

South West Healthcare

Environmental Sustainability Report 2019-20

Over half of all bottles and cups end up in landfill or as litter

Be Healthy

Less Plastic

CHOOSE TAP

South West Healthcare | wannowater | CHOOSE TAP

The infographic features a blue background with three water droplets. The largest, dark blue droplet on the left contains the text 'Over half of all bottles and cups end up in landfill or as litter'. A smaller yellow droplet in the center contains 'Be Healthy'. A light blue droplet on the right contains 'Less Plastic'. The 'CHOOSE TAP' logo is positioned in the top right. At the bottom, logos for South West Healthcare, wannowater, and CHOOSE TAP are displayed.

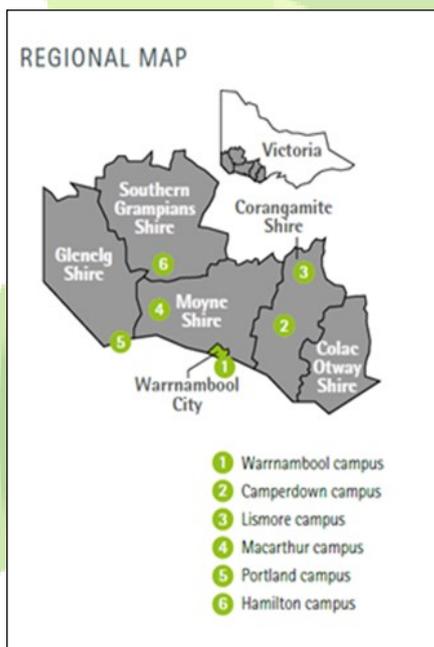


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About South West Healthcare

South West Healthcare (SWH) is the largest sub-regional health service in Victoria; providing acute, mental health, rehabilitation, and aged care together with an extensive range of primary and community health services across the south west catchment. Public clinical mental health services for community members of all ages operate out of offices in Warrnambool, Camperdown, Portland and Hamilton. Community Health Centres at Warrnambool, Camperdown, Lismore and Macarthur and an adult day centre in Camperdown provide services and programs to support the locals in their community, enabling them to maintain their health and prevent illness and chronic disease. With a total of 282 beds (216 acute, 36 aged care and 30 mental health), located across two public hospitals Warrnambool Base Hospital and Camperdown Hospital and Aged Care Facility, and the Prevention and Recovery Centre Ngootyoong, the organisation is a major specialist referral centre for the Barwon South West sub-region. To support these patient services, South West Healthcare has commercial kitchens at two sites, two cafes at Warrnambool, a commercial laundry, supply and maintenance departments, tenancies and a range of smaller dwellings (i.e. Rotary house and medical student accommodation).



Front Cover Images

The front cover provides some images of sustainability-related activity within South West Healthcare during 2019-20(clockwise from top).

1. A custom Choose Tap poster was created to reflect the dual health and environmental goals associated with the installation of permanent water fountains in our Warrnambool Community Health Building. The project was undertaken with the support of Wannon Water.
2. Green Ambassador and Deputy Director of Pharmacy Gavin Flett (right) with Director of Pharmacy Lisa Spence (left) with the new Pharmaceutical waste bins (see story on page 5).
3. Building and Infrastructure Manager Stuart Blignaut (left) with Plumber Alan Bidmade (right) in front of the new bypass hot water heating system (see story on page 3).

About this report

This document contains Southwest Healthcare’s (SWH) environmental performance data as it relates to energy and water usage, waste production and the generation of Greenhouse Gas (GHG) Emissions. This report details performance against a standard, industry-wide set of metrics across the reporting period covering the financial year 2019-20. Energy and Water consumption totals for SWH include all SWH sites, while reported waste production totals relate to the SWH Warrnambool and Camperdown Hospitals. SWH recognizes the importance and value of all sustainability activity at all SWH campuses, and in future years hopes to capture ore of this work through extended capture of waste recycling activity to other key sites and to additional measures of environment performance including Medical Gases and Refrigerant usage.

