Austin Health

SUSTAINABILITY REPORT 2009/10

ENTER

INTRODUCTION

Welcome to the second Austin Health Sustainability Report. The objective of this report is to share information about Austin Health's sustainability initiatives and report our progress. We want to provide our stakeholders an opportunity to gain an understanding of our environmental achievements and challenges throughout the past year.

We have continued to vigorously pursue our sustainability objectives declared in last year's inaugural sustainability report. The Austin Health Environmental Committee (AHEC) developed an organisational wide Environmental Management Strategy (EMS) which was approved by the Austin Executive in March 2010. The EMS sets targets to reduce waste to landfill, energy and water consumption, as well as an increase in greening activities over the next three years. A complimentary Environment Policy was also developed by the committee to promote best practice environmental outcomes. The policy includes our commitment to incorporate environmental considerations into future planning, reduce our carbon footprint, report consumption and provide leadership.

This year, a significant number of infrastructure projects provided many challenges. At the Austin Health site, the construction of the Olivia Newton-John Cancer and Wellness Centre required the demolition of Heidelberg House. Zeltner Hall, a heritage listed building, will be refurbished and will become part of the new Olivia Newton-John Cancer and Wellness Centre. This building project is registered with the Green Building Council of Australia for Green Star design assessment at the end of the design process. The 3KZ Building was demolished, construction of the Florey Neuroscience Institute began and the Bioresources Facility was opened. At Heidelberg Repatriation Hospital (HRH), construction commenced on the Centre for Trauma Relate Mental Health (CTRH) and the Health and Rehabilitation Centre construction is on-going.

This report provides an overview of our environmental initiatives for the year and features case studies and performance data.

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Austin Health

INTRODUCTION

Dr Brendan Murphy
Chief Executive Officer

Message from the Chief Executive Officer

I am proud to present Austin Health's 2009/10 Sustainability Report. The scope of this report includes the three main sites of Austin Health - Austin Hospital (AH), Heidelberg Repatriation Hospital (HRH) and the Royal Talbot Rehabilitation Centre (RTRC). Throughout the year we have maintained our environmental commitment and remain determined to become one of the leaders in the area of environmentally responsible healthcare.

In 2009/10, we focused on identifying our environmental impacts and determining measures to reduce our environmental footprint. Austin Health was invited to participate in the Resource Smart Healthcare pilot trial coordinated by the Department of Health and Sustainability Victoria. This program was designed to assist healthcare agencies to meet environmental targets and policies and provided focus in the development of our EMS. The adoption of our EMS and Environment policy in 2009/10 completed our planning phase and put a robust policy framework in place to guide all future sustainability initiatives.

Over the latter part of the 2009/10 year efforts were concentrated on waste reduction and water saving initiatives. A new waste service provider was appointed to streamline our waste management processes. This resulted in a 65 percent increase in the number of recycling bins across the Austin site alone, reducing the amount of waste being sent to landfill. In February 2010, a waste education program for staff was launched and by June 2010 approximately 30 percent of our 8000+ staff had received training. With funding from the Victorian Government, water saving initiatives were implemented across the three major sites.

I look forward to reporting our EMS achievements in years to come.

WATER

As stated by the Department of Health, health care facilities in Victoria consume greater than 5 gigalitres of water each year to provide services to patients and community.

In 2007 $3.9 million dollars was provided by the Victorian Water Trust via the Department of Sustainability and Environment through the Greening our Hospitals – Water program. This funding was dedicated to increase water efficiency and develop water reuse and recycling projects in health care.

At Austin Health a number of programs and initiatives were identified in our Water Management Plan and through the Greening our Hospitals - Water program. Subsequently, flow controller installation and reverse osmosis waste water recycling were implemented. Additionally, several rain water tanks were installed across three sites.

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Austin Health

WATER

Case Study - Rainwater Tank Installation Program

Persistent drought conditions and water restrictions over the past decade have raised awareness in Victoria about the environmental and economic benefits of rainwater harvesting. Austin Health now has the capacity to capture close to 50,000 litres of rainwater for the maintenance of gardens and grounds.

At HRH, thirteen 2,200 litre water tanks were purchased by the Heidelberg Repatriation Hospital Heritage Appeal. Ten of these tanks have been installed in various locations across the site to provide water for gardens and green spaces. All tanks have been positioned to take advantage of gravity to facilitate water flow and to eliminate the need for pressure pumps. Rain water tanks, with a holding capacity of 10,000 litres, were already in use at the Remembrance Garden.

The remaining three tanks have been installed at the Austin site to provide water for the mature oak trees in the green space in front of the Edward Wilson building. In addition, a 2,000 litre tank was donated by a tank supplier to the Paediatric Ward for use in the children's garden in the Austin Tower.

In 2010, RTRC adopted a rainwater harvesting process for their laundry. Rainwater harvesting involves the collection, storage and distribution of rain water from the roof. In this case, the captured rainwater is used in the laundry during the wash cycle of washing machines. This initiative alone will result in approximately 211 kilolitres of water savings per annum for Austin Health.

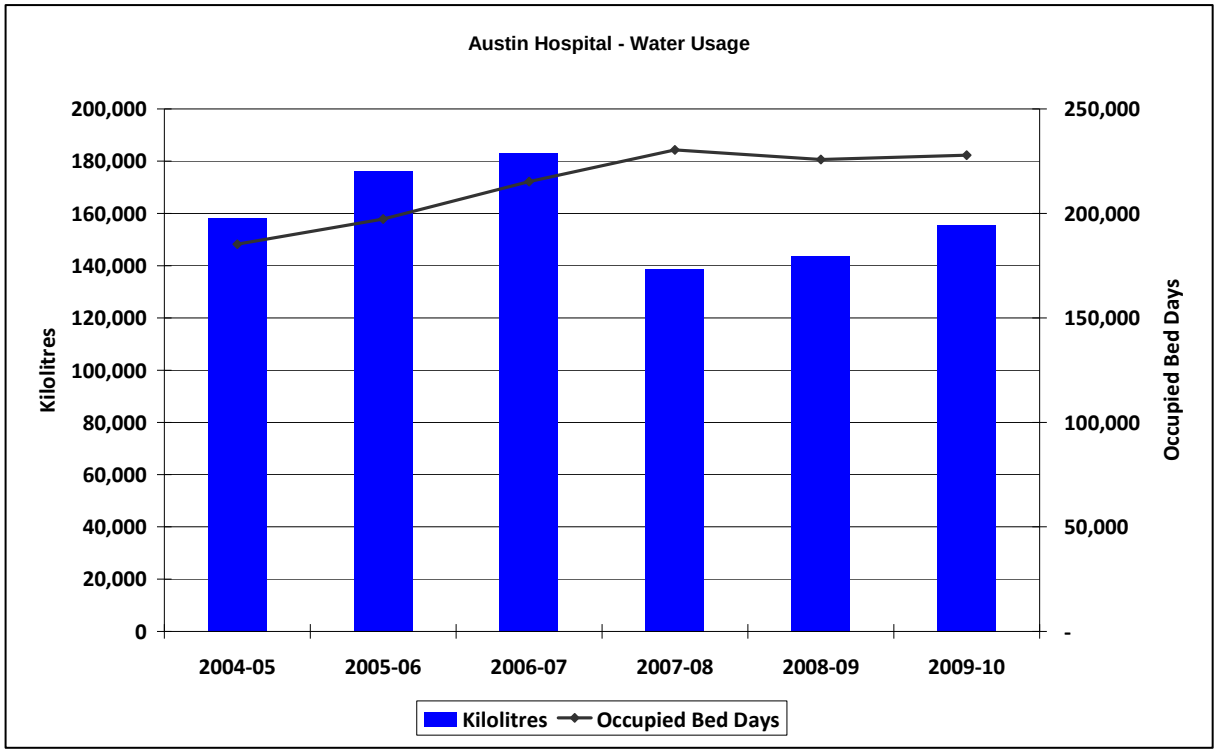
WATER

Austin Hospital

A number of initiatives to reduce water consumption have been undertaken this year such as the installation of flow restrictors in wash basin taps and showers at Austin Hospital, expected to yield reductions of 1,000 kilolitres per year. A reverse osmosis waste water recycling system for renal dialysis water was installed in the Austin Tower building. Reverse osmosis is the process of filtering potable water through membranes resulting in 1/3 purified water for kidney dialysis machines and 2/3 mineralised waste water. The waste water, approximately 1,350 kilolitres per annum, is pumped from Austin Tower into tanks in the basement of the Harold Stokes Building and is subsequently pumped to the top floor of the building and used for toilet flushing.

