



**Environmental Sustainability Report  
2014-16**

## INTRODUCTION

This document contains the environmental performance data of South West Healthcare (SWH) as it relates to energy and water usage, waste production and generation of greenhouse gas emissions (GHG). This report compares the performance against a standard, industry wide set of metrics across a two-year reporting period covering the financial years of 2014-15 and 2015-16.

The 2014-15 reporting period has been designated as the baseline year for Regional Health Services' public environmental reporting requirements in the Department of Health *Policy and Funding Guidelines 2013-14*. Consumption and performance data for this baseline reporting period has been generated for SWH's two main sites: the Warrnambool Base Hospital (inclusive of Community Health and Mental Health facilities) and the Camperdown Hospital and Aged Care facility.

Importantly, the 2015-16 reporting period represents a transition year for South West Healthcare. This is the first year data has been provided for all sites and property owned by South West Healthcare through the Department of Health and Human Services Environmental Data Management System (EDMS). This data provides a far more complete picture of overall organisation consumption and performance data and represents the minimal requirement for public environmental reporting. The EDMS functionality enables reports to be produced for specific facilities within the service, and as the two largest facilities of South West Healthcare, data will continue to be provided for Warrnambool and Camperdown.

Details of how South West Healthcare is performing against each of these indicators are shown in a range of tables throughout this report. Conversion factors for calculating GHG emissions from different energy sources are calculated using the National Greenhouse Accounts (NGA) Factors 2013. This conversion process is consistent with the approach as outlined in the Department of Health *Environmental Reporting Guidelines 2012-13*.

Also in line with Department of Health requirements, the data provided within this report has been normalised using indicators relevant to the healthcare sector for each environmental indicator (using occupied bed days and m<sup>2</sup>). Normalising this data provides South West Healthcare the opportunity to compare efficiency and performance in an anticipated trajectory of increased overall service usage, as well as against other hospitals and healthcare providers. Data assurance for this report has been achieved internally according to the Department of Health *Environmental Reporting Guidelines 2012-13*.

Environmental sustainability became a requirement of South West Healthcare in its *2016-17 Statement of Priorities*, embedding the value of environmental sustainability further within core operational performance. To this end, South West Healthcare has recently created a dedicated Environmental Sustainability Project Officer position in order to drive the development of an updated Environmental Management Plan for improving environmental performance at South West Healthcare.

## GLOSSARY

Throughout this report the following key terms are used:

- Area (m<sup>2</sup>):** The total building floor area (excluding car parks) – metres squared (m<sup>2</sup>) of South West Healthcare.
- Occupied bed days (OBD):** Inpatient bed days as reported through the Victorian Admitted Episodes Dataset (VAED) and the number of public sector residential aged care bed days for the reporting period reported to the Department of Health's Aged Care Branch.

	Area (m2)	2014-15 OBD	2015-16 OBD
Warrnambool Base Hospital	38,878	5,3001	5,3470
Camperdown Hospital and Aged Care Facility	5,255	16,279	14,140
SWH Total	58,285	69,280	67,610

## ENERGY CONSUMPTION AT SOUTH WEST HEALTHCARE

The following tables provide detail about energy consumption for the two major facilities and the entire organisation. Warrnambool Base Hospital currently accounts for more than 90 percent and Camperdown Hospital and Aged Care Facility accounts for approximately 6.5 percent of overall energy use. As fleet vehicles usage rates are calculated across the organisation, Greenhouse Gas Emission detail is provided only for Warrnambool and South West Healthcare. One important story highlighted in these figures is the immediate impact of a heating upgrade undertaken at Camperdown Hospital in 2014, resulting in a 27 percent decrease in natural gas consumption for the facility.

Total Energy Consumption (by energy type)							
	2014-15			2015-16			
	Warrnambool	Camperdown	Total	Warrnambool	Camperdown	Total	SWH Total
Electricity (peak) kWh	3,370,509	253,561	3,624,070	3,716,900	264,973	3,981,873	-
Electricity (off peak) kWh	3,075,153	216,711	3,291,864	3,142,325	224,353	3,366,678	-
Total Electricity kWh	6,445,661	470,273	6,915,934	6,859,225	489,326	7,348,551	9,300,555
Total Electricity (GJ)	23,204	1,693	24,897	24,693	1,762	26,455	33,482
Natural Gas (GJ)	45,938	3,460	49,398	43,338	2,522	45,860	45,855
<b>Total Energy Usage (GJ)</b>	<b>69,142</b>	<b>5,153</b>	<b>74,295</b>	<b>68,031</b>	<b>4,284</b>	<b>72,315</b>	<b>79,337</b>