Energy and Water performance data is compared to data collected since 2014-15, the designated baseline year for Regional Health Services public environmental reporting. Greenhouse Gas Emissions are calculated by the Victorian Health and Human Services Building Authority (VHHSBA) Environmental Data Management System (EDMS). Data assurance for this report has been achieved internally according to the *Department of Health’s Environmental Reporting Guidelines 2015-16*. Data provided within this report is normalised using indicators relevant to the healthcare sector, occupied bed days (OBD) and area (m2). These normalised figures provide the most accurate evaluation of environmental performance in the context of changes to service provision. compared with prior years.

In response to Victorian Government directives regarding COVID-19, a reduction in non-emergency surgical services across all health services was implemented in order manage risks and potential influxes of service demand. Public movement restrictions and risk averse actions by the community during COVID-19 has also contributed to lower OBD numbers during 2019-20 at SWH.

Sustainability Activity at SWH is guided by the SWH Environmental Management Plan (EMP) and in 2019-20, the *2020-2024 EMP* was developed by the Sustainability Committee in consultation with staff and the Consumer Advisory Committee Advisory. The *2020-2024 EMP* actions align with priority areas of the *VHHSBA Environmental Sustainability Strategy 2019-20—2022-23*. This Strategy sets out the Department of Health and Human Services’ (DHHS) commitment to further improve the environmental performance of the health system and to adapt the health system so it is resilient in the face of climate change. As demonstrated on page 4, the range of sustainability initiatives implemented to date at SWH are having a cumulative impact on the reduction of emissions into the environment and SWH recognize that this work is an integral part of being a health promoting agency.

Glossary

Throughout this report the following key terms are used:

Area (m2): Total building floor area (excluding car parks) – metres squared (m2) of South West Healthcare.

Occupied bed days (OBD): Inpatient bed days as reported through the Victorian Admitted Episodes Dataset (VAED) and the number of residential aged care bed days for the reporting period reported to the Department of Health’s Aged Care Branch.

	Area (m2) 2014-15 to 2016-17	2014-15 OBD	2015-16 OBD	2016-17 OBD	Area (m2) from 2017-18	2017-18 OBD	2018-19 OBD	2019-20 OBD
Warrnambool Base Hospital	38,878	53001	53470	60,124	38,878	60,543	62,764	61,760
Camperdown Hospital & Aged Care Facility	5,255	16,279	14,140	15,186	5,255	15,653	15,695	13,136
South West Healthcare Total	58,285	69,280	67,610	75,310	59,635	76,196	78,459	74,896

Scope 1 Emissions: Point source emissions including all emissions produced onsite that are material (>5%) to the operations and services of South West Healthcare. These include fleet transport fuel, gas and diesel consumption.

Scope 2 Emissions: Indirect emissions from the generation of peak and off peak electricity purchased and consumed by South West Healthcare are produced by the burning of fuel (coal) at the power station.



Overview: A 3.2% decrease in energy usage was achieved in 2019-20 in comparison to 2018-19. Possible contributing factors included the impact energy efficiency initiatives such as the SWH Linen Hot Water Bypass project (see story and Figure 1 below), renewable energy projects and maintenance programs. In line with targets set in the *SWH Environmental Management Plan 2020-24*, continual decreases in consumption were recorded across all energy sources with the exception of Natural Gas, and these are summarised in Table 1, with percentage changes given to the year prior. Although LPG gas consumption has a relatively low contribution to overall energy use, our smaller campuses have been reliant on this energy source for heating and hot water. The impact of this energy usage is indicated in Table 2 which provides a summary of Greenhouse Gas (GHG) Emissions with normalised figures.