Furthermore, Stericlean Linen Services closed its doors after 44 years in operation on the Austin site. Linen Services are now provided by an external contractor which reduced water consumption by 42 percent per kilogram of linen washed.

In order to identify further water saving opportunities, additional water meters have been installed at the Austin site.



Austin Health

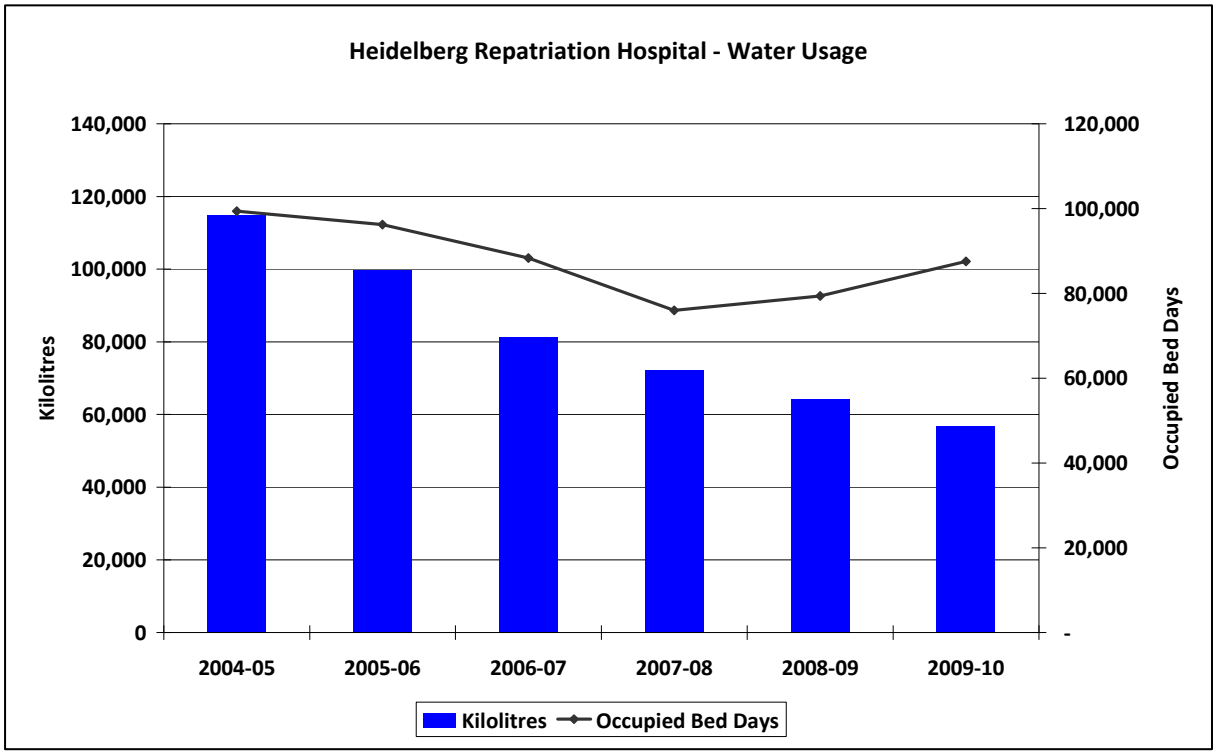
WATER

Heidelberg Repatriation Hospital

A Water Management Action Plan has been lodged with the Austin Health water provider and HRH committed to a water consumption reduction target of 10 percent for this year. With the water efficiencies that were implemented in 2009/10 HRH achieved a reduction of 11.5 percent, exceeding the target.

The installation of flow restrictors in wash basin taps and showers was also completed. This initiative is expected to yield water savings of up to 3,000 kilolitres per annum.

Two water cooled cooling towers were replaced with an air-cooled cooling tower which is expected to be sixty percent more water efficient.



Austin Health

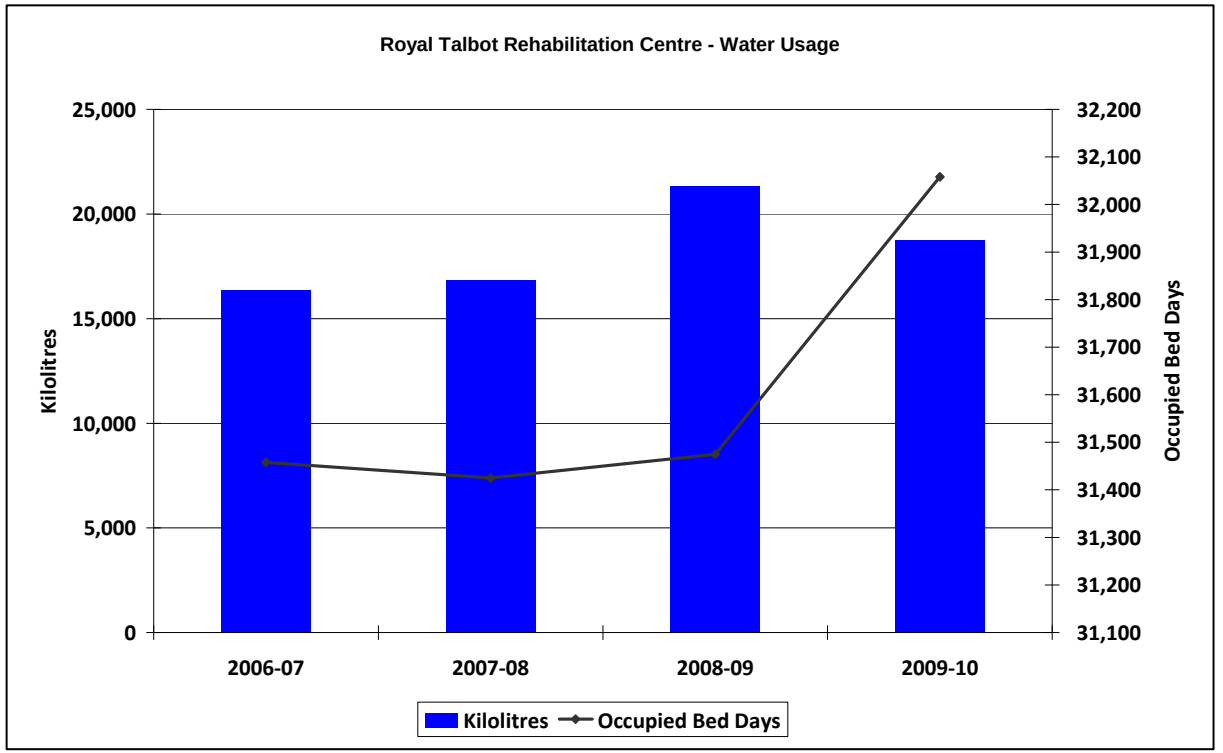
WATER

Royal Talbot Rehabilitation Centre

Flow restrictors for wash basin taps and showers have also been installed at RTRC. Water savings from this initiative are estimated at almost 3,000 kilolitres per year.

RTRC surpassed its commitment in the Water Management Action plan of a ten percent reduction in water consumption. Reductions amounted to 2,568 kilolitres of water or 12 percent.

Unfortunately, plans announced in last year's report to install dual flush three litre/six litre systems in the centre's 120 toilets had to be delayed as funding could not yet be secured.



Austin Health

GAS

Natural gas is used at all Austin Health sites to fuel the boilers to generate steam for sterilisation and heating purposes.

The federal Department of Climate Change and Energy Efficiency provides emission factors for the following greenhouse gases: carbon dioxide, methane, nitrous oxide and synthetic gases (HFCs, SF6, CF4 and C2F6). These gas emission factors are multiplied by their gas global warming potential to arrive at a standardised measure expressed as carbon dioxide equivalent (CO2-e).

The amount of steam produced per kilojoule of natural gas consumed has increased by initiating several large scale efficiency upgrade projects on our boilers at various sites.

