

Sustainability Report

2017 / 2018



Western Health

Chief Executive Officer's Message

Each year our understanding of how our actions can reduce carbon matures as we strive to find more sustainable ways of delivering our services to the community.

This year saw our confidence grow as we adopted a leadership role in this space, while improving our quality of patient care, achieving financial savings and increasing our productivity and effectiveness. This report provides an update on our progress toward achieving the goals we committed to in our Environmental Management Roadmap 2015–2020.

I'm proud to say that our 'single use metal instruments' recycling program was selected as the winner of the Premier's Sustainability Awards 2017. We also received a bronze award for our environmental sustainability program in the International Hospital Federation Awards 2018 for Corporate Social Responsibility.

Our staff have driven our achievements. Dr Forbes McGain and colleagues published an article in the Lancet Planetary Health journal in January. They revealed that healthcare contributed seven per cent of Australia's total carbon footprint in 2014–15, and that hospitals and pharmaceuticals account for two-thirds of that.

Major projects this year included the installation of a large-scale solar system at Sunshine Hospital, completion of a three-year LED replacement program, and major upgrades at Footscray Hospital to improve energy efficiencies, as well as to our building management system that operates across

all sites. We also continued to provide opportunities for lively discussion and learning by holding the Healthcare Environmental Sustainability Forum in collaboration with the Climate and Health Alliance (CAHA) and Institute of Hospital Engineers Australia (IHEA).

Increasingly, we appreciate that practicing sustainable healthcare is broader than us. It requires us to work across the healthcare system and with a diverse range of partners. Doing this within available financial, social and environmental resourcing is something that we are starting to see take shape successfully through programs like our HealthLinks Integrated Care Program and the Chronic Disease Alliance.

Work like this and the targets we have met are all helping to address the challenges of improving health and wellbeing, and delivering high quality care now and for future generations. We certainly look forward to building on this further.



Russell Harrison
Chief Executive
Western Health

Introduction

Western Health's environmental program includes:

Sustainability Committee

Environmental policy

Environmental Management Roadmap 2015–2020

Extensive, innovative, recycling programs

An annual calendar of staff engagement events and campaigns

Communication channels for environmental sustainability

Local Sustainability Action Plans in departmental and clinical areas

Green Champions conducting voluntary action and research

"Green Ward Competition" awarded annually for World Environment Day





This Report provides an update on Western Health’s sustainability efforts during the 2017/18 financial year. These activities are guided by the 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.

In January, benchmark research by Western Health's Forbes McGain et al. was released in The Lancet's Planetary Health Journal. It found that the carbon footprint attributed to health care was 7% of Australia's total; with hospitals and pharmaceuticals the major contributors. Researchers quantified Australian carbon footprint attributed to health care and identified health-care sectors that could be ameliorated. Their results suggest the need for carbon-efficient procedures, including greater public health measures, to lower the impact of health-care services on the environment.

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.

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

Clinical:

- ✓ Radiotherapy Ward
- ✓ Plaster Clinic
- ✓ Renal Services
- ✓ Rotary Equipment Reissue Program
- ✓ Sleep Studies Unit

Departments:

- ✓ Corporate Records
- ✓ Library Services
- ✓ Renal Services
- ✓ Westside Lodge
- ✓ Ambulatory Cancer Services

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



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

Staff education has necessarily targeted the changed (reduced) recycling opportunities for staff via its Commingled Recycling collection bins. The directive, 'pantry products only', came via our waste management provider in response to global pressures from countries now unwilling to take these mixed recycling streams. This has had significant impact on volumes recycled in 2017/18, as commingled recycling constitutes ~50% of volume diverted from landfill to recycling at Western Health.

Most of the other 24 recycling streams operating at Western Health are recycled onshore. This is Western Health's preferred benchmark, because when items are recycled locally, it creates local jobs, closed loop recycling opportunities and green economies.

In this reporting cycle, Western Health has migrated all waste data into EdenSuite, the Victorian online environmental data management system (EDMS).

