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Introduction

As Australia’s largest not-for-profit Catholic health care organisation, with activities covering diverse areas such as tertiary health care, research and education, St Vincent’s Health Australia (SVHA) has a strong connection to the community. As a major health care provider we also have a large environmental footprint. The 2011-2012 SVHA Environmental Report outlines actions we have taken in addressing our environmental impact and our future intentions.

Acting responsibly towards the environment aligns with the Mission and Values of St Vincent’s Health Australia just as Catholic teaching calls on us to be good stewards of the earth. We are especially committed to people who are poor or vulnerable, particularly as issues of environmental degradation and climate change affect lower socio-economic groups most heavily.

Like many large health care organisations our activities generate a significant amount of waste and emissions and consume large amounts of energy, water and resources. These activities either directly or indirectly impact on the environment. SVHA has been working to reduce both our consumption of finite resources and the environmental impacts that arise as part of the work we do.

In 2011-12 SVHA either consumed or generated the following:

- 110,000,000 kilowatt hours (kWhs) of electricity
- 350,000 Megajoules of gas
- 8,000 tonnes of general waste
- 480 tonnes of clinical waste
- 700,000 kilolitres (kL) of water, and
- 150,000 tonnes of carbon dioxide equivalent (CO2-e).

Stewardship of the environment is an ongoing process. This Sustainability Report demonstrates ongoing reductions in these impacts and our commitment to caring for the environment and those that exist within it.

About this report

This report covers the activities of St Vincent’s Health Australia in addressing environmental issues for the period January 2011 to December 2012. In future, our reports will be published within three months of the end of the preceding calendar year.

For more information or to provide feedback about environmental issues at St Vincent’s Health Australia, please contact us by email: environmental@svha.org.au.
I am pleased to introduce St Vincent’s Health Australia’s first Sustainability Report. Our Mission is to bring God’s love to those in need through the healing ministry of Jesus. Implicit in this Mission is a duty to provide an environmentally responsible health care service.

With the increasingly clear link between environmental degradation, climate change and the related health impacts, addressing environmental issues is showing care and compassion for people as well as the earth. We take this responsibility seriously and we are working to improve our environmental performance and reduce our impact.

I am proud of the successes and milestones we have achieved along the way as our commitment to being responsible stewards of the environment continues to gain momentum.

This report highlights the challenges, opportunities and achievements that arise in a dynamic health care enterprise – and tell a great deal about where we have come from, where we are now and where we are heading.

We may be diverse, but we are united by our desire to make a difference to the communities in which we operate; to our patients; our business partners and each other as well as the generations who follow us.

For our employees, this report should be a source of pride and provide motivation to continue their efforts, knowing that they are both appreciated and make a real difference.

I would like to thank all those who have made personal and collective contributions to making St Vincent’s Health Australia a more sustainable organisation. I hope that their efforts will inspire others to take up the sustainability challenge.
Message from the Group Manager, Energy and Environment

Matthew Power

Over the past two years, our people have worked hard to develop and deliver new energy and environmental management programs across the group. Through this report we aim to highlight some of the initiatives and programs SVHA has been putting in place to address environmental and energy management issues.

In terms of the organisation as a whole the most important single environmental sustainability initiative has been the establishment of the group environmental database system. The new environmental database allows us for the first time to accurately monitor and benchmark our energy, waste, water and emissions levels across the organisation and is integral in reducing our environmental footprint.

Our regional teams have been working just as hard to increase energy efficiency and reduce energy consumption. The replacement of ageing air-conditioning systems and lighting upgrades at St Vincent’s Private Hospital, East Melbourne has delivered energy savings at that facility of almost 20 per cent of total consumption. Major lighting upgrades at St Vincent’s Hospital, Sydney have reduced electricity consumption by 1million kWh and reduced CO2 emissions by 880 tonnes. Once complete, the full suite of lighting upgrades will deliver an estimated reduction of over to 2.5 million kilowatt hours per annum and reductions of 2,400 tonnes of CO2 each year.