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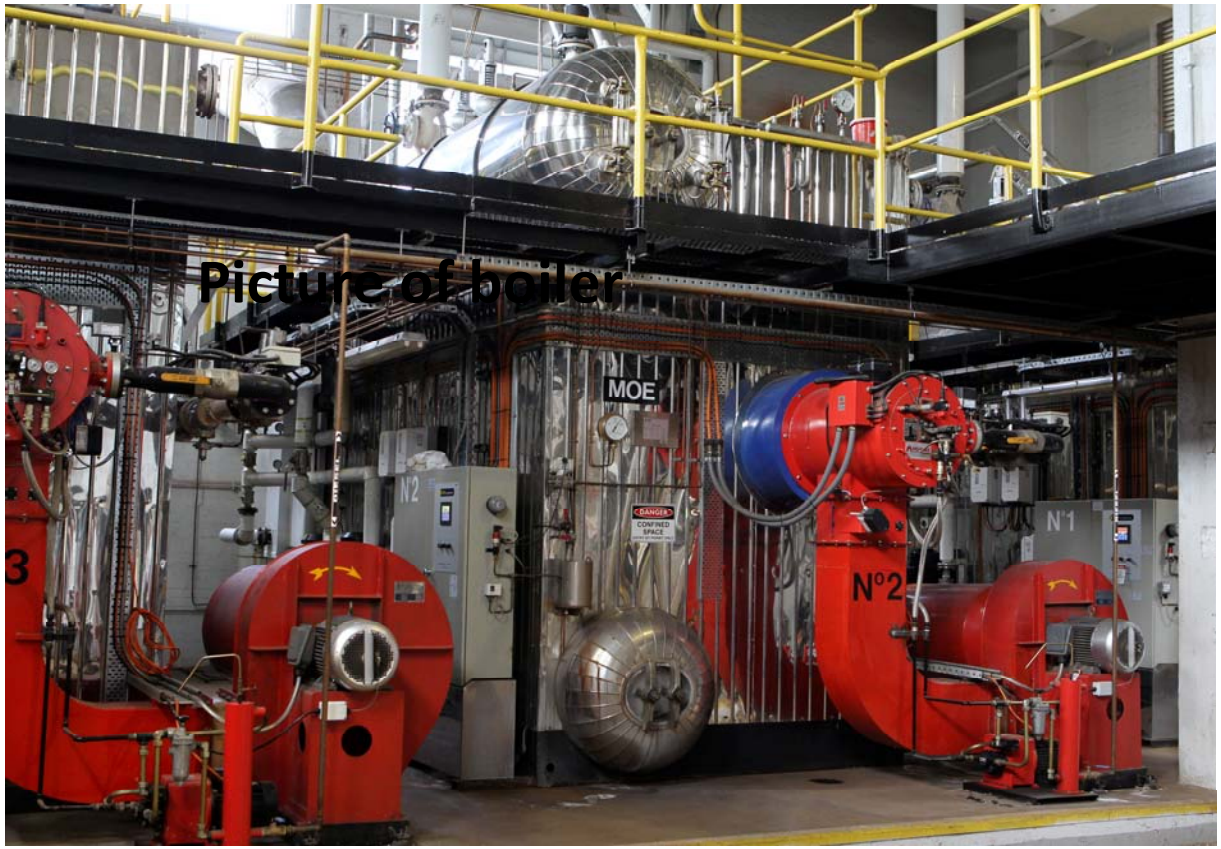
GAS

Case Study - Improving Boiler Efficiency



Continuous improvement of equipment efficiency is necessary to achieve environmentally sustainable outcomes and to minimise the impact of rising energy and gas prices.

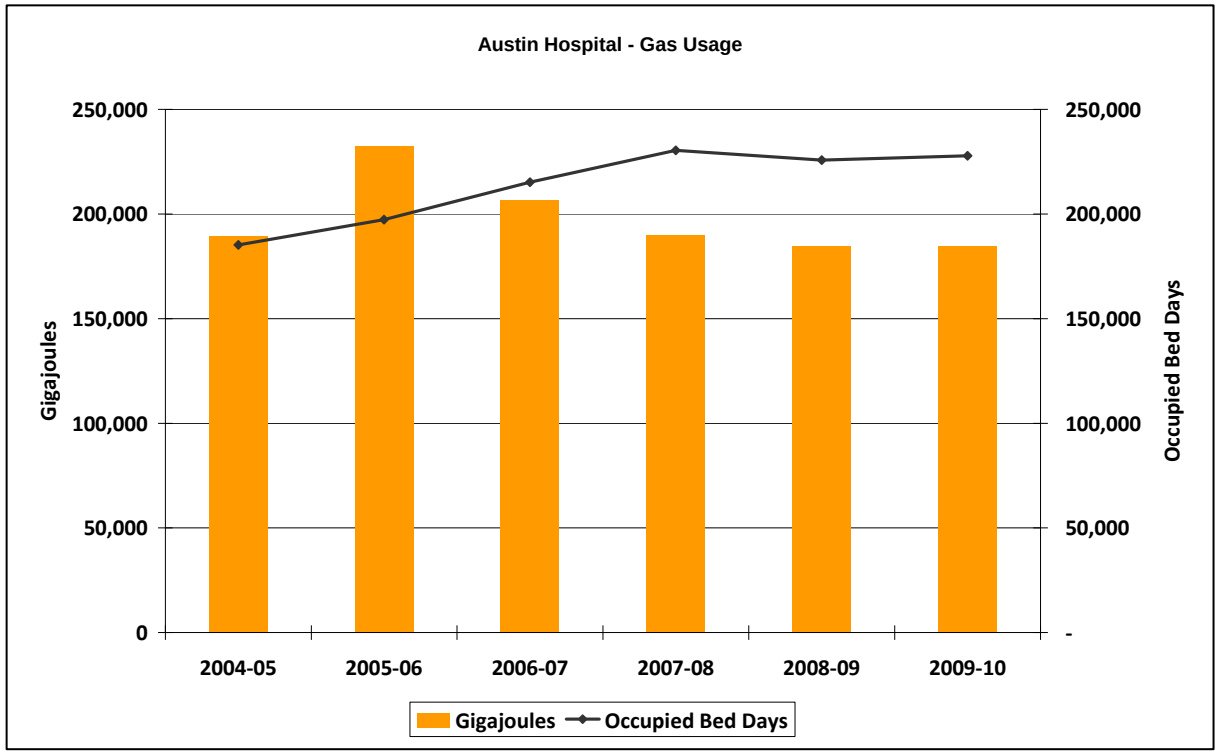
Boilers produce steam for heating, domestic hot water, cooking in our production kitchens and for cooling through absorption chillers. The three boilers at the Austin Hospital and two boilers at HRH were recently upgraded as they were consuming considerable amounts of energy and gas. Programmable logic controls and variable speed drive controls were fitted to the air supply fans and feed pump drives on each of the boilers. These improvements provide optimum fuel efficiency and reduced energy consumption and greenhouse gas emissions.

GAS

Austin Hospital

At the Austin site, a recent upgrade of the boilers has yielded improved fuel and energy efficiency ratings allowing a decrease in gas consumption. This is despite an increase in the number of patients we are treating. .

Our 2009/10 annual gas consumption of 184,570 gigajoules resulted in 9,474 tonnes of Carbon Dioxide equivalent (tCO2e) of greenhouse gas emissions compared to 9,487 tCO2e the previous year. The reduction of 13 tCO2e this year equates to 260,000 back balloons.



