



# Sustainability Report

2022-2023



Western Health



# Revision Control

Issue	Author	Reviewed	Approved	Signature
<b>Final/Issued</b>	MP	CM, JF	CN	[click the RHS '+' to repeat row]

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## Acknowledgment of Country

Western Health acknowledges the Traditional Custodians of the land on which our sites stand, the Wurundjeri Woi-Wurrung, Boon Wurrung and Bunurong peoples of the greater Kulin Nation. We pay respects to Elders past, present and emerging.

We are committed to the healing of country, working towards equity in health outcomes, and the ongoing journey of reconciliation.

Western Health is committed to respectfully listening and learning from Aboriginal and Torres Strait Islander people and wholeheartedly supports their journey to self-determination.

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## Executive summary

As a major healthcare provider to one of the fastest growing and most diverse regions of Australia, Western Health is committed to providing Best Care to communities across Melbourne's west. This includes acknowledging the current climate crisis and its impact on the health outcomes of our community. In response to an ever-changing landscape, climate change challenges us to improve our operations across existing assets and future developments.

We aim to maintain our sustainability leadership momentum, while recognising the growth in the size of the organisation, by building strong foundations and governance structures. Our sustainability management approach focuses on collaboration, data analysis, transparency and research to implement best practices and to reduce our impact on natural resources.

Western Health has continued to grow and evolve in terms of the scope of services provided, including the provision of designated Mental Health Services. There was also a significant increase in medical activities, occupancy and the number of visitors compared with the previous year.

The organisation continued to improve sustainability performance and reduce the environmental impact of our operations. Greenhouse gas emissions decreased by 6% and general waste and clinical waste to landfill decreased slightly from the previous year.

The focus for 2022-2023 involved strengthening the sustainability governance framework for enhanced decision making, enhancing granularity of data captured for reporting and to commence a range of sustainability projects across directorates to build strong foundations.

This period consolidated our sustainability journey and moved towards expanding the program to include social sustainability and the continued delivery of energy, waste and water reductions to support the net zero emissions strategy to 2045.

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# 1. Status update – Sustainability Plan objectives

This year brings us to Year 3 of our 2020-2025 Sustainability Plan, with progress against our objectives described below:

## 1.1. Objective 1: Embed sustainability as a core aspect of our business

During 2022-2023, establishing the governance framework for sustainability management was a key focus. A Sustainability Task Group was formed to oversee our environment, social and governance (ESG) approach and the organisational transformation required to deliver the Sustainability Plan Objectives. The Sustainability Task Group (STG) is represented by leadership team members from across the organisation to make strong collaborative cross-function progress, especially in the incorporation of sustainable considerations and objectives to existing processes.

We conducted a materiality assessment to identify environment, social and governance (ESG) topics that represent our most significant impacts to the environment, people and the economy. Through surveys and consumer engagement, 10 main topics were identified. The environment impact topics remained a priority for the sustainability program. As the organisation matures in the delivery of ESG aspects, other topics for reporting may be considered in the future.

## 1.2. Objective 2: Create a clear path to achieve net zero emissions by 2050

Committed to differentiate ourselves in the healthcare sector, Western Health has integrated data analysis and engineering practices to achieve continual improvement in our daily operations, with a strong focus on asset performance.

Our asset replacement strategy focuses on moving away from gas for existing facilities, major refurbishments and new buildings. This strategy will help us minimise Scope 1 emissions and track the path towards net zero emissions by 2050. Project updates in the pathway to net zero emissions are described below.

### 1.2.1. Energy efficiency

Energy conservation investigations with our building management system provider were conducted to identify operational performance improvements and align with a net zero emissions pathway. The investigations have identified numerous energy efficiency opportunities, especially with air handling units, which will be trialled or implemented in future financial years.

### 1.2.2. Decarbonise our operations – electrification

To achieve this objective, our asset replacement strategy continues to focus on the upgrade of hot water systems and boiler replacements which are nearing end of life.

