Sustainability Report

Western Health

2023-2024

Revision Control

Issue	Author	Reviewed	Approved	Signature
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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 the 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.

Executive summary

As a major healthcare provider to one of Australia's fastest growing and most diverse regions, Western Health is committed to providing Best Care to communities across Melbourne's west. This includes incorporating sustainability as part of our practices, policies and strategies to ensure healthcare systems are environmentally, economically and socially responsible whilst maintaining the quality of care.

Western Health has continued to grow and evolve regarding the scope of services provided, including becoming a mental health service provider and the continued planning and building of new major hospitals. There was also a significant increase in medical activities overall, such as occupied bed days and the number of visitors, compared with the previous year.

The following report provides an overview of our sustainability impact and celebrates achievements while acknowledges some of the challenges to overcome in the journey to reduce natural resource consumption and to support the net zero emissions strategy. Our sustainability program aligns with the updated Western Health Strategic Directions in many areas, but in particular:

- We care for our people
- We deliver services for the future;
- We are better together; and
- We discover and learn.

The focus for 2023/2024 involved continuing to strengthen the sustainability governance framework for enhanced decision making, enhancing granularity of data captured for reporting and to deliver sustainability projects across directorates to build strong foundations.

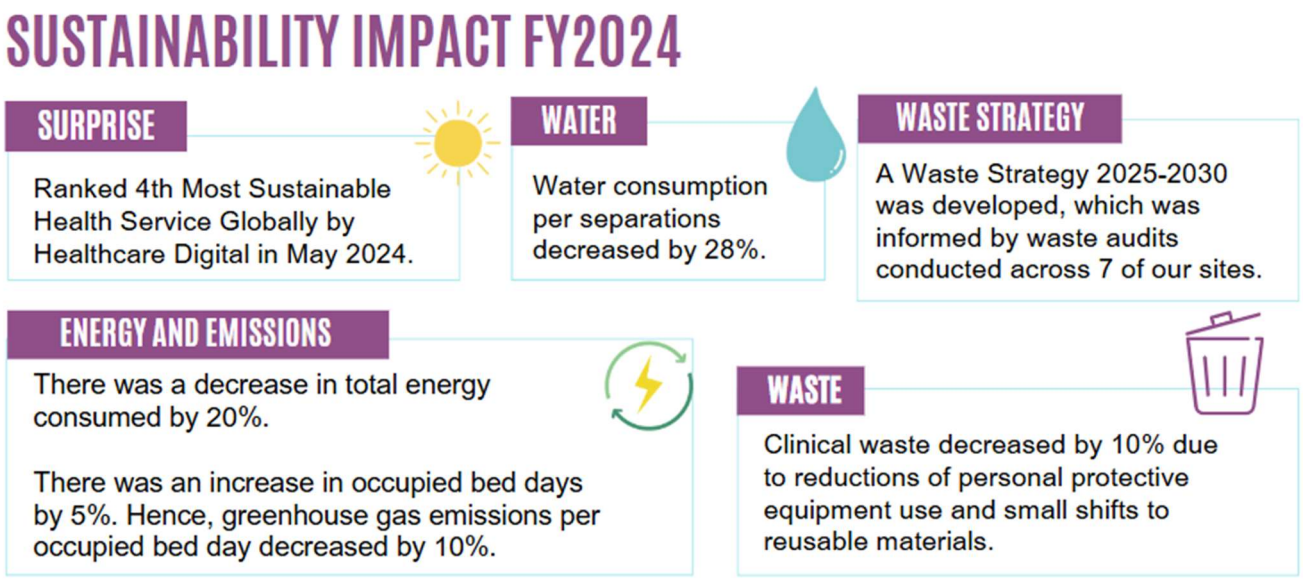
1. Status – Sustainability Plan objectives

This year brings us to Year 4 of our Sustainability Plan 2020-2025, with progress against our objectives described below.

1.1. Our highlights

Our highlights are summarised in the infographic below.

This infographic provides a snapshot of our impact in environmental sustainability for 2024. We are into Year 4 of our Sustainability Plan 2020-2025. Many of the deliverables and projects looked at setting up the foundation, identifying gaps and developing strategies to inform implementation steps.