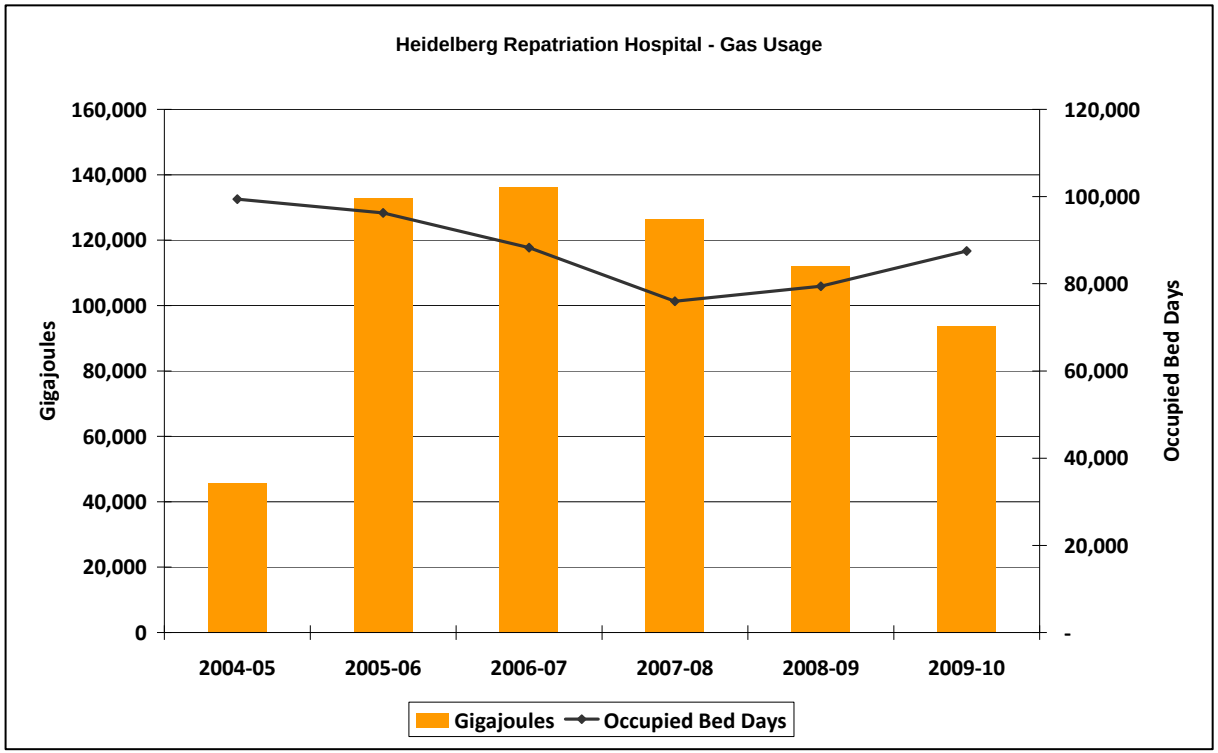
Austin Health

GAS

Heidelberg Repatriation Hospital

Gas consumption at Heidelberg Repatriation Hospital has decreased by 16 percent over last year despite a ten percent increase in patient demand. Our greenhouse gas emissions from gas usage totalled 4,813 tCO2e this year.

Upgrades to the boilers and installation of two steam absorption chillers significantly contributed to this decrease of gas usage.



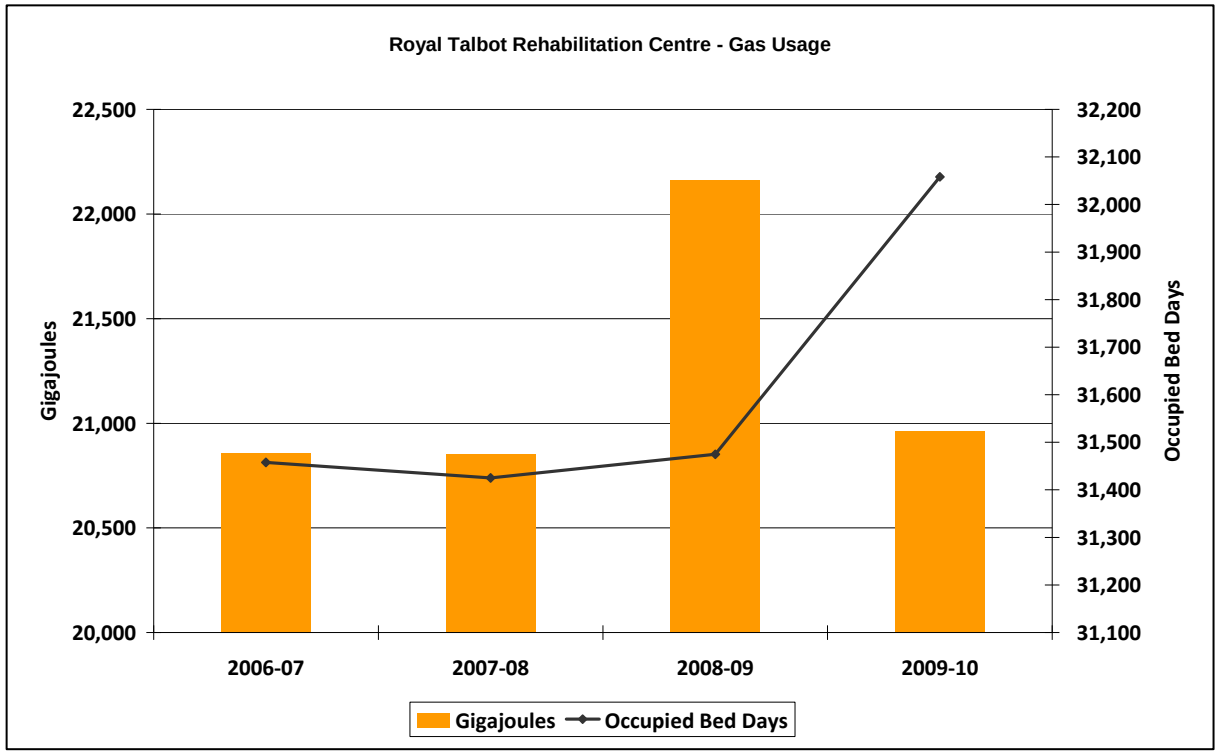
Austin Health

GAS

Royal Talbot Rehabilitation Centre

Gas Consumption at RTRC decreased from 22,163 gigajoules in 2008/09 to 20,964 gigajoules this year, while occupied bed days increased by 583.

Greenhouse gas emissions at the RTRC resulting from gas consumption amounted to 1,076 tCO2e, which is a reduction of more than 5 percent from 2008/09.



Austin Health

ELECTRICITY

Because we operate 24 hours, 7 days a week our facility has a very high demand for electricity due to the constant need for lighting, heating, ventilation, sterilisation and computing equipment. A number of initiatives to improve energy efficiency and reduce greenhouse gas emissions are being evaluated.

In early 2010 Austin Health was nominated to participate in an Energy Performance Contract pilot project - a joint venture between the Department of Health and the Department of Treasury and Finance. Initial stages of this project have commenced. The energy and water profiles have been assessed at the HRH and RTRC sites to further identify conservation opportunities. Recommendations arising from the assessments will be developed and where possible these sites will undergo major energy and water efficiency installations.

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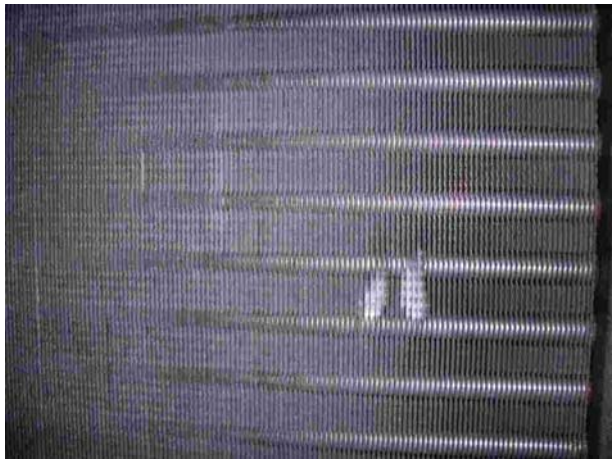
Austin Health

ELECTRICITY

Case Study - Cleaning Program for Air Handling Units

An air handling unit (AHU), is a device used to condition and circulate air as part of the heating, ventilating and air-conditioning (HVAC) system. A regular cleaning regime is implemented to provide improved airflow, improved heat transfer over coils and better air quality. At Austin Health, AHUs are present in all buildings. They provide climate controls to ensure room temperatures are maintained.



Over the past 18 months, approximately 65 percent of AHUs in the Harold Stokes and Lance Townsend buildings have been addressed through the preventative maintenance program. The program involves comprehensively cleaning the heating and cooling coils and ductwork in administration, common areas, patient rooms and operating theatres. The units are isolated and cleaned and then the internal surfaces of each unit are treated with an antimicrobial coating.

Maintaining the cleanliness of duct work in any part of the hospital is a complex process. Careful time management and planning is essential to avoid interrupting the work flow of the hospital. The process usually takes three to four days in any one area because departments need to be completely shut down, requiring the majority of duct cleaning to be completed at night or on weekends.

Energy savings have been achieved through this preventative maintenance regime of AHUs. It has been found that increasing preventative duct maintenance results in an increase in heat transfer efficiency and therefore less energy consumption.