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	% Change
Total Electricity MWh	6,916	7,636	7,806	7,768	7,631	7,011	8% ↓
Total Electricity (GJ)	24,897	27,489	28,103	27,697	27,473	25,241	8% ↓
Natural Gas (GJ)	49,398	46,327	45,644	44,114	37,389	38,038	1.7%↑
Liquid Petroleum Gas (GJ)	-	-	210	173	198	193	2.5% ↓
Fleet Transport (GJ)	6,853	7,288	6,572	6,503	8,060	7,292	9.5% ↓
Total Energy Usage (GJ)	81,149	81,110	80,530	78,561	73,120	70,764	3.2% ↓
Solar Production (GJ)*					59	858	

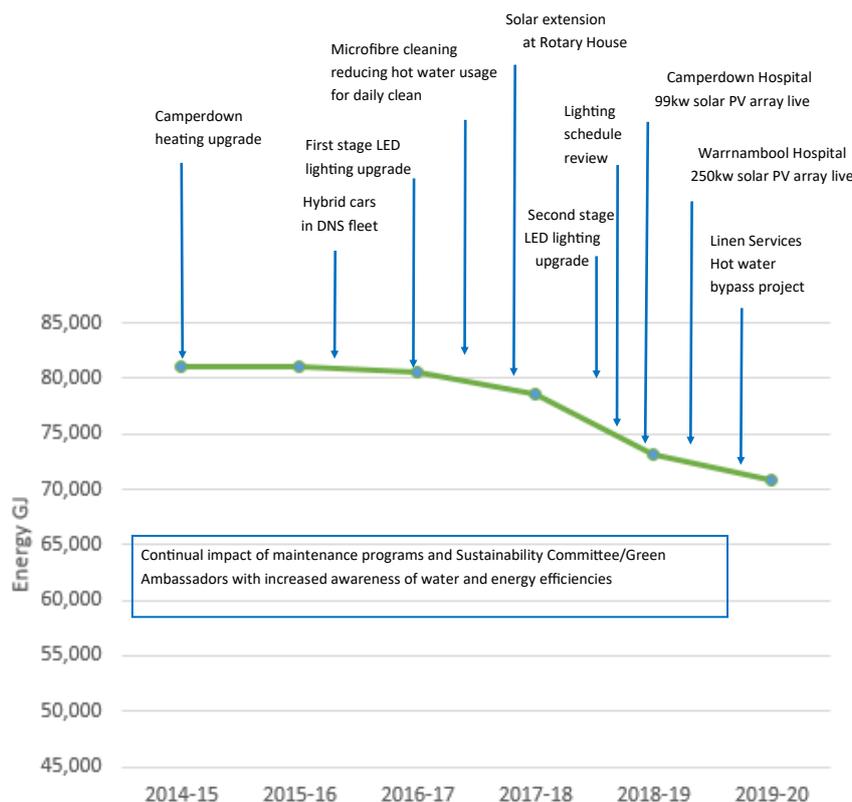
Table 1: Energy Usage at South West Healthcare

*Camperdown Hospital Solar Array began generating power in April 19 and Warrnambool Hospital Solar Array in September 19 meaning comparisons year on year will only be possible in 2021-22.

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Scope 1 – direct (tCo2e)	2,725	2,613	2584	2504	2149	2473
Scope 2 – indirect (tCo2e)	8,161	8,628	8509	8309	8166	7151
Total Emissions (tCo2e)	10,886	11,241	11,093	10,813	10,315	9,624
Emissions (kgCO2e)/OBD	157.12	166.27	147.30	141.91	131.47	128.49
Emissions (kgCO2e)/m2	241.45	192.87	190.32	181.3	172.96	161.38

Table 2: Greenhouse Gas (GHG) Emissions for South West Healthcare

Figure 1: Total Energy Usage (GJ) highlighting impact of key interventions over time



Transforming the system of hot water supply to the SWH Laundry, was one of the 8 successful SWH projects that recently received Victorian State Government funding in 2020, to support the reduction of emissions in the healthcare sector. Stuart Blignaut, Building and Infrastructure Manager and SWH Plumber Alan Bidmade, initiated an investigation into the capability of heating water in-line on demand in a push through system, rather than holding the water heated at 60°Celsius for 24 hours per day, for 6 days per week in the 5,000L laundry hot water tank. Stuart estimated that keeping water heated in the tank required an estimated 990GJ of energy annually, the equivalent of 51,000kg CO2e. Through this bypass modification, only a fraction of the energy is used to deliver hot water to the laundry. This project will lower emissions and reduce hot water heating costs by an estimated \$11,000 annually.





