Operational monitoring and reporting program
38 Sydney Avenue, Forrest	ACT	3	3	Operational monitoring and reporting program
54 Marcus Clarke Street, Canberra	ACT	2.5	2[8]	Operational monitoring and reporting program
60 Marcus Clarke St Canberra	ACT	3	2.5	Operational monitoring and reporting program
10 Rudd Street, Canberra	ACT	2.5	2.5	Operational monitoring and reporting program
3 Rider Boulevard, Rhodes	NSW	4	4	Operational monitoring and reporting program
599 Doncaster Road, Doncaster	VIC	3	2.5[9]	Operational monitoring and reporting program
601 Doncaster Road, Doncaster	VIC	1	1	Operational monitoring and reporting program
605 Doncaster Road, Doncaster	VIC	0	2	Operational monitoring and reporting program
340 Adelaide Street, Brisbane	QLD	0	0	Operational monitoring and reporting program
Total				

1 Unofficial rating based on NABERS Validation Protocol and using energy consumption from utility metering for financial year. Area is based on property total NLA adjusted where required for occupancy levels over the financial year.

2 Performance at Riverside Quay 1 & 2 declined during the year, due to a lack of outside air capability and outdated control systems. Mirvac is planning on upgrading the controls at all 3 Riverside Quay buildings.

3 Current rating includes tenant power. Forecast rating is expected to improve, due in part to the separating of tenant and base building power use.

4 Electricity use increased during the first half of 2008, which led to a decline in NABERS rating. Mirvac is working on a number of optimisation strategies and the site is trending back to 3.5 Stars.

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

		2009/2010
Capital upgrades and other additional works planned or undertaken	Funding Approved	Forecast NABERS Energy Rating
	Pending	Not yet established
Detailed Energy Audit, Planning for BMS Upgrade	$14,500	3
Detailed Energy Audit, Planning for BMS Upgrade	$10,500	2.5
Detailed Energy Audit, Planning for BMS Upgrade	$12,000	3.5
Detailed Energy Audit,	$19,000	3
Detailed Energy Audit	$16,300	3.5
Detailed Energy Audit Additional Metering	$17,500 $5,000	2.5
Detailed Energy Audit	$9,000	2
Detailed Energy Audit being undertaken, VSD's to CW/CHW Pumps	$13,300 $15,000	3.5
Building refurbishment, including lighting, mechanical services and cogeneration system.	Major refurbishment – Total cost $40M[5]	5
Detailed Energy Audit	$14,500	3.5
Revised controls, chilled water reset, VAV heaters, supply air reset. Detailed Energy Audit	$25,000 $18,500	5
		4.5
Detailed Energy Audit	$19,000	4.5
Detailed Energy Audit, Planning for chiller plant and BMS upgrade.	$13,000	3
Upgrade BMS	$442,524	2.5
Upgrade BMS Detailed Energy Audit	Incl. above $26,000	3
Upgrade BMS Detailed Energy Audit	Incl. above $13,300	3
Detailed Energy Audit	$17,000	4
Detailed Energy Audit	$15,500	3.5
Detailed Energy Audit	Incl. above	2.5
Detailed Energy Audit	Incl. above	3
Major plant and BMS upgrade	$1,900,000	4.5
	$2,636,424[10]	

6 Energy performance at 40 Miller Street has suffered due to fluctuations on occupancy over during 2007 and 2008, which led to less efficient operation as occupancy decreases. The property returned to full occupancy from early May 2009.

7 Official rating achieved February 2009.

8 Performance at 54 and 60 Marcus Clarke St declined during the year, due to an outdated building management system (BMS) which is shared across these two assets, and 10 Rudd St. An upgrade to the BMS is scheduled for this year.

9 Performance at this small asset (<2000m2) declined over the period. A detailed energy audit is scheduled for 2009/2010.

10 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. $2.6 million covers initiatives linked directly to energy savings, including detailed energy audits, BMS upgrades, plant and equipment and the like.