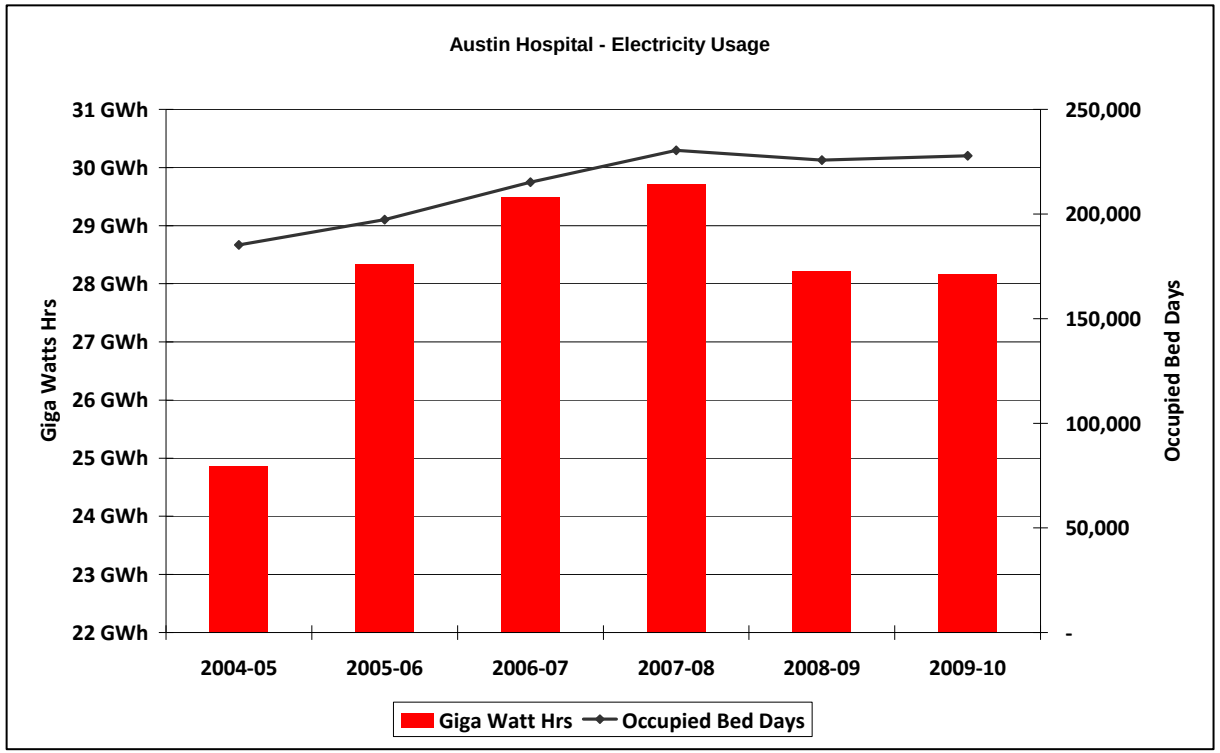
ELECTRICITY

Austin Hospital

At Austin Hospital electricity consumption has decreased by 44,810 gigawatt hours over the past year despite a 2066 increase in occupied bed days.

Monitoring of energy use has been on-going throughout the year to identify opportunities to further reduce electricity consumption. We are gradually replacing the fluorescent tubes in all emergency exit lights with light-emitting diodes (LED) lights. LED lights provide improved energy efficiency and also last longer than fluorescent tubes, resulting in a reduction in waste. Furthermore, LED light bulbs are mercury free and contain no other toxic substances making them very environmentally friendly. We are also investigating the possibility of replacing all other existing fluorescent tubes with energy efficient LED tubes and electronic starters. This initiative, if deemed feasible, could reduce energy consumption from lighting by up to 30 percent.

Greenhouse gas emissions from electricity usage totalled 37,743 tCO2e at Austin Hospital this year.



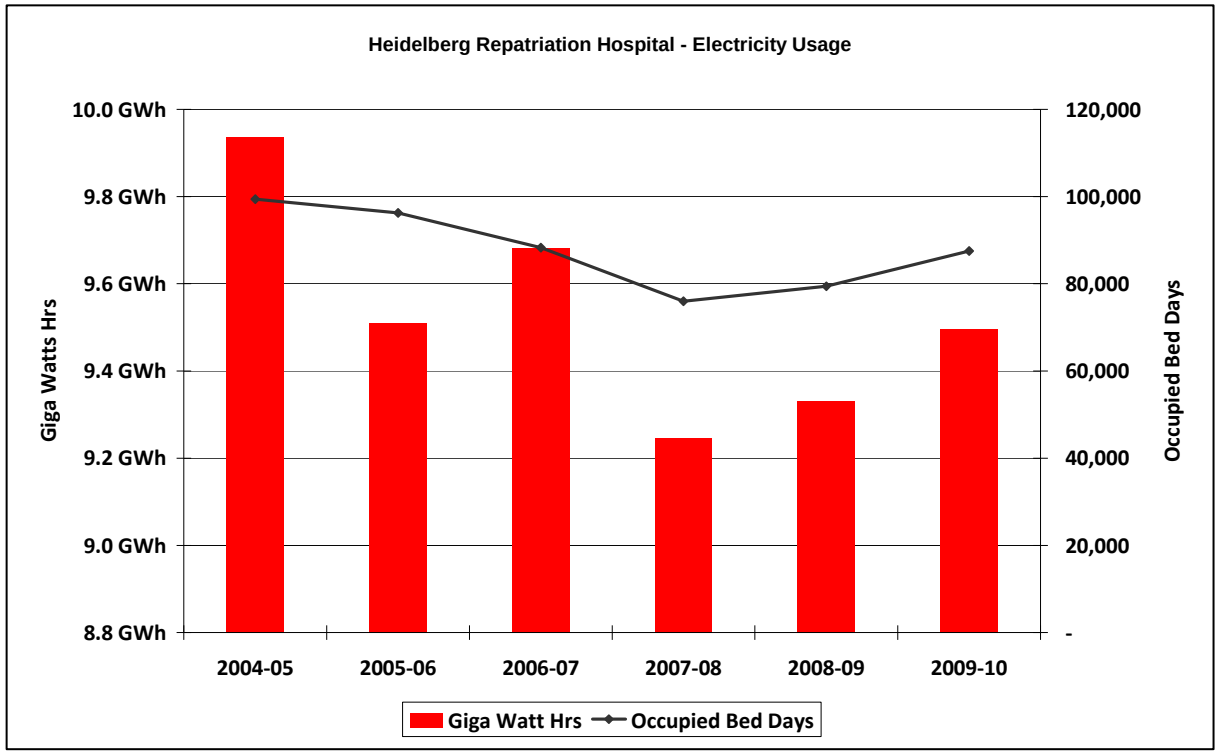
Austin Health

ELECTRICITY

Heidelberg Repatriation Hospital

In a number of buildings at HRH, electricity service improvement projects are underway to reduce electricity consumption. In older buildings, lighting is being exchanged for more energy efficient light globes. Electricity switch boards have already been upgraded in a number of areas to support new medical equipment.

Greenhouse gas emissions from annual electricity consumption amount to 12,724 tCO2e.



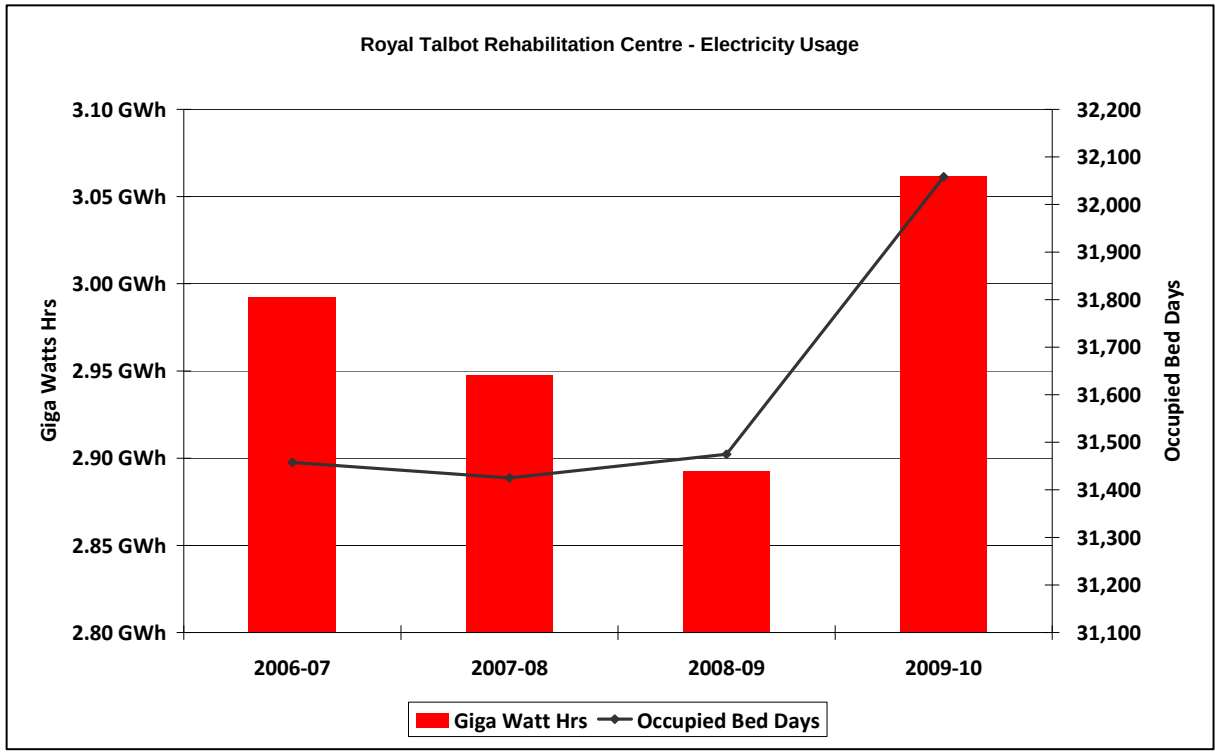
Austin Health

ELECTRICITY

Royal Talbot Rehabilitation Centre

Electricity consumption at the Royal Talbot Rehabilitation Centre has remained constant over the past four years. It is expected that through the EPC project further efficiencies will be identified.

