

Sustainability Report

2015-16

Welcome

CEO'S MESSAGE



As a large employer and leading provider of health services, education and research in north-east Melbourne, Austin Health also has an impact on the environment. Our yearly electricity consumption is equivalent to that used by over 7,600 Victorian homes, and in 2015-16 Austin Health generated in excess of 6.4 tonnes of waste per day through the services we deliver. As a result, we have a key role to play in managing our resources more efficiently as well as identifying and implementing improved practices.

Some of our key achievements in 2015-16 included a reduction in total energy consumption by 5% as well as reducing our potable (or drinking water) water use by 14% though our ongoing investment in replacing ageing water infrastructure.

I am also proud of the commitment shown by our staff to improve our practices. This includes our fleet manager who reduced the carbon footprint of our fleet vehicles by 65% through improvements in

fleet use and securing more fuel efficient vehicles. Our involvement in the 'Little Blue Towels' is not only avoiding waste being sent to landfill but is importantly supporting breast cancer programs. These towels are collected from our operating areas where they have been used to dry sterilised hands and then professionally laundered and packaged. 100% of the proceeds of the sale of the recycled cotton towels go to the OTIS Foundation to support breast cancer retreats.

As demand for the services we provide continues to grow, so does the amount of waste we generate. In 2016-17 Austin Health will continue to place an increased focus on our waste management activities and actions to help eliminate waste as well as improve our recycling rates. 2016-17 is also the final year of Austin Health's 2013-17 Environmental Management Strategy (EMS). We will review our achievements over the next 12 months and put in place a new strategy that will continue to drive change and improvement in the way we operate

I am pleased to present the 2015-16 Sustainability Report which highlights our achievements as well as the areas which require increased focus and attention to help ensure that Austin Health continues to be a sustainable organisation.

A handwritten signature in blue ink, reading "Bernadette McDonald".

Bernadette McDonald
Acting CEO

ABOUT AUSTIN HEALTH

Austin Health is the major provider of tertiary health services, health professional education and research in the north-east of Melbourne. It is world renowned for its specialist work in cancer, liver transplantation, spinal cord injuries, neurology, endocrinology, mental health and rehabilitation.

Austin Health is an internationally recognised leader in clinical teaching and training, affiliated with eight universities. In addition, it is the largest Victorian provider of training for specialist physicians and surgeons.

Austin Health operates 980 beds across acute, sub-acute and mental health with an annual operating budget of more than \$700 million. It employs over 8,000 people across Austin Hospital, Heidelberg Repatriation Hospital, Royal Talbot Rehabilitation Centre and satellite services. In 2015-16 our staff treated 103,756 inpatient admissions, 190,756 outpatient attendances and 82,047 emergency attendances.

Our Commitment To Sustainability

Austin Health's commitment to sustainability is long standing. At Austin Health we recognise the link between human health and the environment, including climate change. Extreme weather events that occur as a result of our changing climate, such as heatwaves, see our patient admission rates rise, placing increased pressure on the health services that Austin Health delivers. Our Environmental Management Strategy (EMS) is the key framework used to help Austin Health to improve its environmental performance and reduce our overall impact.

As a large consumer of electricity and natural gas and a considerable generator of waste, Austin Health has a key role to play in helping to reduce our impact on the environment by using resources efficiently, reducing the amount of waste generated, maximising recycling opportunities and minimising the amount of waste going to landfill.

Some of Austin Health's key sustainability achievements in 2015-16 include:

- Winner of the 2016 Fleet Environment Awards: Recognising Excellence.
- Finalist of the 2015 Premiers' Sustainability Award: Health Category.
- Lighting upgrades at the Heidelberg Repatriation Hospital, Royal Talbot Rehabilitation Centre and the ongoing replacement of fluorescent tubes with LEDs when lights fail at the Austin Hospital.
- Installation of additional variable speed drives (VSDs) at the Heidelberg Repatriation Hospital.
- Ongoing delivery of waste education and sustainability training.