Overview: Total water consumption across South West Healthcare increased in 2019-20 and this is summarised in Table 3. Various factors could be attributed to the increase in recorded water usage. Increased frequency and length of handwashing practices occurred in response to the COVID-19 pandemic, and a Friday flushing program for low water use taps commenced in July 2019 in response to changing legislation around legionella testing in water pipes.. Two water leaks also occurred at the Warrnambool Campus causing peaks in two months. Finally, work occurred to repair and reinstate an irrigation system to the Warrnambool Campus front gardens. A water focused project was undertaken in 2019-20, aiming to decrease the waste and manual handling issues associated with bottled water dispensers used in public access areas at South West Healthcare (see story below).

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	% change
Potable water usage (kL)	59,916	63,917	57,692	60,508	56,020	66,217	18% ↑
Rainwater/re-use water**	12,000	12,000	12,000	12,000	12,000	12,000	-
Total Water Usage	71,916	75,917	69,692	72,508	68,020	78,217	15% ↑
Water usage (kL/OBD)	1.04	1.05	0.93	0.95	0.87	1.04	19.5% ↑
Water usage (kL/m2)	1.23	1.30	1.20	1.22	1.14	1.31	15% ↑
% Rainwater / Reuse rate	16.7%	15.8%	17.2%	16.6%	17.64	15.3%	2.3 ↑

Table 3: Water Usage for South West Healthcare

**estimated volume

South West Healthcare was gifted two drinking water fountains by Wannon Water. In many public locations around the Warrnambool Base hospital, drinking water is provided to consumers by bottled water units with disposable single use plastic cups. In addition, patrons are actively discouraged from refilling personal water bottles with water from these units. The Sustainability Committee identified the installation of water fountains as a project with both environmental and health benefits. Messaging was developed in collaboration with Wannon Water to align with key SWH health promotion messages of choosing water as the easiest and healthiest choice, and providing this without the associated waste to landfill generated by disposable cups. An investigation commenced into high use drinking fountains around the site, that had capacity to be plumbed into water infrastructure. An estimated 7,000 cups per year were identified as used from two eligible dispensing units located in our Primary and Community Health Building at Warrnambool.



Overview: The reporting of waste data across health services became mandatory in 2017-18, and has enabled SWH to compare waste totals by stream for activity at Warrnambool and Camperdown campuses. Waste is recorded by contractor primarily by volume and to a lesser extent weight, and this creates ongoing difficulties in evaluating targets for reducing waste to landfill. The *Victorian public health services waste reporting tool: version 2.01* has been integrated into the EDMS since 2017-18. This tool has attempted to overcome these anomalies of reporting, by providing standardised estimates of weights for key bin types and waste streams. The waste stream totals shown in Table 4 (overleaf) are developed with these estimates. Where an actual weight was known, these are used in preference to the estimated totals.

In line with targets in the *SWH Environmental Management Plan 2020-24*, continual reductions in waste to landfill were achieved. A 6% decrease in waste to landfill recorded in 2019-20 compared to 2018-19 was recorded. Clinical waste totals increased slightly in 2019-20, reflective of increased personal protective equipment (PPE) used in relation to treating patients during the current Coronavirus pandemic. Rates of recycling were increased for 6 key recycling streams, with increases in battery, cardboard, e-waste, garden organics, paper recycling and PVC recycling and toner/printer cartridge recycling streams. The continued volatility in National Recycling Markets impacted primarily on the soft plastics collection, which has continued to be diverted to landfill. Two highlights of 2019-20 include 9 Green Ambassadors/Sustainability Committee Members attending the DHHS Waste In Healthcare Regional Workshop, with significant flow on effects for reviewing waste practices in their work areas and the introduction of new pharmaceutical waste processes related to the disposal of scheduled medications (See story overleaf).