A project at Sunshine Hospital to replace ageing gas-fired boilers with a hybrid solution consisting of electric heat pumps, solar panels and gas boilers, has seen challenges in the original concept design, which would have resulted in a 70% reduction of greenhouse gas emissions. During the detailed design phase, various technical and financial issues resulted in the hybrid solution not being feasible. We are working through the various challenges associated with gas-fired infrastructure retrofitting, on the transition away from gas.

Western Health has moved away from gas for new refurbishments and buildings such as Point Cook Community Hospital and New Melton Hospital. This strategy will help us to minimise Scope 1 emissions and trace the path towards net zero emissions by 2050 or sooner, acknowledging the revised Victorian target of 2045.

### 1.2.3. Renewable energy

Western Health was successful in receiving grant funding from the Victorian Health Building Authority for the installation of solar panel arrays at the Williamstown, Melton and Bacchus Marsh sites increasing installed capacity by 261 kilowatts at peak times. The project kicked off in 2022 and is expected to be completed by September 2024.

## 1.3. Objective 3: Incorporate climate change action as a part of our corporate responsibility

The 2022/2023 financial year saw the starting point for the identification of projects for the following year to be included in the sustainability roadmap with the identification of 24 projects proposed across various directorates within the organisation. The projects range from diversion of waste going to landfill, system level improvements

such as embedding sustainability expectations in existing procurement and financial management processes and the development of training and communication plans.

## 1.4. Objective 4: Continuous discovery and innovation

Western Health is known for its commitment to innovation, mentoring and research to explore how things can be done more sustainably. During the year, we hosted two sustainability interns from the University of Melbourne, which enabled outcomes on multiple projects such as waste management audits, development of climate risk assessment tools and data analysis.

## 1.5. Our highlights

Objective 1	Objective 2	Objective 3	Objective 4
Sustainability Task Group formed for sustainability governance framework and decision making.	Greenhouse gas emissions down by 6% from FY2021-2022	Commenced the Sustainability Directorates Road Map with 24 sustainability projects	Enhanced data gathering and reporting according to FRD-24
	Energy conservation measures identified to improve operational performance and align with a Net Zero Emissions Strategy	Undertook consumer engagement and staff surveying as part of a materiality assessment	Hosting two University of Melbourne sustainability interns
	All electric infrastructure for new capital projects such as: Westside Lodge, Sunshine Mental Health and Wellbeing Centre, Point Cook Community Hospital and New Melton Hospital.	1% reduction in total waste (general and clinical waste) diverted to landfill in comparison to the previous year.	
	Recipient of funding from the Victorian Health Building Authority to install solar panels at Williamstown, Sunbury, Melton and Bacchus Marsh		

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## 2. Sustainability analysis

The 2022/2023 financial year saw the first year of Financial Reporting Disclosure 24 (FRD-24) reporting for Western Health. The purpose of FRD-24 is to provide transparency on public sector performance on environmental indicators year-on-year, identify and manage government exposure to climate-related risks and promote continual improvement in environmental reporting by government entities.

This section presents a breakdown of the sustainability operation metrics for the past three years. Normalisation factors have been used to provide context and to compare or benchmark environmental performance over time.

During the 2022/2023 year, all government-imposed restrictions for surgery were lifted, as well as the reintroduction of staff and visitors to the sites. This is evident from the Western Health hospital activity levels, in terms of occupied bed days (OBD) and total patients treated which increased by approximately 10% from the previous year. Please refer to Table 1.

Table 1: Comparison of normalisers

Normalisers	Baseline 2014/2015	2020-2021	2021-2022	2022-2023	% Change from baseline	% Change previous year
Area m <sup>2</sup>	115,356	139,356	152,167	152,167	Increased 32%	No change
OBD	333,738	386,910	393,161	432,853	Increased 30%	Increased 10%
Patients treated	576,428	688,194	683,538	743,947	Increased 29%	Increased 9%
Separations	115,337	126,181	147,310	157,546	Increased 37%	Increased 7%

### 2.1. Energy use

There was a slight increase in overall energy consumption compared to last financial year. This could be attributed to the related acquisition of mental health services, increase in patients treated and the requirement to operate on return air as standard practice as required by the Victorian Health Building Authority. Refer to Table 2 and Figure 1 for more details.



