

Sustainability Report

2018 / 2019



Western Health

Chief Executive Officer's Message

For almost ten years now, Western Health has been a recognised leader in sustainability initiatives among health services and later this month we will be hosting the Greening Healthcare Forum.

Along with the Australian, American and British Medical Associations and healthcare organisations around the world, Western Health accepts the scientific evidence on climate change and its impact on human health and wellbeing. Climate change poses one of the greatest threats to global public health this century.

We acknowledge that actions to tackle climate change offer the opportunity to improve health outcomes.

Reducing emissions and pollution will help reduce the burden of respiratory and cardiovascular disease, which are very common conditions in our catchment population

Increasing access to active transport and strengthening our food systems will promote health and support improved mental health and well-being among our patients and our communities, as well as among staff and volunteers.

Western Health acknowledges that caring for the West, our patients, staff, volunteers, community and the environment means advocating for stronger measures to tackle climate change.

We support the action on climate change planned for this month, and while many staff who may wish to take part are on duty looking after our patients, we ask that our decision makers act now on climate change to protect human health and well-being.



Russell Harrison
Chief Executive
Western Health

Introduction

Western Health's environmental program includes:

Sustainability Committee

Environmental policy

Green Champions conducting voluntary action and research

Extensive, innovative, recycling programs

Environmental Management Roadmap 2015–2020

Communication channels for environmental sustainability

Local Sustainability Action Plans in departmental and clinical areas

An annual calendar of staff engagement events and campaigns

"Green Ward Competition" awarded annually for World Environment Day



A decorative graphic at the top of the page features a large, stylized rainbow with a gradient from purple to red to orange. Several white, 3D-style clouds are scattered across the scene, some appearing to be part of the rainbow's structure. The background is a soft, light pinkish-white.

This report provides an update on our progress toward achieving the goals we committed to in our Environmental Management Roadmap 2015–2020.

The specific aims of the Roadmap are to:

1. Align Western Health’s environmental sustainability priorities with the needs and expectations of patients, staff and its wider community.
2. Establish clear responsibilities and accountabilities for all staff at Western Health to move further into environmental sustainability and build a culture of corporate social responsibility.
3. Provide appropriate resources and training to staff to support and develop Western Health as an environmentally sustainable healthcare service.
4. Manage environmental resources responsibly and efficiently in an effort to reduce the impact of Western Health’s operations.
5. Connect broadly on issues of sustainable development to inform the direction and ‘greening’ in Western Health operations and services.

Progress against our aims and objectives

Aim 1: Align Western Health's environmental sustainability priorities with the needs and expectations of patients, staff and its wider community.

Western Health has become a Premiers Sustainability Award Finalist for the fourth time in a row in 2019. The award considers the Equipment Reissue Program for Hardship Program which re-homes potentially useful second-hand pieces of allied healthcare equipment. Over a six-month trial period, 87 items such as crutches, four-wheeled frames and shower chairs, were provided to patients who would have struggled to obtain them otherwise. Working not just within the health service but also with Rotary International, the program embodies the best of sustainability practice by helping disadvantaged patients while simultaneously making a significant contribution to reducing healthcare waste in a true circular economy initiative.

Combining staff and visitors wellbeing with a 'war on waste' Western Health pledged to provide water refill stations at all main entrances to its hospitals. This 'Choose Tap' initiative recognises that Melbourne's tap water is the best hydration choice for the environment, people's health and their hip pocket. Reusable water bottles were gifted to staff in an effort to encourage a migration away from unhealthy sugary drinks to improved hydration and wellness.

In December 2019, Western Health rolled out the Electronic Medical Record to improve the quality and safety of patient care. As well as having the most up-to-date and accurate information all in one place, the project has reduced paper usage by 50%, or 1,000 reams (2.5 tonnes) per month and the need for approximately 40 forms has been removed. Environmentally, this paper reduction is equivalent to approximately 720 trees and more than 400 kilolitres of water each year.