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

Energy consumption continues to reduce marginally year on year, 7% overall compared to 2014/15 baseline, and similarly in comparison square metres of floor space. The Engineering Department has been integral to this trajectory. Projects include:

- ✓ Completed install of 306kW solar electricity system and begun producing renewable energy at its Sunshine Hospital.
- ✓ Motor upgrades to 3 lifts at Footscray has reduced the energy consumed in their operation by up to 80%
- ✓ Replacement of 30 steam coils in Footscray's South Block with heated hot water (HHW) coils now provides more energy efficient heating and air flow.
- ✓ Replacement of 3 refrigerated AHU's at Footscray (4th floor) has improved comfort and energy efficiency.
- ✓ Upgrade to underground pipework has been attended to proactively avoids leaks, which tend to lose large volumes of water in the process of them being identified.
- ✓ New Chiller at Footscray has improved efficiency and is reducing the use of cooling towers (water).
- ✓ LED lighting rollout has persisted across Footscray Hospital within business as usual activities.
- ✓ Significant upgrade to the building management system (BMS, all sites) offers more accurate control on cooling and heating, monitoring and valves. This in turn leads to reduced resource consumption.

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

Western Health's Healthcare Environmental Sustainability (HES) Forum was delivered in partnership with the Climate and Health Alliance (CAHA) and the Institute of Healthcare Engineering Australia (IHEA) again in May.

Keynote speaker, David Pencheon, Director of UK National Health Service's (NHS) Sustainable Development Unit (SDU) brought inspiring stories from his 10 years of experience, showing that risks can be reduced, money saved, health improved, and resources diverted from wasteful and unsafe practices to direct beneficial and sustainable healthcare.

The Forum provided an opportunity for sharing knowledge from David's experience and provided an opportunity for health service leaders to reflect on sustainability in their roles and contemplate further opportunities to work towards greater sustainability in healthcare.

It is confronting to realise that the focus on environmentally sustainable practices and green initiatives will be insufficient on its own to address the problems at hand. There are many challenges in providing less care, less intensive care & less intensive settings. However, within these rich dialogues, Western Health is better placed to incorporate a 'triple bottom line' (financial, social and environmental) perspective.

Sustainable healthcare levers can be recognised in the innovative and collaborative programs Western Health has developed in recent years.

- Healthlinks and the Chronic Disease Alliance demonstrate the principles of prevention, patient empowerment and integrated care.
- Electronic medical record (EMR) project reduces duplication and minimises waste and creates efficiency throughout operations.

Targets

Over the strategic period 2015–2020, Western Health is striving to maintain a steady flow of energy efficiency projects to offset impacts associated with completed and new capital works. Generally, the services added in recent years have increased the energy intensity of our operations. However, Western Health is holding ground with projects attended above and an increasing amount of supplemental renewable energy within operations.

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.	315kW solar electrical installation at Sunshine Hospital completed December 2017. ASB not turned on due to cladding issue and risk of fire.
	Reduce electricity consumption at Williamstown Hospital by 5% compared to 2014/15 baseline.	WT remains on track with 3% reduction compared to 2014/15 as a result of LED lighting retrofit. Developing plant inefficiencies are impacting overall energy balance here to some extent, however these are being addressed by Engineering Department.
	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).	Target revised to embrace the whole of Western Health due to the changing service / bed dynamics at Sunshine and Footscray Hospitals (Moving House etc.). August 2018: Stationery energy has reduced by 2.13% compared to FY16/17 consumption
	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.	Stationery energy consumption has reduced by 7% overall in comparison to 2014/15 baseline, and similarly in comparison M2 floor space. Energy Efficiency has improved 22% in relation to activity (Separations)

GHG	Reduce the greenhouse intensity of energy portfolio in operations compared to 2014/15 baseline by July 2020.	Greenhouse intensity of energy portfolio in operations is 92% compared to 2014/15 baseline.
Water	Increase harvested water volume and reuse by 5% in comparison to 2014/15 baseline.	Harvested water is increased by 1.4% since the baseline year of 2014/15
	Improve water efficiency in relation to floor space and activity compared to 2014/15 baseline.	Compared to 2014/15 baseline; water consumption has decreased by 2.4% overall; by 4.4% per M2 floor space and by 20% per Separation (activity).
Waste	Continue to increase diversion of waste from landfill by 2.5% per annum compared to 2014/15 baseline.	In the FY16/17 recycling volumes experienced a significant reduction in the vicinity of 20% to below the 14/15 baseline. Note: WH has adjusted the baseline of all waste data in accordance with DHHS guidelines. See Waste section below.
	Clinical Waste Segregation Education Package seen by 500 clinicians.	Clinical Waste Education received by 100 clinicians in 2017/18.
Greening	5 Green Champion led projects registered in each Annual Green Ward Competition.	5 Projects were entered in the Green Ward Competition in 2016/17. The winner was WH Plaster Clinic's <i>Soft Splints Reissue Program</i> .
	Celebrate environmental calendar events annually: National Tree Day; World Environment Day (WED); Ride2Work Day; National Recycling Week.	Healthy Hospitals; Healthy Planet Forum was held on May 22nd at WCHRE this year, hosting David Pencheon, Director of the NHS Sustainability Unit as keynote speaker. National Tree Day saw 40+ staff plant 300 natives on 17th August at Westside Lodge.
	Decrease the volume of chemicals used in operations by 10% compared to 2014/15 baseline	Complete in 2015/16 with contract renewal. Improvements maintained throughout 17/18.
	Develop comprehensive Local Sustainability Action Plans in 25 business units (5 per FY).	5 Local Sustainability Action Plans developed: <ul style="list-style-type: none"> – Library Services – Corporate Services – Westside Lodge – Renal Services – Ambulatory Cancer Services
	Reduce the environmental impact of paper by 10% per FTE in relation to 2014/15 baseline by 2020.	Multifunction device (MFD) contract renewal was developed to include 'Follow Me Printing' option, however no priority or progress has manifest within the scope of contract award.
	Develop Clinical Action Plans in 25 clinical areas (5 per FY).	5 Local Sustainability Action Plans developed: <ul style="list-style-type: none"> Dialysis Units: <ul style="list-style-type: none"> – Footscray – Sunshine – Williamstown x 2 – Sunbury Sleep Studies Unit