**Table 1: Energy consumption by type**

Normalised Energy Consumption					
	2014-15		2015-16		
	Warrnambool	Camperdown	Warrnambool	Camperdown	SWH Total
Total Electricity (kWh) per OBD	121.61	28.28	128.88	34.61	128.28
Total Electricity kwh per m2	165.8*	89.49	176.43	93.12	159.57
Natural Gas (GJ) per OBD	0.87	0.21	0.81	0.18	0.63
Natural Gas (GJ) per m2	1.18	0.66	1.12	0.48	0.79
Total Energy (GJ) per OBD	1.304	0.31	1.27	0.31	1.17
Total Energy (GJ) per m2	1.78	0.98	1.75	0.81	1.36

**Table 2: Energy consumption by type with normalising factors**

\*Baseline year figures represented an 8.8 percent decrease from 2013-14

Total Greenhouse Gas Emissions (tonnes CO2e)			
	2014/15		2015/16
	Warrnambool	Camperdown	SWH Total
Scope 1**	2960		2,363***
Scope 2	7219		10,510
Total Emissions	10,179		12,873

**Table 3: CHG emissions by type**

\*\*Transport fuel data is recorded for all SWH campuses and reported here under Scope 1 emissions

\*\*\* Transport fuel not included in SWH total results through current EDMS functionality

Total Greenhouse Gas Emissions- Normalised Data (kg CO2e)			
	2014-15		2015-16
	Warrnambool	Camperdown	SWH Total
Scope 1 Emissions per bed day	56		33
Scope 1 Emissions per m2	76		41
Scope 2 Emissions per bed day	136		145
Scope 2 Emissions per m2	186		180
Total Emissions per bed day	192		178
Total Emissions per m2	261		221

**Table 4: CHG emissions with normalising factors**

## WATER CONSUMPTION AT SOUTH WEST HEALTHCARE

The following tables provide detail about water consumption for the two major facilities and the entire usage rates of South West Healthcare. Warrnambool Base Hospital currently accounts for more than 86 percent of potable water use by South West Healthcare, and Camperdown Hospital and Aged Care Facility accounts for approximately 7.5 percent of overall potable water consumption. Rainwater and recycled water from the Warrnambool Base Hospital's Dialysis Unit is captured in a 300,000 L holding tank at Warrnambool Base hospital and is used for toilet flushing. This supply of recycled water is set to increase with plans approved to recycle water from the Operating Theatre Suite sterilisers, an important step toward decreasing usage of potable water.

Total Water Consumption (kl)							
	2014-15			2015-16			
	Warrnambool	Camperdown	Total	Warrnambool	Camperdown	Total	SWH total
Potable Water Usage	53,258*	6,658	59,916	55,372	7,542	62,914	63,917
Re-Used / Recycled Water	12,000	-	12,000	12,000	-	-	12,000
Total Water Usage	65,258	6,658	71,916	67,632	7,452	75,084	75,917
Water Usage (kL) per OBD	1.23	0.41	-	1.26	0.53	-	1.05
Water Usage (kL) per m2	1.67	1.27	-	1.73	1.43	-	1.30
Re-Used / Recycling Rate	18%	-	-	17.8%	-	-	15.8%

**Table 5: Water usage with normalising factors**

\*Baseline year figures represent an 8.6 percent reduction from 2013-14

## WASTE GENERATION AT SOUTH WEST HEALTHCARE

The following tables provide detail about waste generated through activity at Warrnambool Base Hospital. It is important to note the waste functionality of the EDMS is currently being built therefore there are no current records for the entire organisation. With enhanced waste functionality the EDMS will provide a more comprehensive record of weights and volumes of general, clinical and recycled waste. A key story highlighting staff-led change towards improved environmental performance is seen in the rollout of the PVC Recycling Program by Emergency Department nurse Eliza Bartram. This program commenced at South West Healthcare in 2016 and collections are now in place across most clinical departments at the Warrnambool Base and Camperdown Hospitals.

Waste Generation by Type (kg) or Where Not Available (m3)		
	2014-15	2015-16
General (includes sanitary) (kg)	204,400	203,400
General (includes sanitary) – (m3)	4,030	4039.5
Clinical (includes anatomical and cytotoxic) (m3)	25.8	26.7
Recycled (includes confidential, comingled & PVC) (m3)	1,227.2	1,341
<b>Total Waste (m3)</b>	5,283	5,407.2
Percentage of Waste Volume Recycled**	23%	24%

**Table 6: Waste generation by stream**

\*\*For public reporting requirements this figure should be by weight, and would be in the order of 10 percent.

Waste Generation by Type (kg) with Normalising Factors				
	2014-15		2015-16	
	Kg/ OBD	Kg/m2	Kg/OBD	Kg/m2
General	3.86	5.25	3.80	5.23

**Table 7: Waste generation with normalising factors**