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

The Sustainability Task Group (STG) was formed in 2023 to oversee our environment, social and governance (ESG) approach and the organisational transformation required to deliver the Sustainability Plan Objectives. The 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. In 2023/2024 the STG has focused on raising the profile of sustainability across the organisation by embedding sustainability considerations in existing process and with external stakeholders through social media ‘good news stories’.

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

Our asset replacement strategy focuses on moving away from gas for existing facilities, major refurbishments and new buildings. This strategy will help continue to reduce Scope 1 emissions and track the path towards net zero emissions by 2050.

1.2.1. Energy efficiency

The energy conservation program continued with our building management system service partner to identify improvement initiatives that align with the net zero emissions pathway. The investigations have identified numerous energy efficiency opportunities, including the optimisation of the cooling towers and heat rejection system, which will be trialled and implemented in future financial years.

1.2.2. 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 solar arrays were completed in September 2024.

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

The sustainability team worked with various directorates to deliver the 2023/2024 program of 29 sustainability projects. The projects range from developing the Waste Strategy 2025-2030, implementation of energy reductions, baseline data capture for waste streams and system level improvements such as embedding sustainability expectations in existing procurement and financial management processes and the development of sustainability training and communication plans.

1.4. Objective 4: Continuous discovery and innovation

Western Health is known for its commitment to mentoring and research to innovate, explore and pivot on how systems of work can be undertaken more efficiently and sustainably. We continued our relationship with Melbourne University to host sustainability interns, which delivered positive outcomes on multiple projects such as waste management audits, development of the Waste Strategy and better transparency and accuracy of environmental data metrics.

2. Sustainability analysis

The 2023/2024 financial year saw the second 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.

The Department of Health changed the reporting period for FRD-24 to 1 April to 31 March. Previous data was reported 1 July to 30 June.

This section presents a breakdown of the sustainability operations metrics for the past three years, including energy, greenhouse gas emissions, water and waste. Normalisation factors have been used to provide context and to compare or benchmark environmental performance over time.

The 2023/2024 saw an increase in activity levels in terms of occupied bed days (OBD) and total patients treated which increased by approximately 6% from the previous year. Please refer to Table 1.

Table 1: Normalisers

Normalisers	Baseline 2014/2015	2021/2022	2022/2023	2023/2024	% Change from baseline	% Change previous year
Area m^2	115,356	152,167	152,167	225,463	95% ↑	48% ↑
OBD	333,738	393,161	432,853	464,148	39% ↑	5% ↑
Patients treated	576,428	683,538	743,947	778,021	34% ↑	6% ↑
Separations	115,337	147,310	157,546	224,983	95% ↑	43% ↑

2.1. Energy use

There was a 20% decrease in total energy consumption compared to last financial year. This can be attributed to the decrease in natural gas consumption, due to a failure in natural gas pressure supply for dual fuel hot water boilers at Joan Kirner Women's and Children's at Sunshine Hospital from July to November 2023. For the continuing functioning of the boilers, diesel fuel was used instead, resulting in a 12133% increase in diesel fuel consumption. Usually, diesel fuel use is limited for testing the backup generators and for generator operations, as it is higher in cost than natural gas. In addition, the set points of boiler operations have been reduced to improve the thermal comfort across the site. Subsequently leading to a decrease in total energy consumption. 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	2021/2022	2022/2023	2023/2024	% Change from baseline	% Change previous year
Electricity	110,113	139,372	139,286	147,964	34%	6% ↑
Natural gas	117,040	132,804	136,933	73,560	-37%	-46% ↓
Diesel	not available	not available	85	10,398	not available	12133% ↑
Total	227,153	272,176	276,219	221,524	-2%	-20% ↓

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 2023/2024 financial year, energy intensity measured as energy consumption per separation and per occupied bed day (OBD) has reduced by 44% and 25% respectively from the previous financial year. Energy consumption per unit of floor area has also reduced by 46% from last year. These large decreases are due to an increase in OBDs and total floor area, with Sunshine Mental Health and Wellbeing Centre completed.

The results are showing that efficiencies and economies of scale are being realised with services delivered (separations) even though there is an increase in the electricity consumption during the past few years.