Table 2: Total stationary energy consumption by energy type

Total stationary energy consumption by energy type (GJ)	Baseline 2014/2015	2020/2021	2021/2022	2022/2023	% Change from baseline	% Change previous year
Electricity	110,113	122,219	139,372	139,286	26%	-0.1%
Natural gas	117,040	125,266	132,804	136,933	17%	3%
Total	227,153	247,485	272,177	276,219	22%	1%

The portfolio's increase in energy consumption is not a true reflection of the performance as the increase in activity and patients treated plays a major role in this outcome. Therefore, it is necessary to look at the normalised data for a better understanding of the organisation's performance. Refer to Table 3 for energy consumption with normalisers.

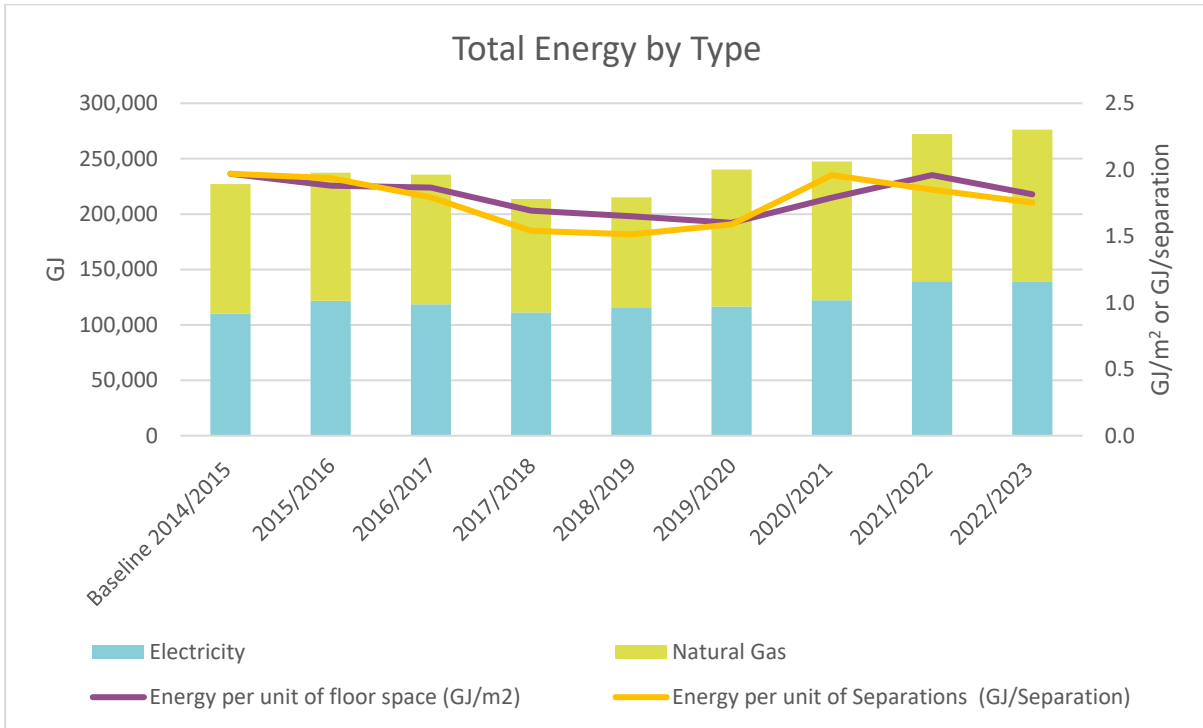
During the 2022/2023 financial year, energy intensity measured as energy consumption per separation and per occupied bed day (OBD) has reduced by 5% and 10 % respectively from last financial year.

Energy consumption per unit of floor area has also reduced by 7% from last year.