In 2012, the first SVHA Quality Award for environmental sustainability was announced. The recipient was Andrew Buchanan, Engineering Manager at St Vincent’s Private Hospital, Melbourne. Andrew won the award for the development of technology to reduce the volume of water used for the sterilisation of surgical instruments. This initiative has delivered savings across our three private hospitals in Victoria of approximately 30 million litres of water annually.

In March 2012, we conducted our first survey of all staff on environmental issues at St Vincent’s Health Australia. It was evident from the survey that our people have a strong interest in the environment. The survey captured a lot of positive feedback and ideas including suggestions for the design of future environmental management programs. The development of this publicly available report outlining our performance in environmental management was another suggestion from staff. The environmental surveys will be conducted biannually.

In August 2012, the SVHA Environmental Policy was issued. The policy clearly outlines what we are seeking to achieve environmentally and our targets for environmental performance over the next three years, and provides a strong basis to drive environmental outcomes going forward.

2012 was a year of firsts for SVHA. In 2013 we aim to build on the successes of the last two years through the further consolidation of our waste management services to drive greater reductions and efficiencies with strong environmental outcomes for the group.

With publication of the organisation’s Environmental Policy including the setting of specific targets in relation to our environmental performance and development of accurate energy waste and water benchmarks, SVHA is now in a position of knowing where we stand environmentally and where we want to be. It is with pleasure that I present the inaugural SVHA Sustainability Report and look forward to reporting on our successes in 2013.
Our Mission, our environment

Environmental stewardship is an integral part of our Mission to bring the healing ministry of Jesus to all we serve. It is clear that changes in the environment can have positive or negative impacts on health and social wellbeing. There is a clear imperative for St Vincent’s as a health care provider to ensure that the provision of that health care is offered in an environmentally responsible and safe manner.

We aim to fulfil our Mission by addressing environmental issues within our facilities knowing that we do so, on behalf of those who are most often negatively impacted by poor environmental decision-making. It is often the poor, the young and those on the margins of society that are most affected by changes in the environment both socially and in terms of physical and mental health, a situation which is being repeated across the world particularly in developing nations.

We see environmental management as integral to social justice. The concepts inherent in Catholic social teaching such as stewardship, solidarity, justice, and equity are also present in the main tenets of ecologically sustainable development (ESD). There are clear connections between what we aim to achieve as a Catholic health care provider and the practical delivery of health care in ecologically sustainable ways. Concepts such as equitable access to resources including food and water, and intergenerational equity in sustaining resources and the environment for future generations are clear examples of the way we want to think and plan for the future of our hospitals and aged care facilities.

As evident in this report, SVHA has begun the journey to bring environmental responsibility into the larger frame of its Mission to provide transformative and sustainable health care to all.
Sustainability highlights

Lighting upgrades at St Vincent’s Hospital, Sydney have reduced electricity consumption by 1.1 million kWh and reduced CO2 emissions by 980 tonnes.

New technology to reduce the volume of water used for sterilisation of surgical equipment across our three private hospitals in Victoria has saved 30 million litres of water annually.

The ‘No more bottled water’ initiative at Mater Hospital has removed 230,000 plastic bottles from the general waste stream - the equivalent of 4,600 tonnes of plastic diverted from our landfills.

In our first environmental staff survey, more than 90 per cent of respondents thought environmental degradation and climate change were real and pressing issues.

The new SVHA environmental database allows us for the first time to accurately monitor and benchmark our energy, waste, water and emissions levels across the organisation.

In 2011-2012, SVHA recycled 560 tonnes of glass and metals and 170 tonnes of cardboard and paper.