Table 3: Energy consumption comparison with normalisers

Normalised stationary energy consumption	Baseline 2014/2015	2021/2022	2022/2023	2023/2024	% Change from baseline	% Change previous year
Energy per unit of floor space (GJ/m2)	1.97	1.96	1.82	0.98	-50% ↓	-46% ↓
Energy per unit of separations (GJ/separation)	1.97	1.85	1.75	0.98	-50% ↓	-44%↓
Energy per unit of bed-day (OBD +aged care OBD) (GJ/OBD)	0.68	0.64	0.64	0.48	-30% ↓	-25% ↓

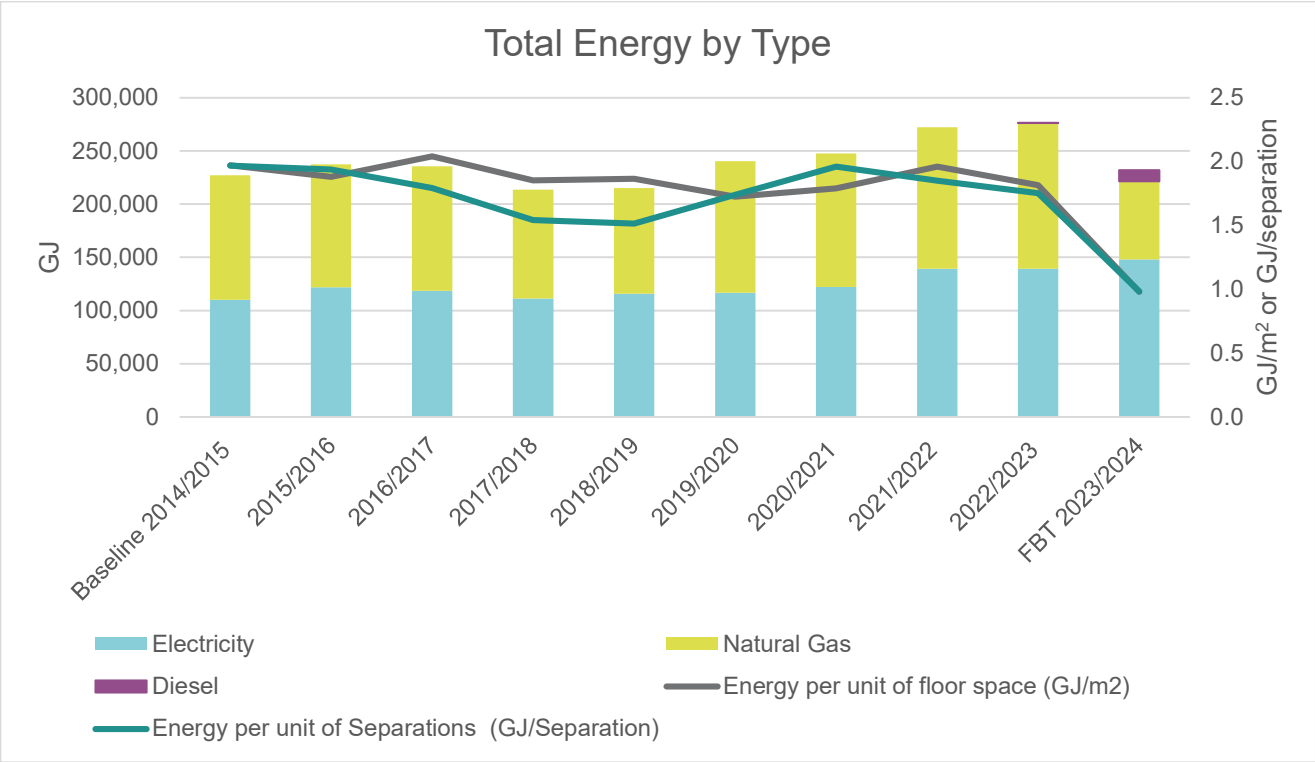


Figure 1: Total energy purchased with energy normalisation measurements.

2.2. Greenhouse gas emissions

To move towards achieving the Victorian Government target of net zero emissions by 2045, Western Health has focussed efforts on energy efficiency projects and design and asset replacement to phase out plants and equipment that are reliant on fossil fuels.

Western Health is continuing to work on embedding decision-making frameworks to 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 and transparency of data sources.

Emission definitions:

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

Scope 2: Indirect emissions from the purchase of energy, an example is purchase of electricity.

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

Total emissions decreased by 5% when compared to previous financial year. Scope 1 emissions decreased by 34% whereas Scope 2 emissions increased by 3%. Refer to Table 4 for a summary of emissions performance. The Scope 1 decrease was primarily due to replacing natural gas with diesel fuel for the boilers at Joan Kirner Women's and Children's at Sunshine Hospital across a four-month period. Diesel has a significantly higher energy density than natural gas meaning a given volume of diesel contains more energy than the same volume of natural gas, hence less Scope 1 emissions.