WINNER - 2016 FLEET ENVIRONMENT AWARDS: RECOGNISING EXCELLENCE

Austin Health won the 2016 AFMA Fleet Environment award as a result of reducing the carbon footprint of our fleet by 75% and reducing our fuel consumption by 76% over the last five years. Travel distances have also plummeted thanks to carpooling and more organised work scheduling. We have also introduced an initiative to ensure all old tyres are completely recycled.



Jan Zagari, Fleet Manager, Austin Health

RADIOLOGY GREEN AWARDS

Austin Health's Radiology Green Committee has been working to reduce their department's impact on the environment for a number of years. 2015 saw the inaugural Radiology Green Award presented to Eric Wang, a radiology nurse. He was nominated for his enthusiasm for recycling, making a considerable effort to ensure waste is put into the correct bin, supporting and educating others. The team continued to reward and recognise staff who excelled in their commitment to environmentally sustainable practices through presentations at their bimonthly departmental meetings.

ENVIRONMENTAL MANAGEMENT STRATEGY (EMS)

The Austin Health 2013-2017 Environmental Management Strategy - working towards a healthier environment for healthier people - is the framework used to help Austin Health become a sustainable organisation through minimising our environmental impact.



2015 PREMIER'S SUSTAINABILITY AWARD FINALIST - HEALTHY ENVIRONMENT, HEALTHY PEOPLE

Austin Health was named a finalist at the 2015 Sustainability Awards in recognition of our leadership, commitment and passion. We were recognised as the first Melbourne healthcare facility to recruit a dedicated sustainability officer in 2008 and the first to host the Victorian Green Health Round Table Group in 2009. Austin Health is also the only Australian health organisation with a dedicated gardens officer to develop green spaces for the therapeutic benefit of patients and staff.



Steven Wells, Gardens & Grounds Project Officer, Austin Health

2015-16 Gardens and Grounds Project summary:

- 8 new garden projects completed.
- 3,040 new plants.

AUSTIN HEALTH'S HORTICULTURAL THERAPY PROGRAM

Horticultural therapy within the rehabilitation setting is a process of using plants and garden related activities to assist with achieving patient rehabilitation goals and to promote the well-being of people's mind, body and spirit, under the guidance of a horticultural therapist.

Austin Health's Horticultural Therapy Program at the Royal Talbot Rehabilitation Centre (RTRC) was established in 2003 as a 2-hour per week program. It has now expanded to a one day per week program that is orientated towards patient participation, enjoyment and quality of life.

Extensive gardens have been designed and created at the RTRC to complement the horticultural therapy program. Previously barren areas, these spaces now foster respite, relaxation and recovery for patients and their family and friends, staff and numerous visitors to the site.

This has expanded to the Olivia Newton-John Cancer Wellness & Research Centre (ONJ Centre) as well, with a 1 day per fortnight horticultural therapy program offered as part of the ONJ Centre's Wellness Programs.

LITTLE BLUE TOWELS

Austin Health is a proud participant in the Little Blue Towels initiative. Towels are collected from operating rooms where they have been used to dry sterilised hands. Normally discarded after a single use, they have been collected and then professionally laundered and packaged by Laundry Mates, an enterprise owned and operated by people with disabilities living in, or near, Echuca, Victoria. 100% of the proceeds of the sale of the recycled cotton towels go to the OTIS Foundation to support breast cancer retreats.

EDUCATION AND ENGAGEMENT

Austin Health's Environmental Sustainability Unit continued to deliver a range of waste and sustainability training to staff. This included compulsory training for all new starters as part of the induction process, as well as tailored training to suit the needs of different departments. In addition, the Environmental Sustainability Unit continued to support Austin Health's green committees and green champions with their initiatives in 2015-16. In 2015-16 8,699 staff completed the online Sustainability training.