In June 2019, Western Health moved into its new Joan Kirner Women's and Children's Hospital on the Sunshine Hospital site. As an 'intelligent building' with a benchmark building management system, it is anticipated to maintain excellent energy efficiency. It includes features such as sensor lighting, double glazing and chilled beam technology for efficient thermal comfort.

Western Health continues to engage staff and provide opportunities for lively discussion and learning via the Healthcare Environmental Sustainability Forum, an annual event hosted in collaboration with the Climate and Health Alliance (CAHA) and Institute of Hospital Engineers Australia (IHEA).





Aim 2: Establish clear responsibilities and accountabilities for all staff at Western Health to move further into environmental sustainability and build a culture of corporate social responsibility.

Western Health undertook a revision of its (existing) theatre packs, in order to improve usability, prevent infection and achieving cost savings. This also presented an opportunity for waste minimisation. Seventeen packs were revised and four new packs created. By revising and creating a single procedure package, the project group were able to remove packaging associated with multiple extra components that would otherwise be added.

Collaborative Local Sustainability Action Plans were established in the following areas:

Clinical areas:

- Footscray Hospital - Ward 1 West
- Footscray Hospital - Day Patient Unit
- Williamstown Hospital Emergency Department
- Williamstown GEM Ward

Departments:

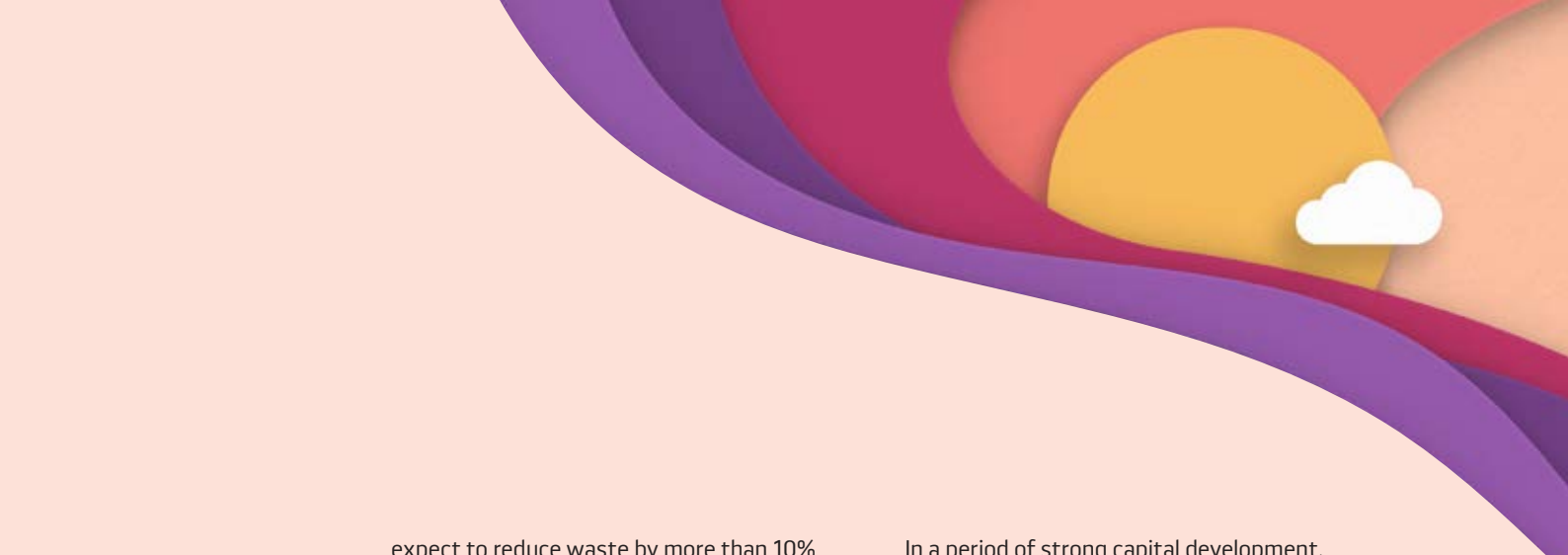
- Legal Services
- Electronic Medical Records (waste minimisation) Project
- Choosing Wisely in Radiology Department
- Western Health Cultural Diversity and Community (CDAC) Advisory Committee
- Joan Kirner Women's and Children's Recycle Rollout Project