The RTRC's greenhouse gas emissions from electricity consumption this financial year were 4,102 tCO2e.



Austin Health

WASTE

With over 25 different waste types currently being managed at Austin Health, correct waste segregation and diversion of waste from landfill is an area of high priority. The three major waste streams at Austin Health are general waste, clinical waste and recyclables. General waste is defined as waste that is not capable of being composted, recycled, reprocessed or reused. Clinical waste includes pharmaceutical, cytotoxic and anatomical wastes as well as quarantine waste for incineration.

This year we introduced a commingled recycling system to allow disposal of paper, cardboard, plastics, glass, aluminium and steel cans in a single bin.

Many other items, such as organic waste, grease trap waste, fluorescent tubes, chemicals, toner/printer cartridges, batteries and e-waste are recycled separately at Austin Health and are not included in this report.

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Austin Health

WASTE

Case Study – Improving Waste Management

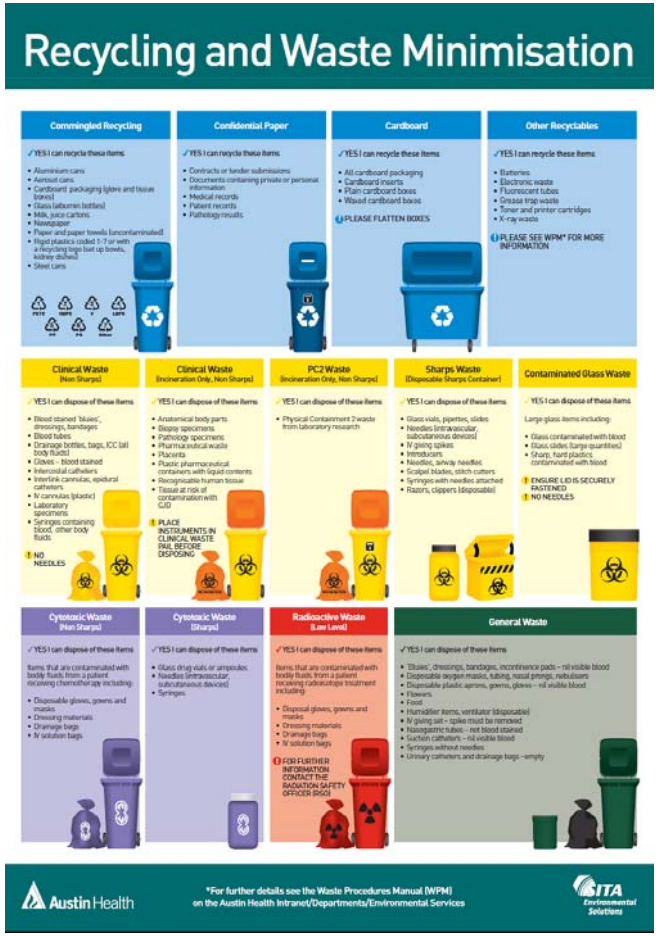
In the past, waste was removed by 13 different waste contractors, creating a high level of complexity to waste management and data collection.

In March 2010 we consolidated our waste removal services into three providers. To compliment this change, standardised bin colour and signage were introduced and a revised waste procedure manual and waste policy published. A waste education campaign to provide staff with effective and clear information about the new waste segregation system was also developed.

The staff education campaign included waste in-service sessions across all three sites in various departments to inform staff of the waste management changes. Information such as how to request new bins or book an in-service was placed on the intranet for easy staff access. A waste disposal poster was designed and copies placed in staff rooms, waste rooms and disposal areas, and a quick reference guide was provided for staff to wear with their ID badges.

Commingled recycling was introduced in order to maximise recycling opportunities and to divert waste from landfill. Staff have enthusiastically embraced the new recycling initiatives and recycling rates have increased steadily since March 2010.

A commingled recycling compactor will be installed at the Austin Health site before the end of 2010 and this is expected to reduce the complexity of recyclable collections as well as significantly decrease transport frequency and therefore greenhouse gas emissions. Reducing the number of service providers also facilitates accurate capture of waste data for future environmental reporting. Accurate data is equally paramount to measure our progress toward our EMS targets and for continuous improvement of various waste minimisation initiatives.



Austin Health

WASTE

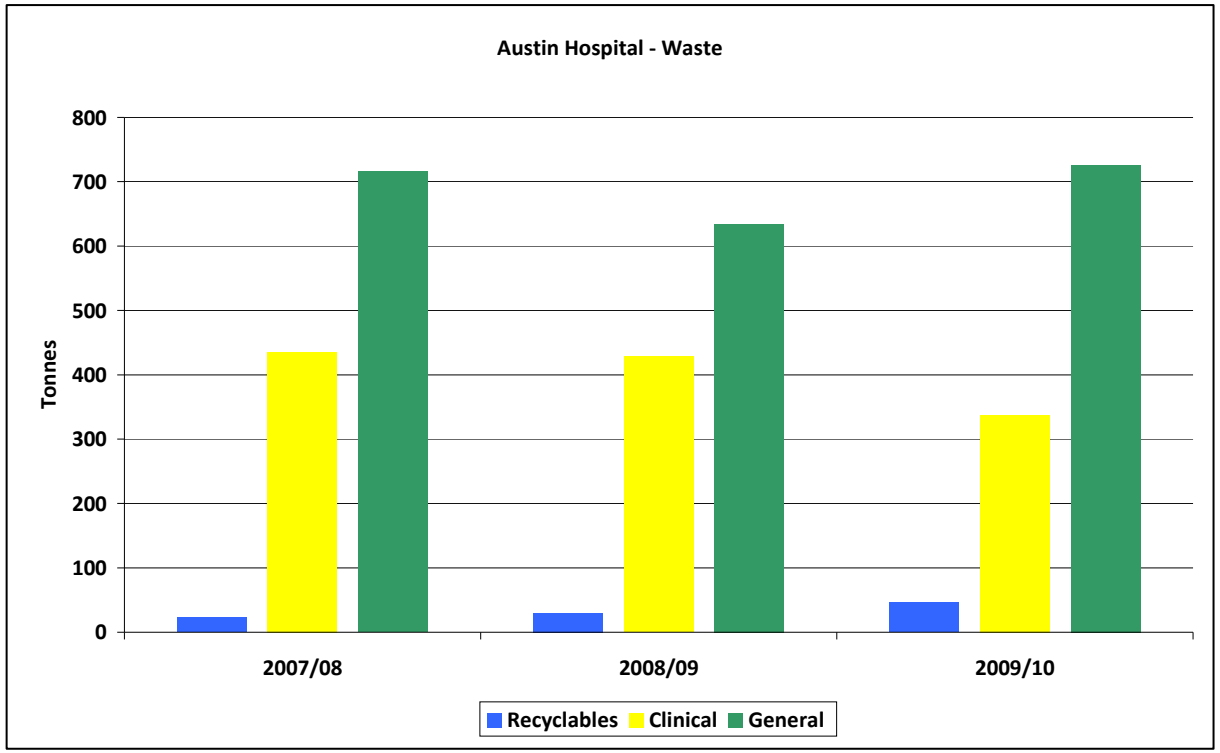
Austin Hospital

Over the past three years a trend has emerged in Austin Hospital's waste data. Improvements in waste segregation are apparent through the increase in recycling rates and the decrease in clinical waste.

The Operating Suite and Intensive Care Unit were the first departments to form sustainability committees. Both departments have applied correct waste segregation techniques to waste management and have achieved great results. Their work has continued through out the year.