The replacement of ageing air-conditioning systems and lighting upgrades at St Vincent’s Private Hospital, East Melbourne has delivered energy savings at this facility of almost 20 per cent of total consumption.
Our Environmental Strategy

During the 2011-2012 Financial Year, we produced our first environmental strategic plan. This environmental management strategy has been adopted by SVHA for the period 2012 – 2015. The major components of the strategy include:

Create a culture of environmental awareness and participation
- Develop an environmental communications and education strategy
- Create an environmental Champions Network
- Develop an Environmental Management System (ISO 14001)
- Bi-annual environmental staff survey

Reduce energy and water consumption and waste and emissions generation
- Environmental audits of all facilities
- Action plans for energy waste and water
- Benchmark impacts both internally and externally
- ESD mandatory in new building designs (including minimum 4 star greenstar)

Meet legislative obligations and reporting requirements
- Implement an environmental database solution
- Report progress to staff, public and management
- Undertake ongoing review of legislative requirements

Increase use of new technology, systems and practices to reduce our environmental impact
- Undertake trials of new or emerging technologies which reduce environmental impacts
- Source new revenue streams to assist in driving energy and environmental reductions
Our Environmental Policy

The SVHA Environmental Policy was endorsed by the SVHA Board in August 2012. This brought together for the first time the various policy platforms that existed under each of the regions into one single policy. The policy provides the organisation with a clear statement as to our objectives, targets and requirements in managing the environment. The policy will be reviewed in 2014 to ensure alignment with future business objectives.

The main facets of the new policy include:

- A commitment to environmental impact reduction in energy, waste, water and emissions
- Reduction targets of 1% year on year
- Development of an SVHA Environmental Management System (EMS)
- Inclusion of ESD principles in the design of our new facilities
- Reporting on our environmental performance annually
- Increasing the accuracy of our reporting
Our current environmental footprint

As one of Australia’s largest health care providers we have a significant environmental footprint. However due to the relatively recent formation of St Vincent’s Health Australia, data collection across all streams only commenced in the 2011-12 financial year. The following is an indication of our levels of impact across energy, waste and water for the whole organisation on a per patient bed day level.

Our aim in the future is to provide details of our environmental impact by facility across major environmental impact groups. In this report and future reports, we will show how we are working to reduce our energy and water consumption and production of waste and emissions.

Energy and water consumption per patient bed day - 2011-12

Waste levels per patient bed day 2011-12
Recycling

In 2011-2012, SVHA recycled 560 tonnes of commingled waste (recyclable materials such as glass, metals and some plastics which are mixed together and require sorting before being recycled) and 170 tonnes of cardboard and paper. We aim to improve this during 2013 through our waste management plan which includes:

- greater efforts to increase the level of waste which is diverted from landfill due to better segregation practices
- a better solution in relation to our organic waste management, and
- greater accuracy as part of contractual obligations on the part of our waste management provider to allow more targeted efforts to boost recycling and diversion activities through greater education practices and waste auditing.

Environmental activities

Over the past two years, SVHA has achieved major outcomes in relation to environmental management and reductions in the level of energy and water we consume and the levels of waste and emissions generated.

Key projects undertaken during 2011 and 2012 include:

- Darlinghurst lighting upgrades
- steriliser water reduction measures at St Vincent’s Private Hospital, East Melbourne
- air-conditioning plant and lighting upgrades at St Vincent’s Private Hospital, East Melbourne
- filter efficiency trial project at Holy Spirit Northside Private Hospital, Brisbane
- environmental database development and benchmarking
- “No more plastic water bottles” initiative at the Mater Hospital in Sydney
- environmental staff survey, and
- introduction of an environmental award in the SVHA Quality Awards in 2012.
Lighting upgrades

Darlinghurst Campus

Since April 2012, we have been working with suppliers to upgrade the lighting systems at St Vincent’s Hospital, Sydney in Darlinghurst. These upgrades have consisted of replacing current lighting with more energy efficient systems which achieve up to a 50 per cent energy saving.

St Vincent’s Darlinghurst Campus has replaced 5,959 T8 Lamps with T5 Adaptors while also addressing technical requirements for the type of lighting to be used in clinical areas.