Aim 3: Provide appropriate resources and training to staff to support and develop Western Health as an environmentally sustainable healthcare service.

Waste minimisation has remained a focus area that engages staff who are passionate about the environment. It is gratifying that staff are able to express their green values via projects and activities with the support of colleagues by establishing Local Sustainability Action Plans (LSAPs). These Plans are acknowledged with Western Health's Environmental Management Roadmap, giving them legitimacy and support. This year, Western Health has diverted a benchmark 32%, or 580 tonnes of waste from landfill to recycling.

In September 2018, Western Health (WH) commissioned Tandem Solutions to undertake a waste audit (24hr sample) of general waste generated across Western Health; all sites; clinical and non-clinical areas. The main issue identified was poor segregation of basic recyclables from landfill at the ward/department level. The quality of recycling being disposed of was found to be generally tolerable. With the assistance of DHHS funding, Western Health has begun to develop a multi-module e-learning tool that will support all staff to recycle correctly and will additionally improve recycling behaviours.

In FY18/19 Western Health successfully integrated polystyrene recycling and established an ice brick return / reuse program into the Pharmacy and Pathology Departments, with the assistance of its pharmaceuticals supplier. These projects



expect to reduce waste by more than 10% in these departments. Together with the electronic medical record (EMR) rollout, some 19.2 tonnes of polystyrene has been recycled in FY18/19. It is remanufactured locally into 'waffle pods', used to displace and stabilize concrete in the formation of housing slabs in the building industry.

Ice bricks were recorded to be 10% of the impact of the Pharmacy waste audit, due to their dense weight. Western Health worked with its pharmaceuticals supplier to develop a program which could return the bricks for cleaning and reissue them to Western Health, thereby diverting this waste from landfill. CH2 will provide a fortnightly pick up service using reusable collection containers from Sunshine Hospital (main issuer of ice bricks). It is estimated that this project diverts several tonnes of reusable waste from landfill each year.

Keeping recycling onshore ensures resilience that can buffer against global recycling markets. This is Western Health's preferred benchmark because when items are recycled locally, it creates local jobs and circular green economies.

Aim 4: Manage environmental resources responsibly and efficiently in an effort to reduce the impact of Western Health's operations.

Responding to changes in Victorian EPA Regulations, Western Health expanded its e-waste collection and recycling program beyond ICT, to all areas of the organisation. All electronic items (anything with a plug, a cord or batteries) is now collected in tubs throughout the organisation and responsibly recycled to contain potentially hazardous and valuable materials, for safe destruction and reuse.

In a period of strong capital development, Western Health strives to improve emissions per meter square floor space. Results show 6% improvement in energy efficiency since 2014/15.

The Joan Kirner Women's and Children's came online as Western Health's first 'intelligent building' in July 2019. This means providing a productive and cost-effective environment through optimisation of its structure, systems, services and management, and the interrelationship between them.

The new Footscray Hospital has moved into its 'design development' phase. Within this public, private partnership, Western Health is committed to delivering a building reflective of the Victorian Government's pledge towards Zero Net Carbon by 2050. This presents a formidable challenge, as hospitals remain some of the most energy hungry buildings in existence.

The Engineering Department has been pivotal in improving the environmental performance of plant within their capital replacement program. Two generators at Footscray Hospital and a chiller at Sunshine Hospital's Building A/B have significantly improved their energy efficiency. An extensive building management system upgrade has also been completed with Sunbury this year.