This analysis provides a deeper understanding of the impact the increase in patients treated had in overall energy consumption. The results are showing that economies of scale are being realised with services delivered (separations) and there being a slight increase in the total energy consumption during the last three financial years.

Table 3: Energy consumption comparison with normalisers

Normalised stationary energy consumption	Baseline 2014/2015	2020/2021	2021/2022	2022/2023	% Change from baseline	% Change previous year
Energy per unit of floor space (GJ/m <sup>2</sup> )	1.97	1.79	1.96	1.82	-8%	-7%
Energy per unit of separations (GJ/separation)	1.97	1.96	1.85	1.75	-11%	-5%
Energy per unit of bed-day (OBD +aged care OBD) (GJ/OBD)	0.68	0.71	0.71	0.64	-6%	-10%



**Figure 1: Total energy purchased with energy normalisation measurements**

## 2.2. Greenhouse gas emissions

Western Health has focused efforts on energy efficiency projects and the phasing out of plant and equipment reliant on fossil fuels through design and asset replacement, aligning with the Victorian Government target of net zero emissions by 2045.

In order to achieve this, Western Health is working on developing decision-making frameworks that enable a realistic approach that considers service planning, expected portfolio expansion, asset management plans, capital expenditure and the resource allocation required to achieve the net zero emissions target.

The introduction of FRD-24 reporting has resulted in enhanced granularity of data gathering.

Scope 1 emissions now include medical gases such as nitrous oxide, which were not incorporated in previous Sustainability Reports. Also included are Scope 3 emissions from waste emissions, corporate travel and indirect emission from the purchase of gas and electricity.

**Emission definitions:**

Scope 1: Direct emissions from sources owned or controlled by Western Health. Examples: emissions from combustion of natural gas in boilers, fleet fuel consumption, medical gases

Scope 2: Indirect emissions from the purchase of energy. Examples, purchase of electricity

Scope 3: Other indirect emissions that occur across the value chain. Examples: waste disposal, transportation of purchased products

Total emissions decreased by 6% when compared to previous financial year. Scope 1 emissions decreased by 6% and Scope 2 emissions by 7%. Refer to Table 4 for a summary of emissions performance. There is a large increase in Scope 1 emissions, 57% from the baseline in 2014/2015, one of the reasons is the inclusion of medical gases in reporting and an increase in the number of sites in the Western Health portfolio.

There was a 12% decrease in emissions per separations, which is similar to the 14% decrease in emissions per occupied bed day. Refer to Figure 2 for graphical representation of total emissions and compared to normalised emissions.

Table 4: Greenhouse Gas Emissions comparison

Greenhouse Gas Emissions						
Total greenhouse gas emissions (tonnes CO <sub>2</sub> e)	Baseline 2014/15	2020/2021	2021/2022	2022/2023	% Change from baseline	% Change previous year
Scope 1	6,008	12,493	10,029	9,408	57%	-6%
Scope 2 <sup>1</sup>	36,093	33,2712	35,2302	32,799	-9%	-7%
Scope 3	None reported	6,641	6,362	6,387	NA	0.4%
Greenpower / Offsets	None reported	(140)	(91)	(93)	NA	2%
<b>Total</b>	<b>42,101</b>	<b>52,264</b>	<b>51,529</b>	<b>48,502</b>	<b>15%</b>	<b>-6%</b>

Notes:

1. Scope 2 emissions uses the location-based method which reflects the average emissions intensity of grids on which the energy consumption occurs.
2. The Scope 2 emissions for FY2021 and FY2022 differ in this report to previous Western Health Sustainability Reports, as there was a change in reporting methodology to align with FRD-24 reporting requirements. Previously, market-based methods may have been used, however using the location-based method has resulted in an increase in Scope 2 emissions.

Table 5: Greenhouse Gas Emissions with Normalisers.