Green Ambassador and Deputy Director of Pharmacy, Gavin Flett, has been working as part of a small team (including Lisa Spence, Director of Pharmacy, Steph Hughes, Clinical Product Advisor and Elvira Hewson, Environmental Sustainability Officer), to improve the disposal of pharmaceutical waste at South West Healthcare. Lisa Spence and Gavin Flett are pictured with the new Drug Waste Bins and Daniels Pharmaceutical Bins. Until recently, there have not been suitable pathways available to dispose of S4D and Schedule 8 medications (drugs of dependence) that meet both requirements of the Drugs, Poisons and Controlled Substances Act and EPA/DHHS regulations. Staff have had the option of either flushing these substances down the sink, or placing them in clinical sharps waste in order to render them irretrievable and unrecognisable. As clinical sharps waste is not incinerated, the active ingredients of these drugs remain unchanged and enter the soil through landfill. With the introduction of new Drug Waste Bins and Daniels Pharmaceutical Bins, there is the capacity to meet all requirements, and in the process ensure drugs of dependence and antibiotics are not entering waterways or soil in landfill sites.

Waste by type (kg)			
	2017-18	2018-19	2019-20
General (inc. sanitary) ***	325,228	295,298	276,419
General waste (kg/ OBD)	4.27	3.76	3.63
Clinical waste incinerated	4,397	4,218	4,365
Clinical waste sharps	4,961	4,785	4,413
Clinical waste treated	61,351	70,643	71,751
Total Clinical Waste	70,710	79,647	80,520
Clinical Waste (kg / OBD)	0.93	1.01	1.075
Recycling—batteries	329***	334.8***	913
Recycling—cardboard	58,410	66,797	77,218
Recycling—comingled	54,789	45,128	42,330
Recycling—e-waste	1565***	771***	1720
Recycling—metals	226	2520	720
Recycling—garden organics	919	682	819
Recycling—FOGO	n/a	4368	n/a
Recycling—Little Blue Towels	n/a	224	120
Recycling—PVC (IV Bags, Oxygen masks and tubing)	278***	357***	419***
Recycling—packaging plastics and films	3,843	n/a	n/a
Recycling—paper (confidential and other)	16,114	13,659	13,920
Recycling—sterilisation wraps	515***	10,158	4,668
Recycling—toner and print cartridges	116	139.62	127.3
Total Recycling	137,104	147,534	142,974
Recycling waste (kg/OBD)	1.80	1.88	1.91
Percentage of recycling to landfill/clinical**	35%	39%	28.6%

Table 4: Overview of key waste and recycling streams.

*** the general waste at Warrnambool campus is a known weight, and this figure used in preference to the estimate of the waste reporting tool. This figure is significantly less than that generated by the Waste Reporting Tool. This has the biggest impact when considering the percentage of recycling to landfill and clinical waste, which is probably closer to 20%. When available, known weights are used in preference to estimates generated using the Waste Working Tool for any recycling stream.

Sustainability highlights at a glance

Significant environmental benefits of key projects and strategies have helped to reduce negative environmental impacts and also operational costs. This summary infographic highlights that the process of embedding sustainability into all areas of South West Healthcare is a journey and that a significant start has been made.

2020 - 2024 SWH Environmental Management Plan

Laundry hot water bypass project



Pharmacy medication disposal project creating environmentally sustainability waste disposal pathways



3 hybrid cars introduced to general fleet for trial



9 Green Ambassadors attend DHHS Waste in Healthcare Workshop with reviews in work areas to improve recycling



4900 LED lights installed

Water saving shower heads installed at Warrnambool and Camperdown Hospitals resulting in savings of over 10,000L / day



343 kW solar panels installed across Rotary House, Camperdown and Warrnambool Hospitals

An additional 4,000kL water captured from Sterilisers and RO plant annually for re-use with rainwater for the toilet flushing system at Warrnambool.



14 Recycling Streams, including new collections of alkaline batteries, KIMGUARD, Little Blue Towels and Food Organics and Green Organics (FOGO).

2017-19 SWH Environmental Management Plan



Environmental Sustainability Committee and email network of 75 SWH Green Ambassadors. Member of the Global Green and Healthy Hospitals Network.



KEEPCup campaign, reducing 13,000 disposable coffee cups in first year



8 Hybrid Camrys in District Nursing Fleet



Ride to work day



Establishment and maintenance of donor-funded Rehab / GEM therapy garden

For more information or to provide feedback about Sustainability Programs at South West Healthcare contact the Environmental Sustainability Officer.

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