The use of these lamps in the Xavier building reduced consumption from approximately 46 watts per lamp to 23. The results of the upgrade have seen a reduction of over 1.1 Million kilowatt hours (kWhs) and up to 980 tonnes of CO2-e annually.

The second phase of lighting upgrades will include replacement of:

• additional T8 lamps with T5 adaptors
• twin compact fluorescent downlights with LED lamps; and
• 50 Watt downlights with 7 Watt LED lamps.

The reductions generated through this second phase of replacements is estimated at a further 1.6 million kWh and a further 1,430 tonnes of CO2-e bringing total reductions through this program to an estimated 2.7 million kWhs and 2,400 tonnes of CO2-e per annum.

Group Support Services – Bondi Junction

As part of the larger rollout of lighting upgrades in Darlinghurst approximately 390 T8 lamps were replaced at the SVHA Group Support Services office in Bondi Junction during April 2012. As can be seen from the results in the graph below, lighting load reductions have averaged 46 per cent since installation and a 23 per cent reduction in electricity consumption overall (13,245 kWh over a nine-month period).

Impact of lighting upgrades - Group Support Services, Bondi Junction
Steriliser water use reduction

During 2010, St Vincent’s Private Hospital, Melbourne undertook an audit of water consumption which showed that one of the largest water end uses was equipment sterilisation with an estimated water consumption of 11 million litres of water per year across the three sites.

As required by all steam based sterilisers the steam produced must be dry when leaving the sterilisation chamber for infection control purposes and this is achieved by means of a vacuum. This vacuum is achieved through the use of a vacuum pump which is driven by water. Each steriliser unit has an average consumption of 800 litres per cycle and 100 cycles per week. The water that drives the pump during each cycle is simply sent to the sewer resulting in significant water wastage.

Through the creation of a closed loop vacuum pump the water used to drive the pump is diverted back to a storage reservoir on the steriliser unit. With the development of this system the hospital was able to demonstrate a relatively low cost solution to deliver considerable water savings. Use was also made of the residual steam which was passed through a small heat exchanger with the subsequent condensed water sent to top up the reservoir making the system virtually independent of town water.

The initial estimate of 11 million litres saved across the three private hospitals has since been found to underestimate the savings which have now been confirmed as being in the order of 30 Million litres per annum at these three hospitals alone. What is also pleasing to note is that similar systems have either been implemented at other hospitals within SVHA or are currently underway.
Air-conditioning and lighting upgrades – 
St Vincent’s Private Hospital, East Melbourne

Air-conditioning plant replacement

In late 2011 it became apparent to St Vincent’s Private Hospital, East Melbourne that the current mechanical plant (air-conditioning) was at the end of its operational and economic life. The need to replace the mechanical plant presented an opportunity to explore environmental and energy management advances in mechanical plant design and performance.

St Vincent’s subsequently engaged consultants to conduct an assessment of the air conditioning system at the hospital. The assessment confirmed that the energy usage by the ageing mechanical plant at the then Mercy Private was contributing to excessive energy consumption and that the replacement of the mechanical plant would significantly reduce this. The consultants were able to provide the hospital with a design that both addressed operating requirements but also significantly reduced the hospital’s overall energy consumption and carbon footprint.

Since the installation of the new energy efficient mechanical plant finalised in April 2012, estimated energy savings annually have been in the vicinity of 1 million kWh and the reduction in CO2 emissions is estimated at 1,190 tonnes per annum. As can be seen below this has resulted in substantial reductions in energy consumption and greenhouse gas emissions from electricity generation.
Lighting improvements

As part of energy efficiency measures St Vincent’s Private Hospital, East Melbourne replaced their existing light fittings with more energy efficient alternatives including:

- **50W halogen lamps** which consume 62 Watts per unit with LED units consuming 18 Watts. The halogen lamps have a lamp life of 3,000 hours compared to the 30,000 hours of the LED alternative.