Normalised greenhouse gas emissions	2014/2015	2020/2021	2021/2022	2022/2023	% Change from baseline	% Change previous year
Total emissions per unit of floor space (kgCO <sub>2</sub> e/m <sup>2</sup> )	365	345	293	319	-13%	-6%
Total emissions per unit of separations (kgCO <sub>2</sub> e/separations)	368	379	303	308	-16%	-12%
Total emissions per unit of bed-day (LOS+aged care OBD) (kgCO <sub>2</sub> e/OBD)	126	134	113	112	-11%	-14%

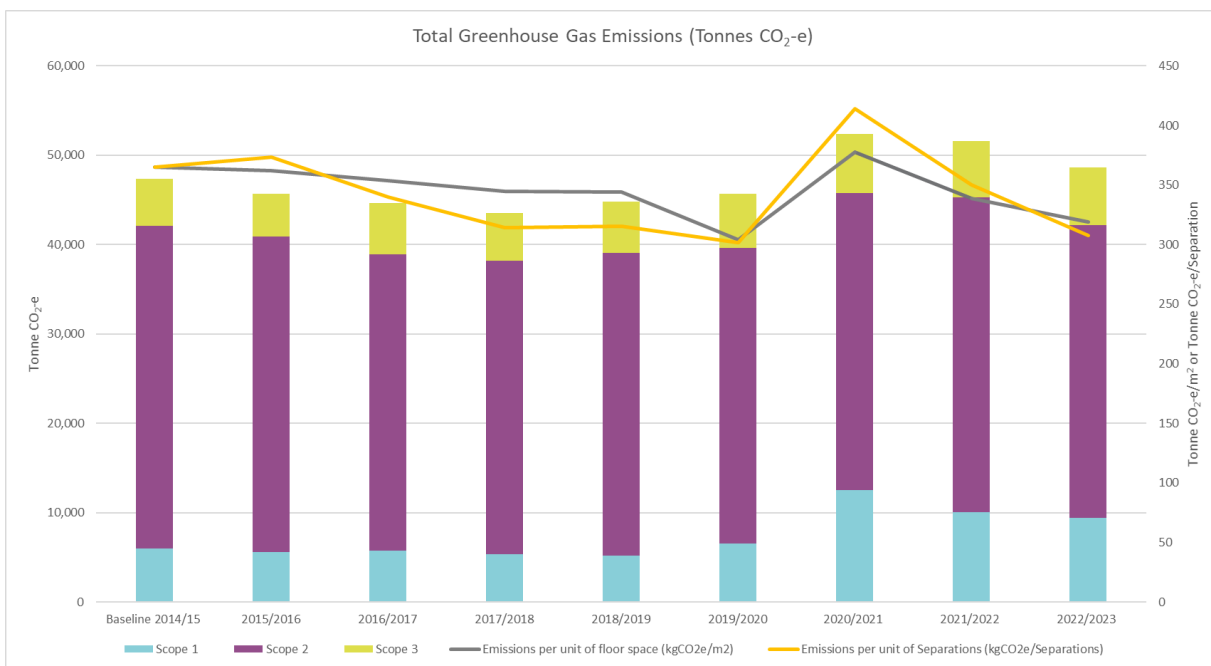


Figure 2: Total organisational GHG emissions (tonnes CO<sub>2</sub>)

Western Health is seeing a steady decrease in total emissions since 2020-2022 (COVID pandemic years).

There will be a continued focus on energy efficiency measures to reduce Scope 2 emissions. Mitigation of Scope 1 emissions, from natural gas combustion, medical gases and fleet fuel consumption will also be a priority area in the future.

## 2.2.1. Highlight – medical gases (Scope 1 emissions)

Various medical gases are used in healthcare facilities. Western Health uses the medical gas nitrous oxide in surgical procedures as both an anaesthetic and analgesic. Medical gas-related emissions have oscillated between 6 and 5.6% during the last two financial years. High discrepancies in volumes of nitrous oxide in previous years can directly correlate with leakages in old manifolds.