There was a 30% decrease in emissions per separations and 5% decrease in emissions per occupied bed day. Emissions per m2 floor area also decreased by 33%. Refer to Table 5 and 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 CO2e)	Baseline 2014/15	2021/2022	2022/2023	2023/2024	% Change from baseline	% Change previous year
Scope 1	6,008	10,029	9,408	6,235	4%↑	-34%↓
Scope 2[1]	28,096	35,2302	32,799	27,211	-3%↓	3%↑
Scope 3	5,286	6,362	6,387	6,678	NA	5%↑
Greenpower / Offsets	None reported	(91)	(93)	(83)	NA	-11%
Total	39,390	51,529	48,502	40,041	2%↑	-5%↓

Notes:

1. Historically, Scope 2 emissions were calculated using a location-based method which reflects the average emissions intensity of grids on which the energy consumption occurs. However, the Department of Health has shifted to using the market-based approach to reflect emissions from the specific electricity that we purchase.

Table 5: Greenhouse Gas Emissions with Normalisers.

Normalised greenhouse gas emissions	Baseline 2014/2015	2021/2022	2022/2023	2023/2024	% Change from baseline	% Change previous year
Total emissions per unit of floor space (tonne CO_2e/m^2)	0.34	0.29	0.28	0.18	-48%↓	-36%↓
Total emissions per unit of separations (tonne CO_2e/separations)	0.32	0.30	0.27	0.18	-45%↓	-34%↓
Total emissions per unit of bed-day (LOS+aged care OBD) (tonne CO_2e/OBD)	0.12	0.11	0.10	0.09	-27%↓	-10%↓