PVC RECYCLING

At Austin Health PVC waste materials such as intravenous fluid bags, oxygen masks and oxygen tubing is recycled to make new products such as garden hosing and vinyl flooring.



GREEN FLEET

Austin Health's partnership with Greenfleet provides employees with the opportunity to donate money to offset their individual carbon emissions. In 2015-16 116 trees were planted on behalf of Austin Health staff. Greenfleet plants native, biodiverse forests that are protected for up to 100 years and provide habitat to the local species, desalinate the soil and absorb carbon from the atmosphere.

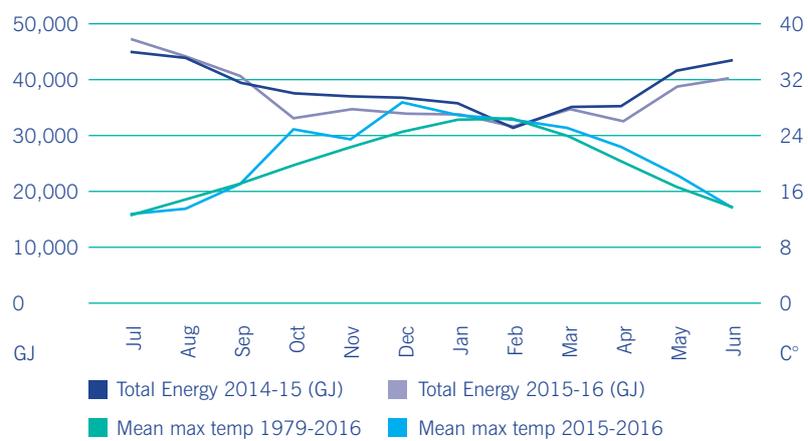


Greenhouse Gas Emissions

Figure 1: Greenhouse Gas Emissions (tCO₂e)



Figure 2: Mean Max Temperature (2015-16) and Long Term Max Temperature Trend (1979-2016) v Total Energy Use (2014-16)



Source: Bureau of Meteorology Bundoora Weather Station

Austin Health's major sources of greenhouse gas emissions are:

- Scope 1: natural gas used predominantly as a fuel source for boilers to generate steam for the Austin and Heidelberg Repatriation Hospitals.
- Scope 2: electricity purchased from the grid.

In 2015-16 Austin Health's total greenhouse emissions reduced by 10% from 2014-15 levels. Whilst Austin Health continued to implement energy efficiency initiatives, one of the key factors was Melbourne's climatic conditions. Austin Health's energy consumption and related greenhouse gas emissions is largely influenced by the weather.

A warm spring and autumn is likely to have contributed to a decrease in energy consumption and subsequent greenhouse emissions from Austin Health's heating and cooling systems.

Some of the key weather trends for Melbourne in 2015-16 included:

- Above average mean maximum temperatures across Melbourne.
- A very warm spring.
- A record breaking hot spell in early October.
- Early-season heat records broken across the city.

Key greenhouse gas emission reduction activities in 2015-16 included:

- Lighting upgrades at the Heidelberg Repatriation Hospital, Royal Talbot Rehabilitation Centre and the ongoing replacement of fluorescent tubes with LEDs when lights fail at the Austin Hospital.
- Installation of variable speed drives (VSD's) at the Heidelberg Repatriation Hospital.
- Improvements in fleet utilisation and the securing of more fuel efficient vehicles.

Energy

Equipment at Austin Health which consumes the most energy includes: boilers (natural gas) as well as heating, ventilation and air conditioning (HVAC), chillers, lighting, motors, pumps and drives. In addition, sophisticated medical equipment often consumes large amounts of energy.

In 2015-16 total energy consumption (GJ) decreased by 5% with total electricity and natural gas consumption reducing 5% and 4% respectively from 2014-15 levels. On a building per m2 basis, total energy consumption also decreased by 5% from 2014-15 levels. Electricity and natural gas consumption (GJ) also reduced by 6% and 5% respectively from 2014-15 levels on a building per m2 basis.