There was a significant reduction in volumes of medical gases achieved in the last two years, due to key actions:

- Repair of leakages and periodical revision of existing piping and manifolds in Footscray and Sunshine maternity units;
- The awareness of medical staff to swap to intravenous medications which provide similar analgesic properties with a smaller greenhouse gas emission profile to medical gases;
- Cessation of desflurane and isoflurane (other types of medical gases) across Western Health hospitals; and
- The portable supply of nitrous oxide via cylinders, to reduce leakage in pipes.

## 2.3. Water

Water usage increased by 3% with respect to the previous year. This is due to higher number of patients treated, increase in medical services and visitors and staff returning to sites.

Table 6: Water consumption Comparison

Water Consumption						
Total water consumption (kL)	Baseline 2014/2015	2020/2021	2021/2022	2022/2023	% Change from baseline	% Change previous year
Total potable water	229,160	201,370	227,992	235,322	3%	3%

Table 7: Water consumption with normalisers

Normalised water consumption (potable + Class A)	2014/2015	2019/2020	2021/2022	2022/2023	% Change from baseline	% Change previous year
Water per unit of floor space (kL/m <sup>2</sup> )	1.99	1.45	1.45	1.55	-22%	7%
Water per unit of separations (kL/Separations)	1.99	1.65	1.60	1.49	-25%	-7%
Water per unit of bed-day (LOS +aged care OBD) (kL/OBD)	0.69	0.64	0.58	0.54	-21%	-6%

When assessing water usage per square metre against 2021/2022, a 7% increase is observed. However, water usage per separations and per OBD decreased 7% and 6% respectively, compared to last financial year. Refer to Figure 3 for the water consumption chart.