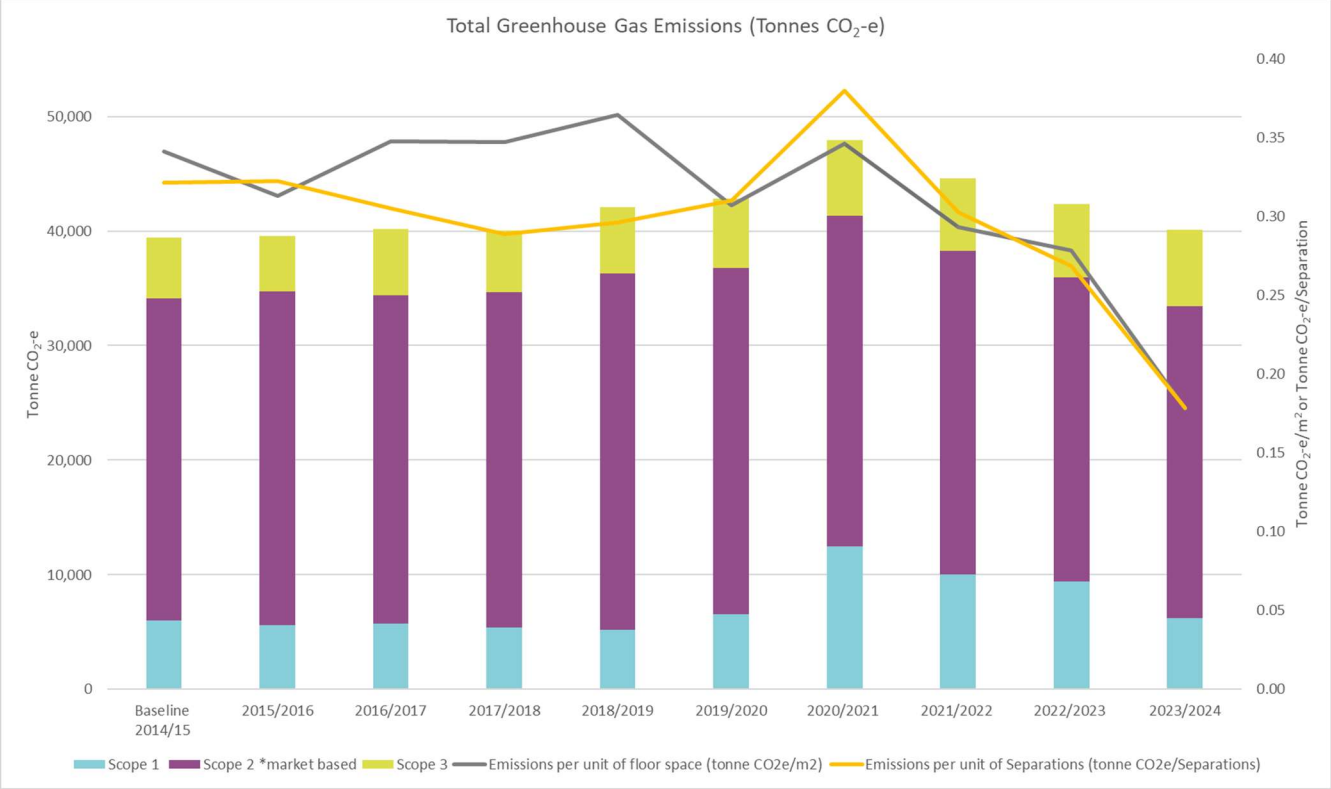


Figure 2: Total organisational GHG emissions (tonnes CO2)

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 continue to be a priority area in the future.

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	2021/2022	2022/2023	2022/2023	% Change from baseline	% Change previous year
Total potable water	229,160	223,778	228,431	235,322	3%↑	3%↑

When assessing water usage per square metre against 2022/2023, a 30% decrease is observed. Water usage per separations and per ODB decreased 28% and 2% respectively, compared to last financial year. Refer to Table 7 and Figure 3 for the water consumption chart.

Table 7: Water consumption with normalisers

Normalised water consumption (potable + Class A)	2014/2015	2021/2022	2022/2023	2023/2024	% Change from baseline	% Change previous year
Water per unit of floor space (kL/m^2)	2.0	1.5	1.5	1.0	-47%↓	-30%↓
Water per unit of separations (kL/Separations)	1.9	1.5	1.4	1.0	-44%↓	-28%↓
Water per unit of bed-day (LOS +aged care OBD) (kL/OBD)	0.7	0.6	0.5	0.5	-26%↓	-2%↓