Western Health undertook to implement a funded Choosing Wisely Australia® Project, 'Guidelines on Diagnostic Imaging', to reduce unnecessary tests for particular diagnoses. Given the high cost and the potential for patient harm (e.g. radiation dose, contrast reactions), it is essential that radiation be used judiciously. The study also undertook to measure the energy associated with each that avoided radiological examination within the study, tallying results and offering analysis of the reduced environmental impact of the study.



**Western Health won the
2017 Premiers Sustainability
Awards for its Single Use
Metal Instruments (SUMI)
Recycling Program**

Aim 5: Connect broadly on issues of sustainable development to inform the direction and 'greening' in Western Health operations and services.

Western Health was delighted to engage in the development of the Stony Creek Naturalisation Project, as it has been actively engaged in planting the riparian zones that interface with the rear of Sunshine Hospital on National Tree Day in recent years. The rehabilitation of Stony Creek in Melbourne's Sunshine North is a flagship urban renewal project. It's transforming a concrete drain into a biodiverse wetland and community asset.

Staff and visitors to Western Health were encouraged to leverage the social, environmental and economic benefits that urban renewal projects can offer. Stony Creek came to fruition thanks to a partnership approach across government agencies and industry participants including City West Water, Melbourne Water, Brimbank City Council, Development Victoria, DELWP and Green Fleet.

When completed in 2019, the project will transform an area that was of little value into a sustainable green urban landscape with a natural creek environment, a path network and picnic areas.

This year Western Health worked with a local Product Designer, Sarah Ceravolo, to recycle high volumes of orange syringes that became obsolete in the transition to international standard (purple) enteral feeding syringes. Sarah was able to transform the high density polyethylene (HDPE) into beautiful designer cutlery for use by patients with limited dexterity. Using 3D printing for the design of mold and Precious plastics, a local plastics recycling outfit, the project was able to create the products using extrusion molding. 'Grip', the name of the exhibit, featured in the Wasteland exhibition as part of Melbourne Design Week 2019. With plastics making up approximately 30% of hospital wastes, the project stimulates innovative ideas around reusing plastics.




Targets

Table 1 offers an update on progress against targets set out in the Environmental Management Roadmap 2015–2020.

Table 1: Environmental targets in Western Health’s Environmental Management Roadmap 2015 – 2020.

Energy	Install solar electricity in new buildings, as roof space allows.	Western Health produced 953GJ of power from renewable energy sources in FY17-18. This is 0.45% of total energy.
	Reduce electricity consumption at Williamstown Hospital by 5% compared to 2014/15 baseline.	Energy consumption remains 5% below 2014/15 baseline.
	Return to 2014/15 energy efficiency /m2 floor space and in relation to activity at Sunshine Hospital, in the face of additional energy intensive services (by July 2016).	With the addition of the JKWCH in March 2019, total energy consumptions has risen by 9% overall.
	Return to 2014/15 energy efficiency /m2 floor space and in relation to activity in the face of additional energy intensive services (by July 2016) across Western Health.	Achieved. Energy per unit of floor space (GJ/m2) reduced by 6% from baseline 2014/15.