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

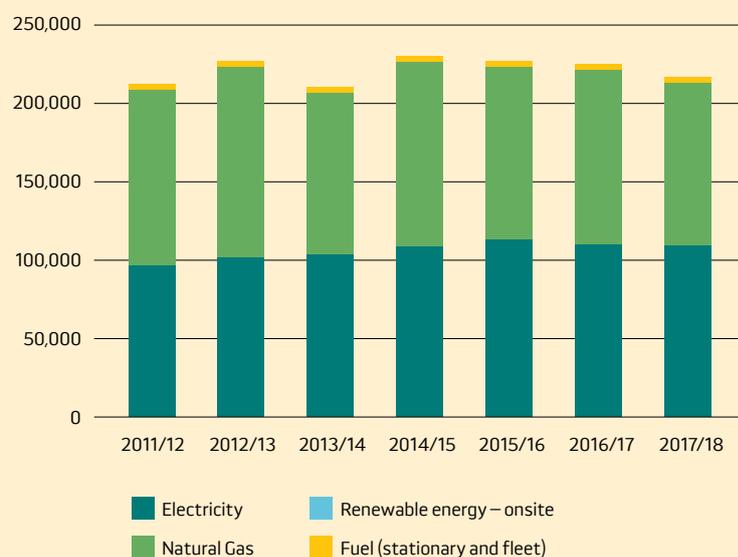
The reporting boundary used for greenhouse, energy, water and waste impacts in this report are for those operations and services where Western Health pays energy and fuel bills (all sites). This includes all Western Health services and extra utilities from services shared with other healthcare networks (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)	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	
Electricity	98,456	103,545	104,845	107,840	111,976	108,825	108,025	100%
Renewable energy - onsite	41	56	58	63	59	85	912	
Natural Gas	111,086	119,523	102,013	117,040	110,240	112,912	102,245	87%
Fuel (stationary and fleet)	3,351	4,180	3,998	3,497	3,042	2,900	2,748	79%
Total gigajoules (GJ)	212,934	227,304	210,914	228,440	225,318	224,722	213,929	94%
Normalised energy consumption	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	
Energy per unit of floor space (GJ/m ²)	2.35	2.21	1.83	2.00	1.98	1.95	1.85	93%
Energy per unit of Separations (GJ/Separations)	1.90	2.08	1.90	1.98	1.84	1.71	1.54	78%
Energy per unit of (LOS+Aged Care OBD) (GJ/OBD)	0.55	0.67	0.63	0.68	0.67	0.63	0.59	86%

Total energy consumption by type (GJ)



Greenhouse gas emissions

Greenhouse gas emissions				Baseline				% change from baseline
Total greenhouse gas emissions (tonnes CO2e)	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	
Scope 1	5,702	6,135	5,236	6,008	5,679	5,818	5,269	88%
Scope 2	33,092	34,227	34,075	36,093	36,054	33,765	33,341	92%
Total	38,794	40,362	39,311	42,100	41,734	39,583	38,610	92%
Normalised greenhouse gas emissions	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	
Emissions per unit of floor space (kgCO2e/m2)	428.80	391.82	340.38	368.32	361.78	343.14	334.70	91%
Emissions per unit of Separations (kgCO2e/Separations)	345.42	369.47	353.67	365.02	340.76	301.16	278.60	76%
Emissions per unit of (LOS+Aged Care OBD) (kgCO2e/OBD)	100.52	118.95	116.87	126.15	123.26	111.65	106.34	84%