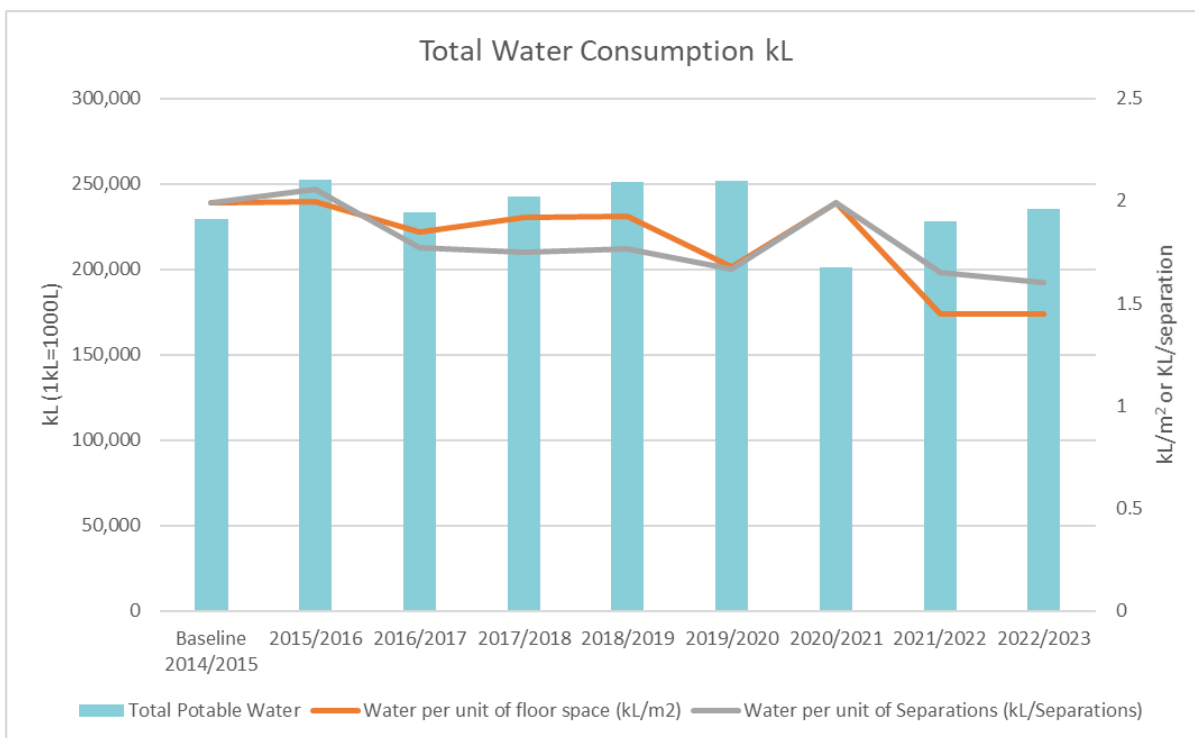


Figure 3: Total water consumption with normalisers

## 2.4. Waste

During the 2022-2023 financial year Western Health generated more than 1,000 tonnes of general waste (landfill) and 391 tonnes of clinical waste. This is 9% and 30% less than FY2021-2022 respectively. The improvement in performance is attributed to the reduction of personal protective equipment (PPE) for staff and patients during the COVID-19 pandemic. In addition, various landfill diversion initiatives continued, and new streams implemented including:

- reusable gowns
- food donation program
- recycling of:
  - PVC
  - batteries
  - toner and printer cartridges
  - metals
  - e-waste.

Total recycling has doubled from the previous year due to enhanced data capturing of different streams including in data reporting.

Another positive outcome is from the shift to electronic medical records. In 2022-2023 more than 100 tonnes of confidential patient records were digitised and sent for secure destruction (paper recycling). The electronic medical records system will help to avoid future paper usage and reduce our carbon footprint by enabling more efficient use of material resources and supporting virtual models of care (telehealth).

Refer to Table 8 and Figure 4 for more detail.

Table 8: Waste Streams Comparison

Type	Baseline 2014/2015	2020/2021	2021/2022	2022/2023	% Change from baseline	% Change previous year
Clinical waste total (tonnes)	317	434	574	443	40%	-23%
CW bagged and incinerated (tonnes)	290	405	539	408	41%	-24%
CW sharps (tonnes)	27	30	35	35	30%	1%
Landfill (tonnes)	1,444	1,326	1,044	1,037	-28%	1%
*Recycling (tonnes)	546	492	480	973	78%	103%
Total waste to landfill (clinical waste+ general waste)	1,761	1,760	1,617	1,480	-16%	-8%
Total waste generation (clinical waste+ landfill+ recycling)	2,307	2,252	2,097	2,453	6%	17%

Table 9: Normalised waste data

Normalised waste data	2014/2015	2020/2021	2021/2022	2022/2023	% Change from baseline	% Change previous year
Waste / OBD (kg)	6.91	6.44	5.43	5.77	-17%	6%
Waste / patient treated (kg)	3.99	3.58	3.10	3.33	-16%	7%
Total waste to landfill per patient treated	3.04	2.80	2.39	2.01	-34%	-16%
Rate of diversion from landfill %	27.44%	27.05%	31.49%	48.41	76%	54%



Figure 4 presents the compilation of the waste management performance for the organisation. There is an increase in total waste generated per occupied bed day (OBD) (orange line) due to a doubling of recycling; however, a decrease in total landfill waste per patient treated.