GHG	Reduce the greenhouse intensity of energy portfolio in operations compared to 2014/15 baseline by July 2020.	Achieved. Emissions per unit of floor space (kgCO ₂ e/m ²) reduced by 6.2% from baseline 2014/15.
Water	Increase harvested water volume and reuse by 5% in comparison to 2014/15 baseline.	Harvested water volume has increased by more than 5% in comparison to 2014/15 baseline (not fully measured). Water is used mainly on gardens, with some toilet flushing in Building A/B
	Improve water efficiency in relation to floor space and activity compared to 2014/15 baseline.	Water efficiency per Separation has reduced by 19% and 9.4% per OBD. in relation to floor space has remained constant.
Waste	Continue to increase diversion of waste from landfill by 2.5% per annum compared to 2014/15 baseline.	Recycling rate has increased by 10.6% since 2014/15 baseline. Total landfill has reduced by 14% and total waste per patient treated has reduced by 16%.
	Clinical Waste Segregation Education Package seen by 500 clinicians.	Achieved. Clinical Waste Segregation Education continued to be a part of the education of new and existing staff.
	5 Green Champion led projects registered in each Annual Green Ward Competition.	Not achieved in 2017-18
	Celebrate environmental calendar events annually: National Tree Day; World Environment Day (WED); Ride2Work Day; National Recycling Week.	Celebrated National Recycling Week and R2W Day in 2017-18.
	Decrease the volume of chemicals used in operations by 10% compared to 2014/15 baseline	Achieved in 2015/16 and continues to be sustained.
	Develop comprehensive Local Sustainability Action Plans in 25 business units (5 per FY).	LSAPs instituted in: <ul style="list-style-type: none"> - Legal Services - EMR (waste minimisation) Project - Choosing Wisely - Radiology Department - Western Health Cultural Diversity and Community (CDAC) Department - JKWCH Recycle Rollout Project
	Reduce the environmental impact of paper by 10% per FTE in relation to 2014/15 baseline by 2020.	Achieved. Copy paper reduction of 50% and retirement of 40 Forms with EMR this year.
	Develop Clinical Action Plans in 25 clinical areas (5 per FY).	LSAPs instituted in: <ul style="list-style-type: none"> - Footscray Hospital - Ward 1 West - Footscray Hospital - Day Patient Unit - Williamstown Hospital Emergency Department - Williamstown GEM Ward - Williamstown LWW

Environmental Impacts

As per the requirements for Victorian public health services, and in accordance with the Department of Health Policy and Funding Guidelines 2012-13, details are provided on the following environmental impacts:

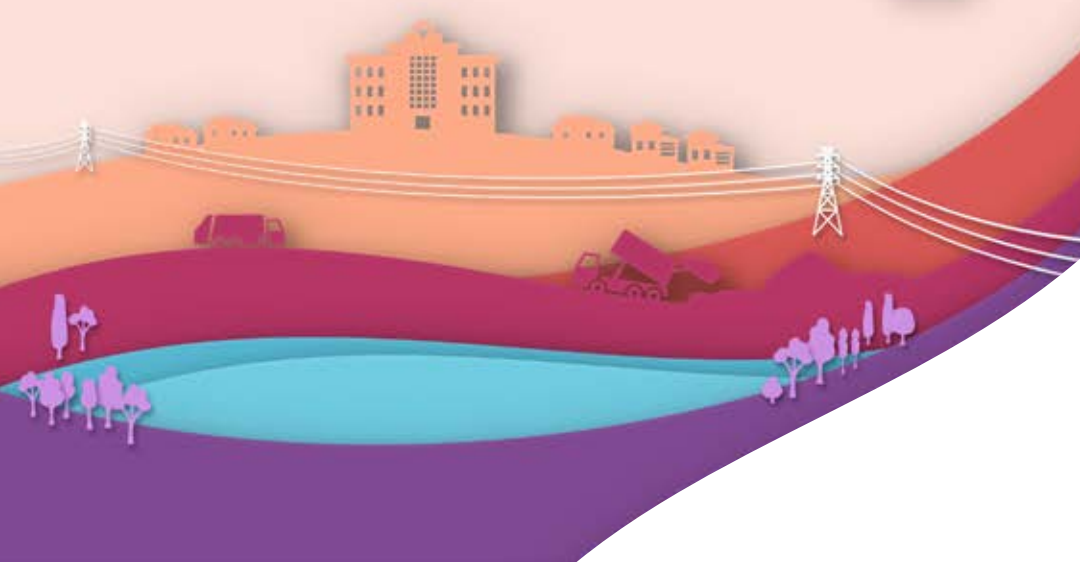
Greenhouse gas emissions
(Scope 1 & Scope 2)