Water use

Water Consumption	Baseline							% change from baseline
Total water consumption by type (kL)	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	
Class A Recycled Water	-	-	-	-	-	-	-	
Potable Water	214,153	219,185	253,835	229,160	222,189	218,461	223,634	97.6%
Reclaimed Water	4,974	4,781	4,871	2,607	3,636	5,233	5,499	111% improvement
Total	219,127	223,966	258,706	231,767	225,825	223,694	229,133	89%
Normalised water consumption (Potable + Class A)	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	
Water per unit of floor space (kL/m ²)	2.42	2.17	2.24	2.03	1.93	1.89	1.94	95.6%
Water per unit of Separations (kL/Separations)	1.95	2.05	2.33	2.01	1.81	1.66	1.61	80%
Water per unit of (LOS+Aged Care OBD) (kL/OBD)	0.57	0.66	0.77	0.69	0.66	0.62	0.62	89%
Water re-use and recycling	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	
Re-use or recycling rate % (Class A + Reclaimed / Potable + Class A + Reclaimed)	2.3%	2.2%	1.9%	1.1%	1.6%	2.4%	2.5%	

Total water consumed (kL) with normalisers

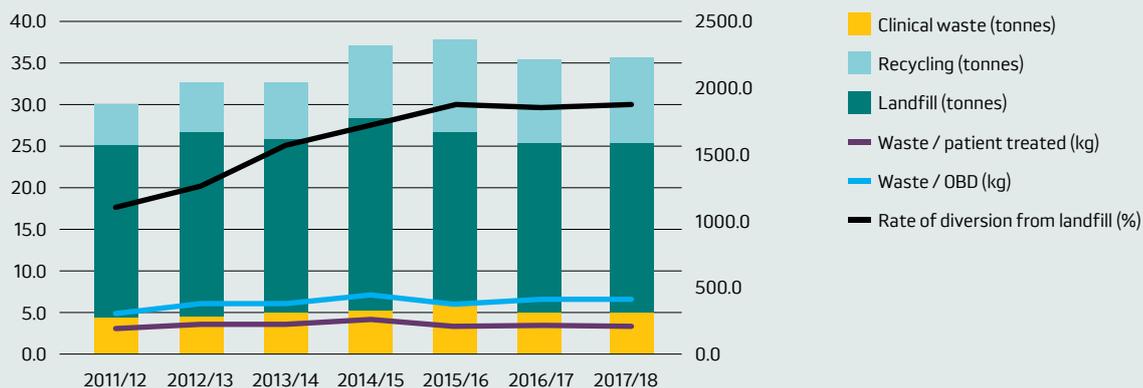


Waste generation

Waste	Baseline							% change from baseline
Waste type	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	
Clinical waste (tonnes)	268	278	297	317	376	336	336	100%
– CW Bagged (tonnes)	241	257	270	290	345	305	305	100%
– CW Sharps (tonnes)	27	21	28	27	31	31	31	100%
Landfill (tonnes)	1,297	1,380	1,309	1,444	1,290	1,359	1,358	100%
Recycling (tonnes)	293	367	430	546	558	554	570	103%
*Total waste to landfill generated (kg clinical waste+kg general waste)	1,565	1,658	1,606	1,761	1,348	1,695	1,695	
Total waste generation	1,858	2,025	2,036	2,307	1,905	2,249	2,265	
Normalised waste data	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	
Waste /OBD(kg)	4.81	5.97	6.05	6.91	5.63	6.34	6.24	90%
Waste /patient treated (kg)	3.01	3.54	3.54	3.99	3.20	3.59	3.51	88%
*Total waste to landfill per patient treated ((kg clinical waste+kg general waste)/PPT)	2.53	2.90	2.79	3.04	2.26	2.71	2.63	86%
Rate of diversion from landfill (%)	18%	21%	25%	27%	30%	29%	30%	3% improvement
Normalisers	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	
Aged Care OBD	36,954	10,203	17,012	-	-	-	-	
ED Departures	120,013	123,398	127,716	129,415	134,737	140,127	142,904	
LOS/OBD	348,973	329,114	319,362	333,738	38,586	354,517	363,068	
M2	90,471	103,012	115,491	114,305	113,624	115,356	115,356	
Total patients treated	618,251	571,960	575,240	578,490	595,796	626,079	644,560	
Separations	112,311	109,245	111,150	115,337	122,473	131,435	138,588	

*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

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Footscray VIC 3011
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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