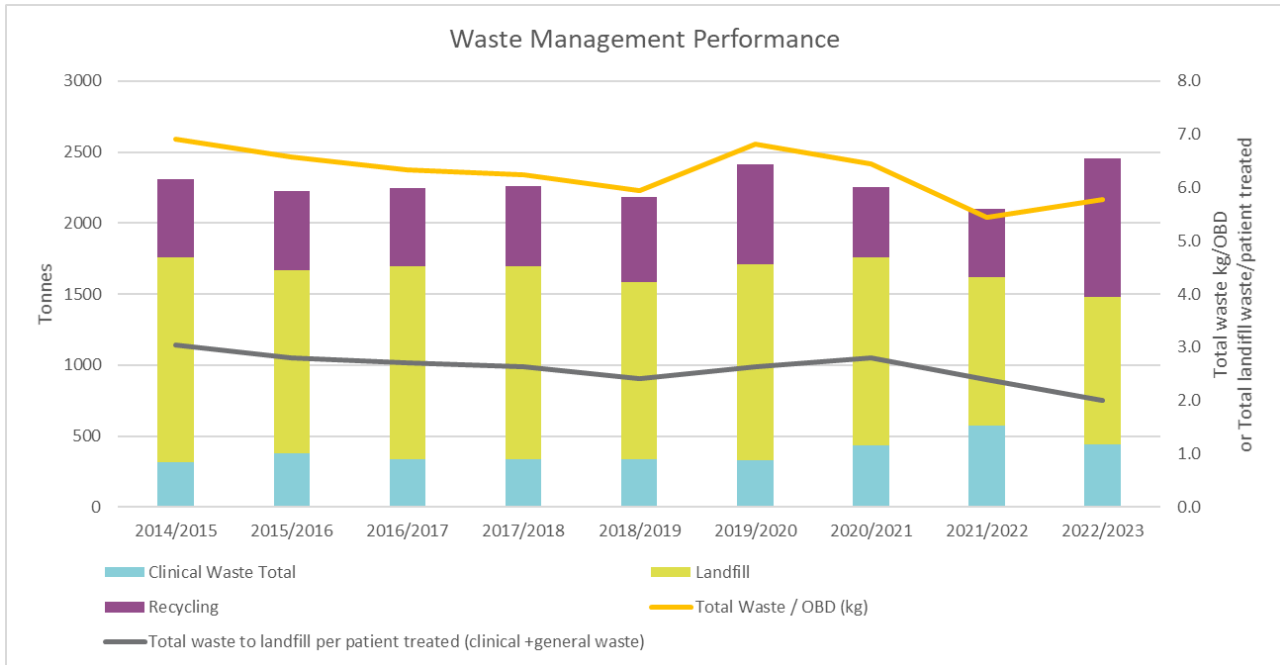


Figure 4: Waste generation with normaliser

### 2.4.1. Reusable gowns update

Western Health continues to use reusable gowns which commenced as a pilot project in April 2022 in Footscray and Sunshine ICUs and has so far resulted in the avoidance of more than 90,000 disposable gowns diverted to landfill, which is equivalent to approximately 3,600 kg of diverted waste.

Staff have provided feedback that the reusable gowns are “more breathable and comfortable than the disposable gowns”.

### 2.4.2. Food donation program

Western Health has committed to donate food that is not been consumed by our patients. Our partnership with OzHarvest has been successfully operating for three years. This has rescued more than 14 tonnes of food from landfill. Refer to Table 10 for a summary per site. In 2022-2023 a total of nearly 5,000 kg of food was rescued, which is equivalent to 9,896 meals. Western Health will continue to optimise our processes and reduce organic and general waste loads to landfill.

Table 10: OzHarvest food collection

Site	FY 2020-2021 (kg)	FY 2021-2022 (kg)	FY2022-2023 (kg)
Sunshine	1,544	2,823	1,470
Footscray	1,623	2,383	3,478
Williamstown	557	225	merged with Footscray
Total	3,724	5,431	4,948

### 2.4.3. PVC recycling

Since its establishment in 2016, this program continues collecting high grade, clear PVC hospital items such as used facemasks, oxygen tubing and irrigation bags for intravenous fluids, to be recycled into agricultural hosing and gumboots. During 2022-2023, WH recycled 1.87 tonnes of PVC.

### 2.4.4. Battery recycling

Western Health continued with the battery recycling program, implementing collections in three hospitals. More than one tonne of batteries was diverted from landfill in 2022-2023.

### 2.4.5. The journey ahead

The focus for the next year will be to continue to deliver the organisational transformation actions identified in our Sustainability Plan, including the sustainability governance framework for enhancing decision making, enhancing transparency of data captured for reporting and assessing performance of operations. This will allow the organisation to further develop targeted actions to support reductions in energy, greenhouse gas emissions, waste and water and support the net zero emissions strategy to 2045. We will also increase the awareness and engagement on sustainability to build an empowered workforce to embed sustainability as a core aspect of our business.



Western Health

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