Energy use

Water use

Waste generation

The reporting boundary used for greenhouse, energy, water and waste impacts in this report are for those operations and services where Western Health pays energy and fuel bills (all sites). This includes all Western Health services and extra utilities from services shared with other healthcare networks (Mercy / Royal Childrens Hospital and Melbourne Health share the delivery of mental health services onsite). This reporting boundary is in line with Western Health's National Greenhouse and Energy Reporting (NGER).

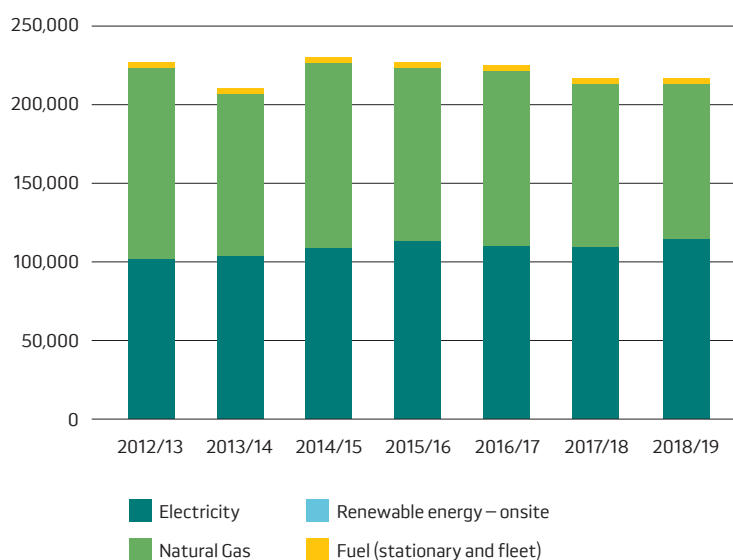


Energy use

Energy Consumption	Baseline							% change from baseline
Total energy consumption by energy type (GJ)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Electricity	103,545	104,845	107,840	111,976	108,825	108,025	115,982	105%
Renewable energy - onsite	56	58	63	59	85	912	953	
Natural Gas	119,523	102,013	117,040	110,240	112,912	102,245	97,643	83%
Fuel (stationary and fleet)	4,180	3,998	3,497	3,042	2,900	2,748	2,658	76%
Total gigajoules (GJ)	227,304	210,914	228,448	225,318	224,722	213,929	217,236	94%
Normalised energy consumption	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	95.1%
Energy per unit of floor space (GJ/m ²)	1.94*	1.80*	1.97*	1.95*	1.95	1.85	1.86*	95%*
Energy per unit of Separations (GJ/Separations)	2.08	1.90	1.98	1.84	1.71	1.54	1.54	76%
Energy per unit of (LOS+Aged Care OBD) (GJ/OBD)	0.67	0.63	0.68	0.67	0.63	0.59	0.58	85%

*Erratum in data reported in previous years. Correction as per EDMS data.

Total energy consumption by type (GJ)



Greenhouse gas emissions

Greenhouse gas emissions		Baseline						% change from baseline
Total greenhouse gas emissions (tonnes CO2e)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Scope 1	6,135	5,236	6,008	5,679	5,818	5,269	5,032	84%
Scope 2	34,227	34,075	36,093	36,054	33,765	33,341	34,473	96%
Total	40,362	39,311	42,100	41,734	39,583	38,610	39,505	94%
Normalised greenhouse gas emissions	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Emissions per unit of floor space (kgCO2e/m2)	350.55 *	341.40*	364.96*	361.78	343.14	334.48*	344.50*	94%
Emissions per unit of Separations (kgCO2e/ Separations)	369.47	353.67	365.02	340.76	301.16	278.60	278	76%
Emissions per unit of (LOS+Aged Care OBD) (kgCO2e/OBD)	118.95	116.87	126.15	123.26	111.65	106.34	107	85%