As noted in the greenhouse gas section above, Melbourne's above average mean temperatures, including a very warm spring, is likely to have contributed to a reduction in energy consumption for Austin Health, in particular for reduced heating and cooling requirements. Other Austin Health initiatives in 2015-16 contributing to a decrease in energy consumption (GJ) included:

- Lighting upgrades at the Heidelberg Repatriation Hospital, Royal Talbot Rehabilitation Centre and the ongoing replacement of fluorescent tubes with LEDs when lights fail at the Austin Hospital.

Figure 3: Total Energy Consumption(GJ)

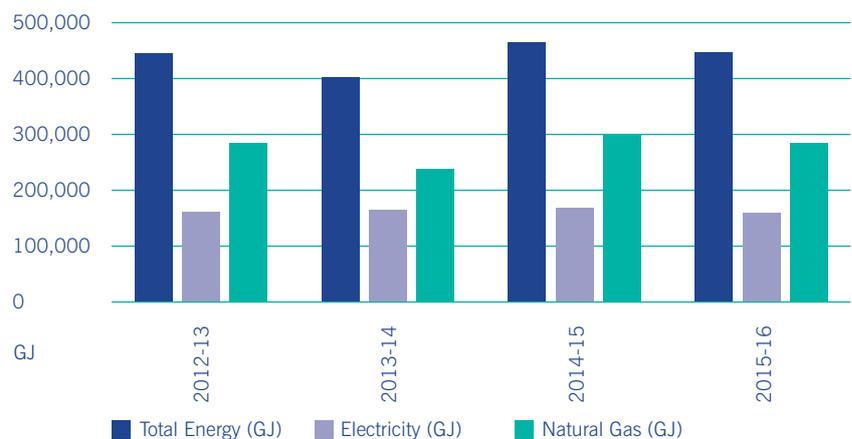
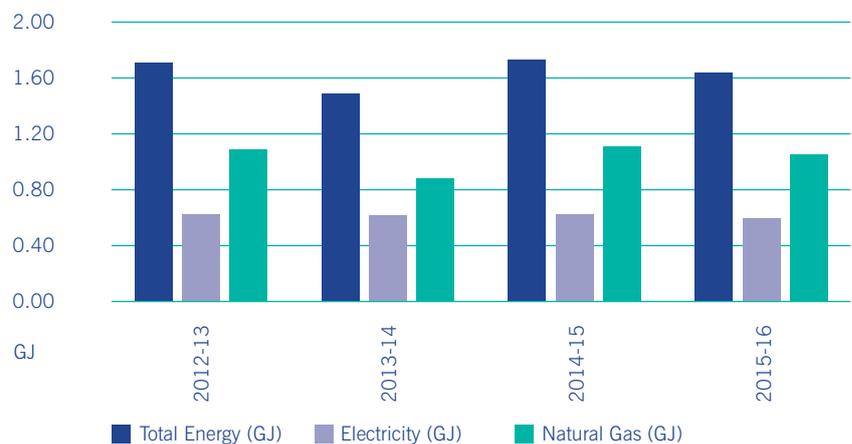


Figure 4: Energy Consumed per Building m²



- Installation of variable speed drives (VSD's) at the Heidelberg Repatriation Hospital.

Austin Health continues to monitor its energy consumption through integrated building management systems (BMS) at the Austin Hospital.

Water

Austin Health predominantly uses potable water (or drinking water) for drinking, food preparation, cleaning, toilet flushing, cooling towers and fire services. The health service reduced its reliance on potable water through the collection and use of rainwater for garden irrigation as well as the use of recycled water from its onsite waste water treatment system for toilet flushing.

Through a strong focus on the replacement of ageing water infrastructure that caused a substantial increase in 2014-15, Austin Health achieved a 14% decrease in potable water consumption in 2015-16.