- **4 x 18 Watt fluorescent lighting** with a 3 x 18 Watt alternative with electronic ballasts reducing consumption from 96 Watts to 54 Watts per unit and extending lamp life.

- **80W mercury vapour down lights** consuming 100W were converted to LED MIDI down lights with a consumption of 20W and a lamp life of 35,000 hours - more than three times that of the light it replaces.

Replacing the lighting also has additional benefits in terms of reductions in thermal load including reducing the impact on air-conditioning systems and reduced maintenance costs as the lamp life is increased. The lighting upgrades contributed an estimated saving of 313 tonnes of CO2 per annum and 860Mj to the overall reductions at East Melbourne (as per the graph below).

**Energy reduction by % (lighting and HVAC) - East Melbourne**

**Energy reduction 2011 v 2012 - East Melbourne**
Filter project at Holy Spirit Northside

As part of efforts to increase the level of efficiency in air-conditioning a trial was conducted using energy efficient filters that provided high quality filtration which meets or exceeds compliance standards with reduced drag. This reduces the amount of energy in the form of fan motor effort to drive air through the filters. In assessing the best location it was confirmed that optimal results come with the combination of filtration coupled with variable speed drives (VSDs) which can be throttled back as the energy required to maintain airflow rates is reduced.

On this basis a trial of the filtration was carried out at Holy Spirit Northside Private Hospital in Brisbane. The results of a three-month trial confirmed that reductions on fan motor energy consumption ranged from 13 per cent to 22 per cent depending on application, and that when applied across the organisation could deliver significant energy reductions, lower energy costs and reduce emissions. SVHA is currently considering the use of the filters nationally.

Environmental database - benchmarking and targets

In order to gauge our effectiveness in limiting our environmental footprint we needed to be able to accurately measure our levels of energy, water consumption, and waste and carbon emissions. To enable us to measure consumption, we sourced an industry best practice database system specifically aimed at environmental management.

Working with our database supplier Global Carbon Systems, we developed and implemented a group-wide environmental database system which went “live” in August 2012.

The database has significantly increased the accuracy of the data collected and increased efficiency in collection and collation at an organisational level. The new system enables us to determine impacts across environmental categories as well as address legislative and public environmental reporting responsibilities.

The next step will be implementing benchmarking of our sites internally. These benchmarks are based on those targets outlined in the SVHA environmental policy. The agreed metrics are to assess energy, waste, water and emissions based on a quarterly reconciliation against patient bed days.

Assessment will be based on quarter on quarter and year on year comparisons, with the annual comparison being the basis for assessing progress against the targets outlined in our environmental policy.

No more bottled water at Mater Hospital

In early 2011, Mater Hospital in North Sydney examined the possibility of removing the use of plastic bottled water and replacing it with tap water. After a short trial a full changeover was completed in July 2011.

This initiative has removed 230,000 plastic bottles from the general waste stream, or the equivalent of 4,600 tonnes of plastic diverted from our landfills.

Environmental survey

In March 2012, SVHA conducted an online survey across the organisation to find out the views of staff on issues relating to sustainability and environment. Almost 800 staff participated indicating a healthy interest in environmental issues across the organisation.

Staff were quite emphatic as to what they saw as priorities and in almost all cases a definitive response was received to all questions. The feedback and suggestions we received have helped shape the SVHA environmental strategy and assisted in driving the provision of information both to staff and the public.
Some of the staff responses we received included:

- More than 90 per cent felt environmental degradation and climate change were real and pressing issues.
- 93 per cent responded in the affirmative to the question “Is there a connection between caring for the environment and fulfilling our mission?”.
- 90 per cent felt we should state our environmental performance publicly once a year.
- 85 per cent felt SVHA was not doing enough to be environmentally sustainable but of that 45 per cent felt some progress had been made.
- 83 per cent said they did not know the contents of our Environmental Policy, or did not realise there was a policy.
- Staff confirmed they wanted to be informed regularly on activities taking place in energy/environmental in SVHA (i.e. monthly/quarterly).
- Staff wished to be active in managing the environment but felt they did not have the education, support or tools to adequately do so.