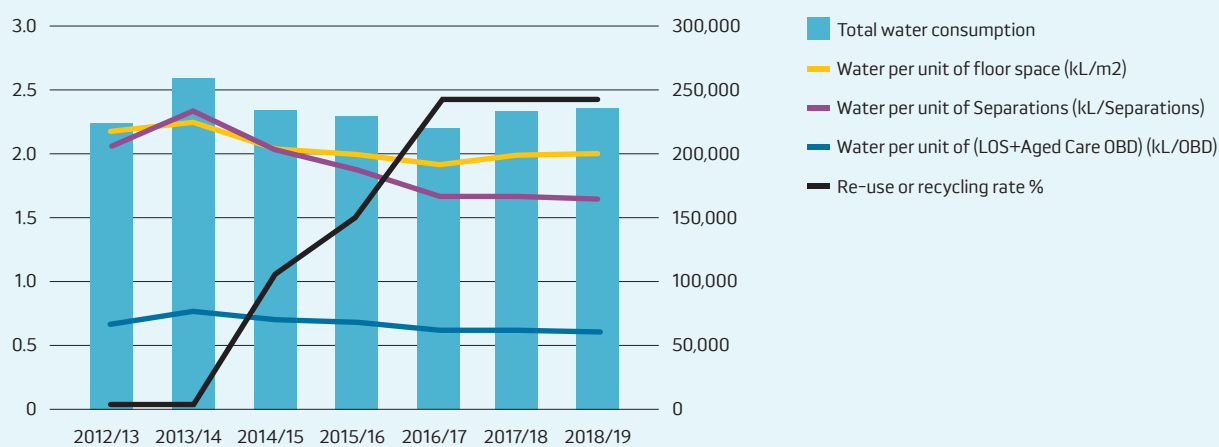
*Erratum in data reported in previous years. Correction as per EDMS data.

Water use

Water Consumption	Baseline							% change from baseline
Total water consumption by type (kL)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Class A Recycled Water	-	-	-	-	-	-	-	
Potable Water	219,185	253,835	229,160	222,189	218,461	223,634	228,849	100%
Reclaimed Water	4,781	4,871	2,607	3,636	5,233	5,499	5,502	220% improvement
Total	223,966	258,706	231,767	225,825	223,694	229,133	234,351	320%
Normalised water consumption (Potable + Class A)	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Water per unit of floor space (kL/m ²)	1.94*	2.20*	1.99*	1.93	1.83*	1.95*	1.99*	100%
Water per unit of Separations (kL/Separations)	2.05	2.33	2.01	1.81	1.66	1.61	1.61	81%
Water per unit of (LOS+Aged Care OBD) (kL/OBD)	0.66	0.77	0.69	0.66	0.62	0.62	0.62	91%
Water re-use and recycling	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2017/18	
Re-use or recycling rate % (Class A + Reclaimed / Potable + Class A + Reclaimed)	2.2%	1.9%	1.1%	1.6%	2.4%	2.5%	2.4%	222%

*Erratum in data reported in previous years. Correction as per EDMS data.