The key initiatives to reduce potable water consumption in 2015-16 included:

- Condenser pipe replacement at the Austin Hospital.
- Some replacement of ageing water infrastructure at the Heidelberg Repatriation Hospital.

Ageing water infrastructure, especially at the Heidelberg Repatriation Hospital, continues to be a key focus.

Figure 5: Potable Water Consumption (kL)

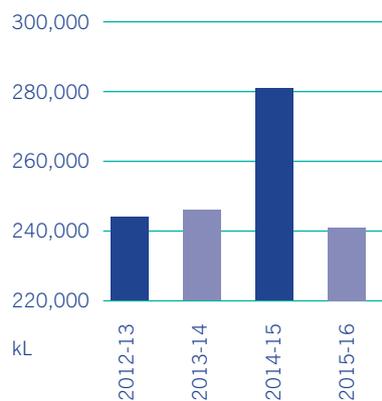
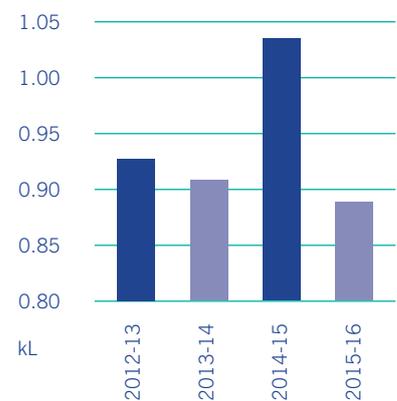


Figure 6: Potable Water Consumption (kL) per m²



Waste

Austin Health is a large generator of waste and creates and manages 20 different waste streams, all of which are segregated at source by staff. Waste streams include (but are not limited to) general waste, comingled recycling, paper and cardboard, clinical, sharps, cytotoxic, pharmaceutical, e-waste, batteries, fluorescent globes, PVC, kinguard, and confidential paper.

In 2015-16 the total amount of waste generated by Austin Health increased by 4% from 2014-15 levels. During this period the amount of general waste increased by 8% and our recycling rate decreased by 10% despite ongoing waste education including signage, training and staff engagement programs. Recycling rates at Austin Health have historically fluctuated for a range of reasons including administrative activities, staff turnover and staff knowledge of recycling opportunities. On average, 6.3 kilograms of waste per patient was generated in 2015-16 (up from 6.2 kilograms in 2014-15).

The key factors contributing to a decline in Austin's Health's waste performance in 2015-16 included:

- The increasing trend of single use items in healthcare to reduce infection risks which has subsequently led to increased volumes of waste.

Figure 7: Total Waste Generated

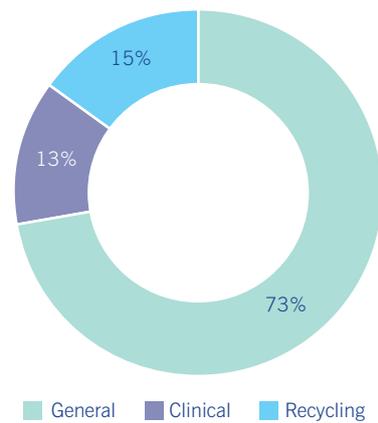


Figure 8: Major Waste Streams (tonne/p.a)