This year, additional action groups in Food Services, Radiology and the Surgery Centre have been formed. Lead by committed and enthusiastic staff these action groups, with the support of Environmental Services, have implemented waste minimisation campaigns and departmental waste segregation education.

Since the consolidation of waste removal services recycling rates have risen substantially and we are hoping to report an increase of waste diverted from landfill in next years report.



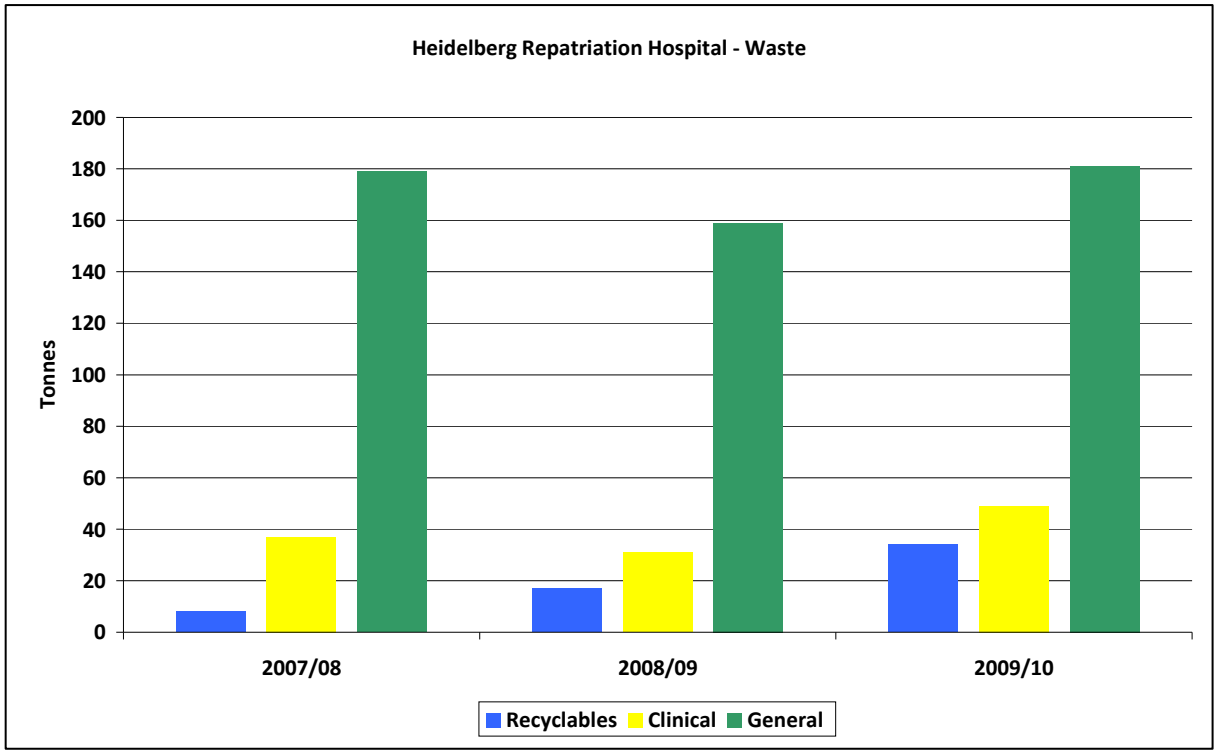
Austin Health

WASTE

Heidelberg Repatriation Hospital

At HRH recycling rates have doubled over the past year. The consolidation of waste service providers and the introduction of commingled recycling have encouraged staff to better segregate their waste at the point of generation. As with our other sites, the number of recycle bins has been increased and waste stream collection procedures simplified.

Occupied Patient Bed Days have increased by ten percent at HRH in the past year explaining the increase in total waste generated at this site.