Total water consumed (kL) with normalisers



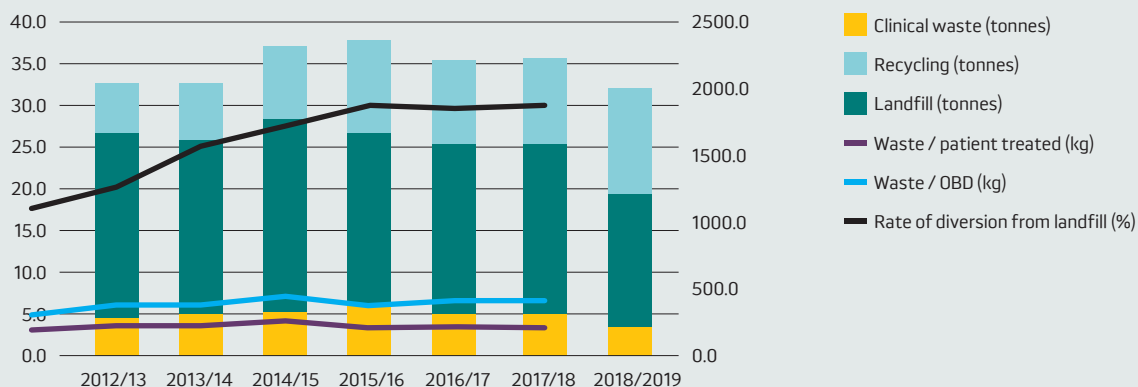
Waste generation

Waste	Baseline							% change from baseline
Waste type	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Clinical waste (tonnes)	278	297	317	376	336	336	338	106.6%
– CW Bagged (tonnes)	257	270	290	345	305	305	308	106.2%
– CW Sharps (tonnes)	21	28	27	31	31	31	29	107.4%
Landfill (tonnes)	1,380	1,309	1,444	1,290	1,359	1,358	1,244	86.1%
Recycling (tonnes)	367	430	546	558	554	570	604	110.6%
**Total waste to landfill generated (kg clinical waste+kg general waste)	1,658	1,606	1,761	1,666	1,695	1,695	1,582	89.8%
Total waste generation	2,025	2,036	2,307	2,224	2,249	2,265	2,171	
Normalised waste data	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
Waste /OBD(kg)	5.97	6.05	6.91	6.57	6.34	6.24	5.95	86.0%
Waste /patient treated (kg)	3.54	3.54	3.99	3.73	3.59	3.51	3.34	83.9%
**Total waste to landfill per patient treated ((kg clinical waste+kg general waste)/PPT)	2.90	2.79	3.04	2.80	2.71	2.63	2.42	79.5%
Rate of diversion from landfill (%)	21%	25%	27%	30%	29%	30%	33%	5.2%
Normalisers	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2017/18	
Aged Care OBD	10,203	17,012	-	-	-	-	-	
ED Departures	123,398	127,716	129,415	134,737	140,127	142,904	143,985	
LOS/OBD	329,114	319,362	333,738	338,586	354,517	363,068	367,683	
M2	103,012	115,091*	115,356*	113,356*	115,356	115,356	115,356	
Total patients treated	571,960	575,240	578,490	595,796	626,079	644,560	653,701	
Separations	109,245	111,150	115,337	122,473	131,435	138,588	142,033	

*Erratum in data reported in previous years. Correction as per EDMS data.

**New benchmarking data / indicator under Victorian Health and Human Services Building Authority's (VHHSBA) Environmental Data Management System (EDMS)

Waste generation and recycling (tonnes)



Together, caring for the West

westernhealth.org.au

Footscray Hospital
Gordon Street
Footscray VIC 3011
Locked Bag 2
Footscray VIC 3011
03 8345 6666

Sunshine Hospital
Furlong Road
St Albans VIC 3021
PO Box 294
St Albans VIC 3021
03 8345 1333

Sunshine Hospital
Radiation Therapy Centre
176 Furlong Road
St Albans VIC 3021
03 8395 9999

Western Centre for Health
Research and Education
Sunshine Hospital
Furlong Road
St Albans VIC 3021
03 8345 1333

Sunbury Day Hospital
7 Macedon Road
Sunbury VIC 3429
03 9732 8600

Williamstown Hospital
Railway Crescent
Williamstown VIC 3016
03 9393 0100

Drug Health Services
3-7 Eleanor Street
Footscray VIC 3011
03 8345 6682

Hazeldean Transition Care
211-215 Osborne Street
Williamstown VIC 3016
03 9397 3167



Western Health