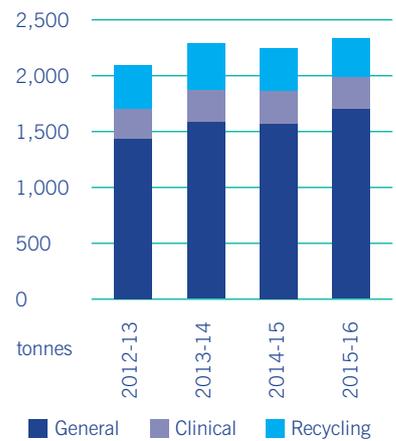
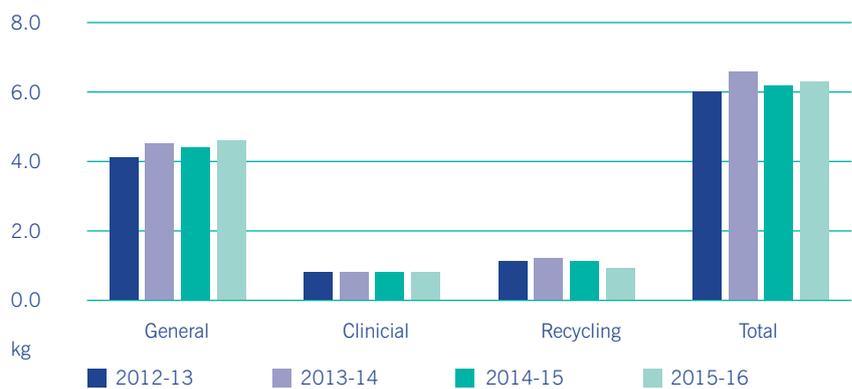


Figure 9: Waste type per patient per day (kg)



- Admissions and attendances (both outpatient and emergency) increasing by 3.5% in 2015-16 leading to more waste being generated.
- An increase in surgical activity and throughput of patients in comparison to previous years contributing to more waste being generated.

Waste continues to be a key focus area and challenge for Austin Health and we are committed to improving our performance in this area in 2016-17.

Data Summary¹

AUSTIN HEALTH GENERAL STATISTICS	2012-13	2013-14	2014-15	2015-16
Occupied Bed Days (OBD)	352,077	352,829	363,516	372,032
Inpatient admissions	91,661	96,580	98,539	103,756
Outpatient attendances	176,426	176,869	186,096	190,756
Emergency attendances	71,391	77,428	79,323	82,047
GREENHOUSE GAS EMISSIONS	2012-13	2013-14	2014-15	2015-16
Scope 1 (tCO2e)	14,995	12,558	15,685	15,022
Scope 2 (tCO2e)	52,870	54,048	55,059	48,440
Total (tCO2e)	67,865	66,606	70,745	63,463
Total tCO2e per building square metre	0.26	0.25	0.26	0.23
ENERGY	2012-13	2013-14	2014-15	2015-16
Electricity (GJ)	161,298	164,892	167,978	159,987
Electricity per metre squared (GL)	0.62	0.61	0.62	0.59
Natural Gas (GJ)	284,245	237,321	298,255	285,225
Natural Gas per metre squared (GL)	1.09	0.88	1.10	1.05
Diesel (GJ)	232	436	633	579
WATER	2012-13	2013-14	2014-15	2015-16
Potable water (kL)	241,862	246,443	281,572	240,934
Potable water per metre squared (kL)	0.93	0.91	1.04	0.89
Recycled water (kL)	7,990	9,340	3,956	2,360
WASTE	2012-13	2013-14	2014-15	2015-16
General waste (tonnes)	1,445	1,604	1,590	1,715
General waste per occupied bed day (kg)	4.10	4.55	4.37	4.61
Clinical waste (tonnes)	274	287	293	295
Clinical waste per occupied bed day (kg)	0.78	0.81	0.81	0.79
Recycling (tonnes)	394	422	385	348
Recycling per occupied bed day (kg)	1.12	1.19	1.06	0.94
Total waste (tonnes)	2,113	2,312	2,268	2,358
Total waste per occupied bed day (kg)	6.00	6.55	6.24	6.34

ACKNOWLEDGEMENTS

All data presented in this report was obtained from resource suppliers, contractors, internal sub-metering, audits, the Victorian Department of Health and Human Services and other relevant Victorian healthcare organisations

(benchmarking). This report has been prepared by the Sustainability Unit with assistance from the following departments: Fleet Management, Human Resources, Facilities Maintenance, Corporate Communications and Capital Works.