These responses clearly indicate that SVHA has plenty to do in environmental management particularly on staff engagement. However SVHA takes many positives away from the survey, in that while there are issues to be dealt with the results of our first survey highlight that there are also major opportunities to exploit in environmental management underpinned by the support and commitment of our staff.

**Environmental Sustainability Quality Award**

St Vincent’s Health Australia introduced its national Quality Awards in 2006 to promote quality, excellence, innovation and safety in clinical care across its health and aged care services. The Awards drive collaboration across the organisation through the sharing of best practice outcomes. The Awards also help to promote and reinforce the Mission of St Vincent’s Health Australia through recognising individuals and teams who achieve excellence in the provision of health care.

In 2012, the Quality Awards program introduced a new environmental award category recognising innovative programs with demonstrable benefits, particularly real-life impact on patients, health service provision and the community, using sustainable approaches that can be translated to other health services.

The inaugural Environmental Sustainability Award went to Andrew Buchanan for the development of the water saving device for equipment sterilisers at St Vincent’s Private hospitals in Victoria (see case study on page 13).
Legislative compliance

As a large multi-regional organisation SVHA is required to address a large number of state and federal environmental legislation. With the creation of SVHA in 2009 we passed thresholds for registration under the following two key pieces of Federal environmental legislation:

- Energy Efficiency Opportunities Act (EEO)
- National Greenhouse and Energy Reporting Act (NGERS)

Summarised below are details on how we have addressed this legislation over the past two years.

Energy efficiency opportunities (EEO)

SVHA has more than 150 buildings in its portfolio. A representative approach to assessing opportunities for energy efficiency is the most effective way of finding measures that could be applied across the portfolio.

We have undertaken two assessments under the EEO guidelines to a level 3 standard (AS 3598) - the first at St Joseph’s Hospital and Village in Auburn, NSW, and the Mater Hospital in North Sydney. We are currently implementing a number of measures at these locations.

SVHA is in the process of finalising other audits scheduled for St Vincent’s Hospitals in Toowoomba, Melbourne and Sydney, which will be completed by mid-2013. Copies of the SVHA public reports as required under the EEO legislation can be found on our website: www.svha.org.au.

National Greenhouse and Energy Reporting (NGERS)

SVHA has reported under the NGERS legislation since 2009. Under a process of continuous improvement we have sought to better manage this process which culminated in the development of the SVHA environmental database. Through a process of data automation and assessment of all end uses particularly in relation to energy, SVHA has now streamlined this process while reducing risk and increasing data quality. As the use of the database increases we will examine the benchmarking process to isolate opportunities which deliver better reporting practices and greater efficiencies.
The future

St Vincent’s Health Australia has implemented a number of major initiatives during the past two years. We now have in place the infrastructure to accurately measure our impact and also to gauge how effective we are in reducing that impact. We are continuing to work towards achieving greater reductions in our environmental impact and our people are committed to being better stewards in the use of the earth’s finite resources.

In 2013, SVHA has some great opportunities to build on the progress made over the past two years, through delivery of the following:

• finalisation of the SVHA Environmental Management System (EMS) to ISO 14001 standard with a view to accreditation in 2014
• creation of the benchmarking tool and assessment of our performance against our reduction targets
• further rollouts of energy reduction technologies particularly in lighting, on site generation and measurement and verification
• development of energy, waste and water plans for the period 2013-15 to provide a structured and cohesive approach to reductions in these areas
• development of a holistic approach to communicating and educating staff on environmental management practices and giving them the tools for better management of our environmental impact at all levels, and
• adoption of a single waste management approach across all sites which will assist in delivering even greater reductions in waste to landfill and increase recycling and diversion rates.

In March 2014 we will publish our second annual environmental report outlining our achievements in reducing SVHA’s environmental impact.