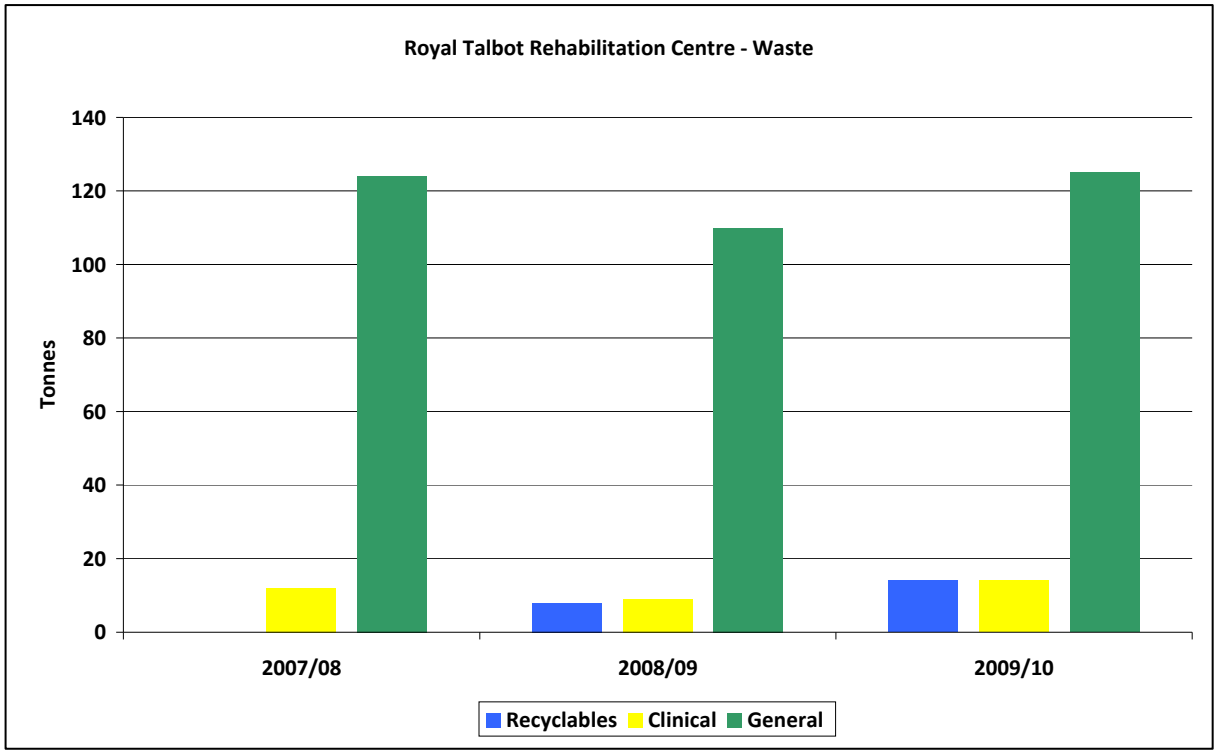


Austin Health

WASTE

Royal Talbot Rehabilitation Centre

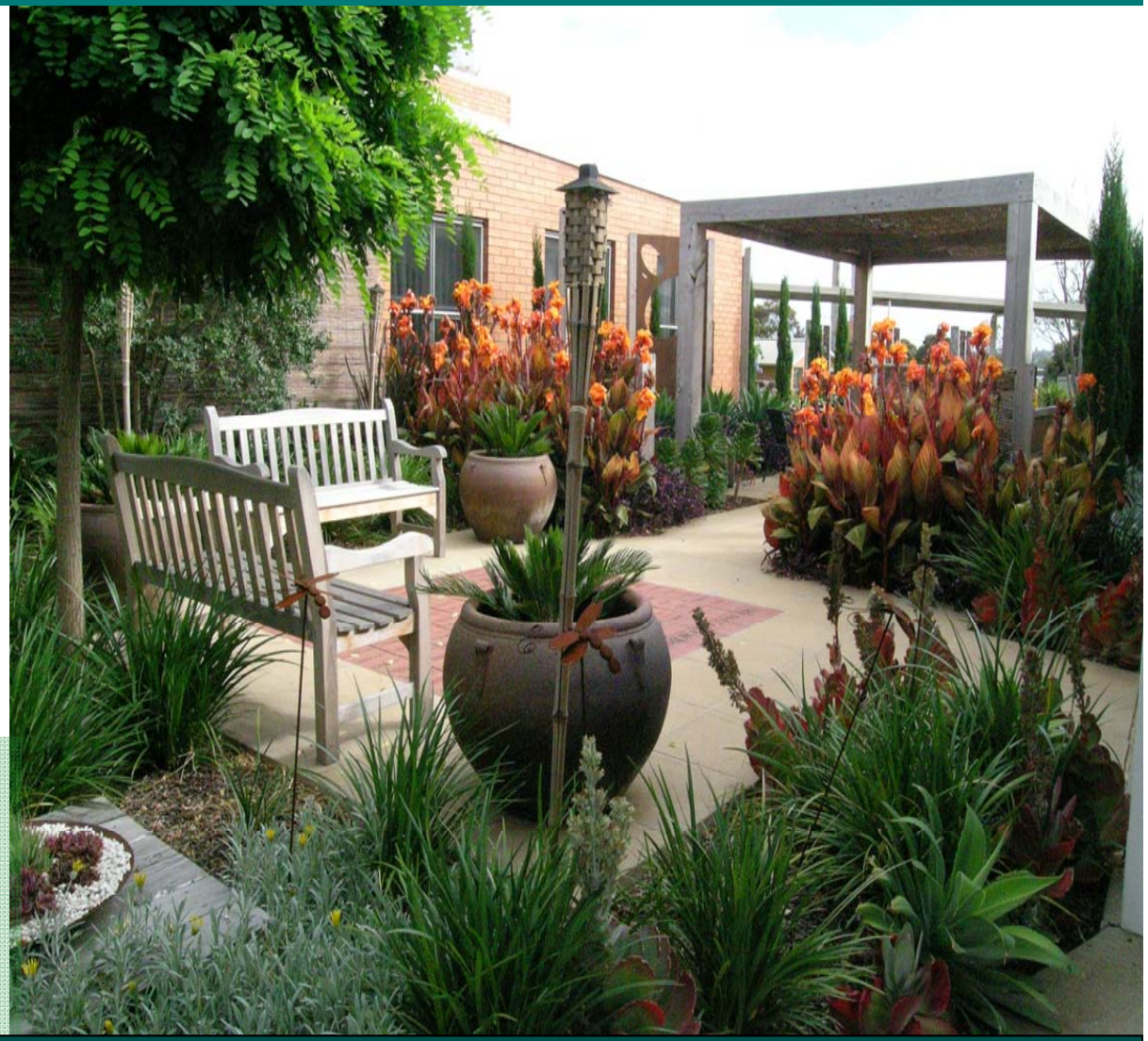
Waste data for recyclables at RTRC was not available in 2007/08 as there were no recycling services at this site. Fortunately this was rectified in the later half of 2008. Additional recycling services were provided in March this year with the commencement of the new waste contract and recycling rates are on the increase.



GREENING

In early 2010 the Austin Health Environment Committee defined the term ‘greening’ in our EMS as “the process of transforming space, a lifestyle or a brand into a more environmentally friendly version”. These 'green' qualities include, but are not limited to, the biodiversity of the natural environment, sustainable transport and eco-procurement.

The definition is broad to include a variety of environmental projects and initiatives that may not suit the waste, water or energy categories.



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GREENING

Case study – Green Fleet Management

The Motor Vehicle/Fleet Management policy and procedure manuals were reviewed and updated in early 2009. The policy and procedures reflect the change in Fleet Management requirements within Austin Health.

The updated Fleet Management policy has incorporated a variety of improvement practises, such as:

- Vehicle procurement – evaluation of vehicle requirements across the organisation
- Replacement of 6 cylinder vehicles with 4 cylinder vehicles (purchased or leased)
- Provide fuel efficient, cost effective replacement vehicles and standardise vehicle colour and type
- Tyre management - maintaining optimum tyre pressure to ensure maximum fuel efficiency, accident prevention and tyre longevity
- Review of log book management in pool vehicles to ensure Austin meets all fringe benefit tax obligations
- Introduction of an in car driver guide - roadside assist and accident management information, plus a brochure on driver obligations and responsibilities when using an Austin Health provided vehicle

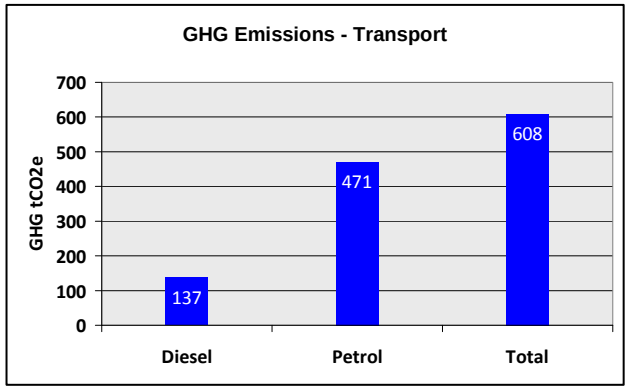
The trial of an online car booking system is another new initiative. The new system will improve vehicle utilisation and management scheduling, highlight when services are due, track infringement notices, and provide departments the ability to report accidents online and in a timely manner. The system will also provide statistical data on usage to assist Fleet Management in ensuring optimum vehicle numbers. By improving the management of fleet cars, Austin Health is aiming to consolidate its fleet, provide cost effective, safe, fuel efficient vehicles and decrease our greenhouse gas emissions.

Vehicles & Fuel Consumption

In 2009/10 Austin Health operated a total of 192 fleet vehicles and used 256,596 litres of fuel products.

Fleet related greenhouse gas emissions totalled 608 tCO2e.

	Pre 2004	Post 2004	Total
Vehicles	15	177	192
Oil (Litres)	1	10	11
Diesel (Litres)	11,262	39,501	50,763
Petrol (Litres)	3,444	202,378	205,822



Austin Health

GREENING

Case study – Heidelberg Repatriation Hospital 'Can Do Team'

The "Can Do Team" is a group of volunteers who are active in the development and management of the grounds at HRH. They have helped to transform the site with spanning wetlands, commemorative and special garden areas. The team consists of local neighbours, gardeners, staff and secondary school students, and with support from the CEO and Facility Maintenance Department they undertake a variety of activities to 'green' the 21 hectare site.

Since 2005 this group of committed volunteers has met on a monthly basis to conduct a variety of small jobs, from landscaping, mulching, weeding and general clean up, to larger jobs such as repairs to gravel roads and car parks and removing unwanted materials and items. Volunteers bring with them their own expertise or equipment and a Bob Cat with driver hired each month to assist with larger projects.

The "Can Do Team" commitment has seen them lead the way for greening programs that have spread across all Austin sites. In 2008, the team noted the considerable amount of cigarette butts that accumulated on the grounds of the site. With the assistance and support of the CEO, a hospital wide smoking ban was implemented. The successful initiative reduced cigarette butt litter significantly and the smoking ban was extended to include the Royal Talbot Rehabilitation Centre and Austin Hospital sites.

The team agree that this work is vital to creating a better workplace environment and general neighbourhood improvement. Their next challenge is to complement the linkage and areas around the new Health and Rehabilitation Centre and new Veterans Psychiatry Unit. The work continues because they care and believe in the value of Austin Health to the community.

L-R: Peter Ruff (Gardner), Joe Murphy (Transfield Contract Manager), Krishna Arul Arunasalum (NUM, Ward 17), Jill Smith (Physiotherapist), Honourable Daniel Andrews MP (Victorian Minister of Health), Ross Crawford (Business Improvement Manager), Robert Winther OAM (Veteran Liaison Officer).

Austin Health

COMMITMENTS

In order to achieve our EMS targets by 2013 we have developed yearly objectives for energy waste, water and greening. Over the coming year initiatives will be implemented to meet the Year One commitments detailed in our EMS.

To reduce energy consumption a preventative maintenance schedule to ensure optimum building efficiency will be put into practice. This includes a steam trap maintenance project and further cleaning of air vents and air ducts.

To divert waste from landfill a wet waste and recycling program will commence in our Food Services department. By segregating the waste from patient trays and food preparation areas into organic waste, recycling and general waste, significant reductions in waste to landfill are anticipated.

A review of fire testing management is planned as a new water saving initiative. At the moment sprinkler systems are tested on a weekly basis in all buildings. By changing these tests to a monthly basis (where feasible), water consumption may be further reduced. An investigation into the possible capture of the fire test water for reuse is also occurring.

In relation to our greening target we will concentrate on our gardens in the next year by developing a Gardens and Grounds Master Plan. The priorities of this plan will include increasing indigenous drought tolerant plantings, mulch and garden art and installing additional rain water tanks for watering.

We look forward to the implementation of these sustainability initiatives throughout the next year and look forward to recounting our challenges and achievements in next year's report.

FEEDBACK

We hope you have enjoyed reading about our sustainability initiatives, achievements and challenges in the Austin Health 2009/10 Sustainability Report.

We welcome and value your ideas and feedback for the next report.

You can make your comments online at www.austin.org.au/publications

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Austin Health

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