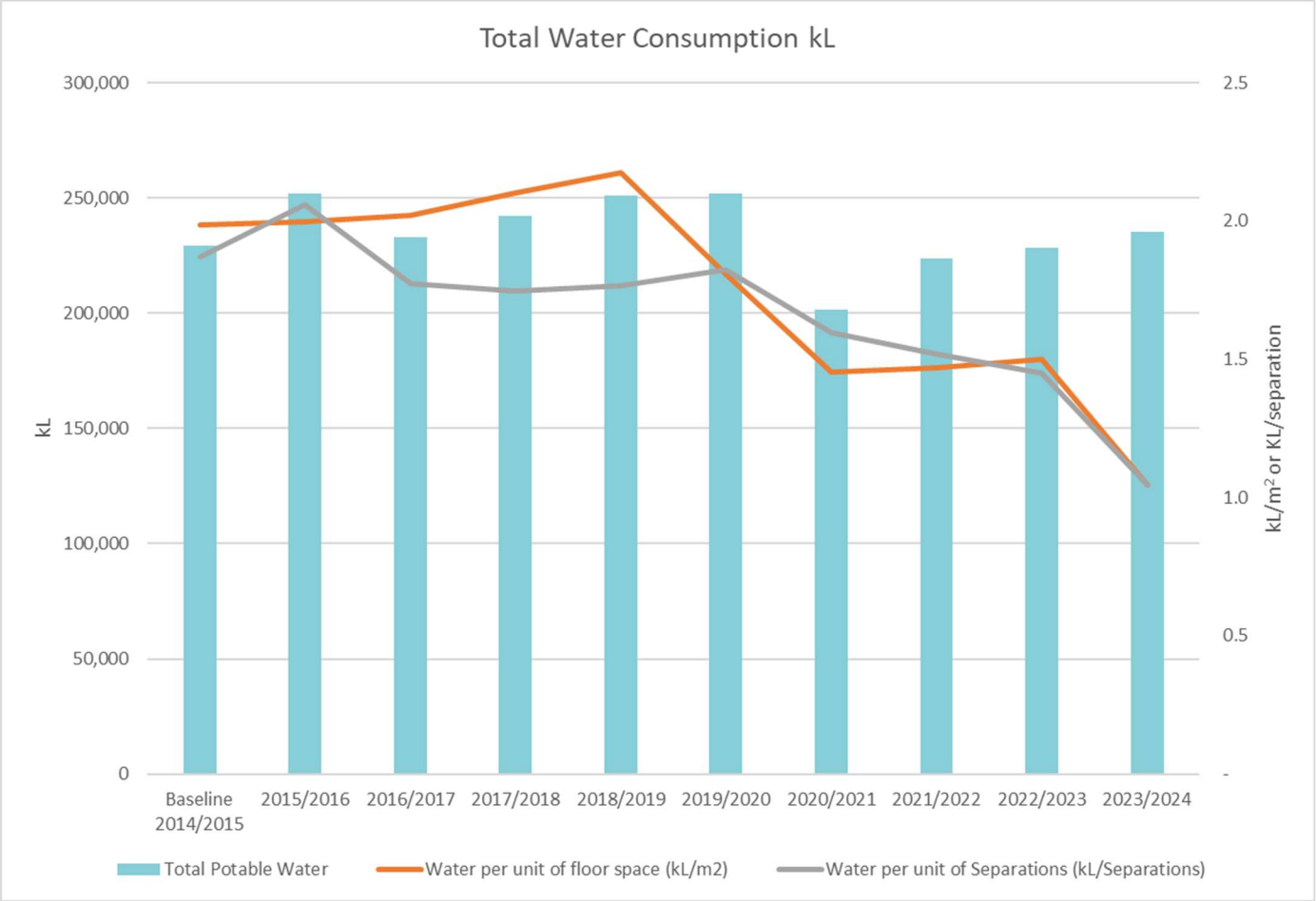


Figure 3: Total water consumption with normalisers

2.4. Waste

During the 2023/2024-year, Western Health generated 1,794 tonnes of general waste (landfill), which is a 73% increase from the previous year. Unfortunately, the majority of mixed recycling was contaminated, so this material was sent to landfill. In addition, a change in waste management contractor during the year has led to improved data accuracy and transparency. Actions to improve waste segregation are to implement areas identified in the Western Health's Waste Strategy such as the introduction of a paper and cardboard stream and food organics collections.

For clinical waste, 357 tonnes were generated, 19% less than the previous year. This is primarily due to reducing additional personal protective equipment through our hospital activities.

Various landfill diversion initiatives continue, including:

- reusable gowns
- food donation program

- recycling collections of:
  - PVC
  - Sevoflurane canisters
  - batteries
  - toner and printer cartridges
  - metals
  - e-waste
  - fluorescent tubes
  - blue huck towels
  - polystyrene
  - confidential paper
  - garden waste
  - patient transfer mats, compression sleeves

Overall, total recycling has decreased by 22% from the previous year due to contamination issues with the mixed recycling stream. Refer to Table 8 and Figure 4 for more details.

Table 8: Waste Streams Comparison

Type	Baseline 2014/2015	2021/2022	2022/2023	2023/2024	% Change from baseline	% Change previous year
Clinical waste total (tonnes)	317	574	443	357	13%↑	-19%↓
CW bagged and incinerated (tonnes)	290	539	408	not available	n/a	n/a
CW sharps (tonnes)	27	35	35	not available	n/a	n/a
Landfill (tonnes)	1,444	1,044	1,037	1,794	24%↑	73%↑
Recycling – landfill diversion (tonnes)	546	480	973	763	40%↑	-22%↓
Total waste to landfill (clinical waste+ general waste)	1,761	1,617	1,480	2,151	22%↑	45%↑
Total waste generation (clinical waste+ landfill+ recycling)	2,307	2,097	2,453	2,914	26%↑	19%↑

There was a decrease in the overall rate of diversion from landfill by 38% from the previous year, as shown in Table 9.

Table 9: Normalised waste data

Normalised waste data	2014/2015	2021/2022	2022/2023	2023/2024	% Change from baseline	% Change previous year
Total Waste / OBD (kg)	6.91	5.43	5.77	6.28	-9%↓	9%↑
Total waste to landfill per patient treated	3.04	2.39	2.01	2.76	-9%↓	38%↑
Rate of diversion from landfill %	27%	31%	48%	30%	9%↓	-38%↓

Figure 4 presents the compilation of the waste management performance for the organisation. There is an increase of 9% in total waste generated per occupied bed day (OBD) and waste to landfill per patient treated increased by 38%.

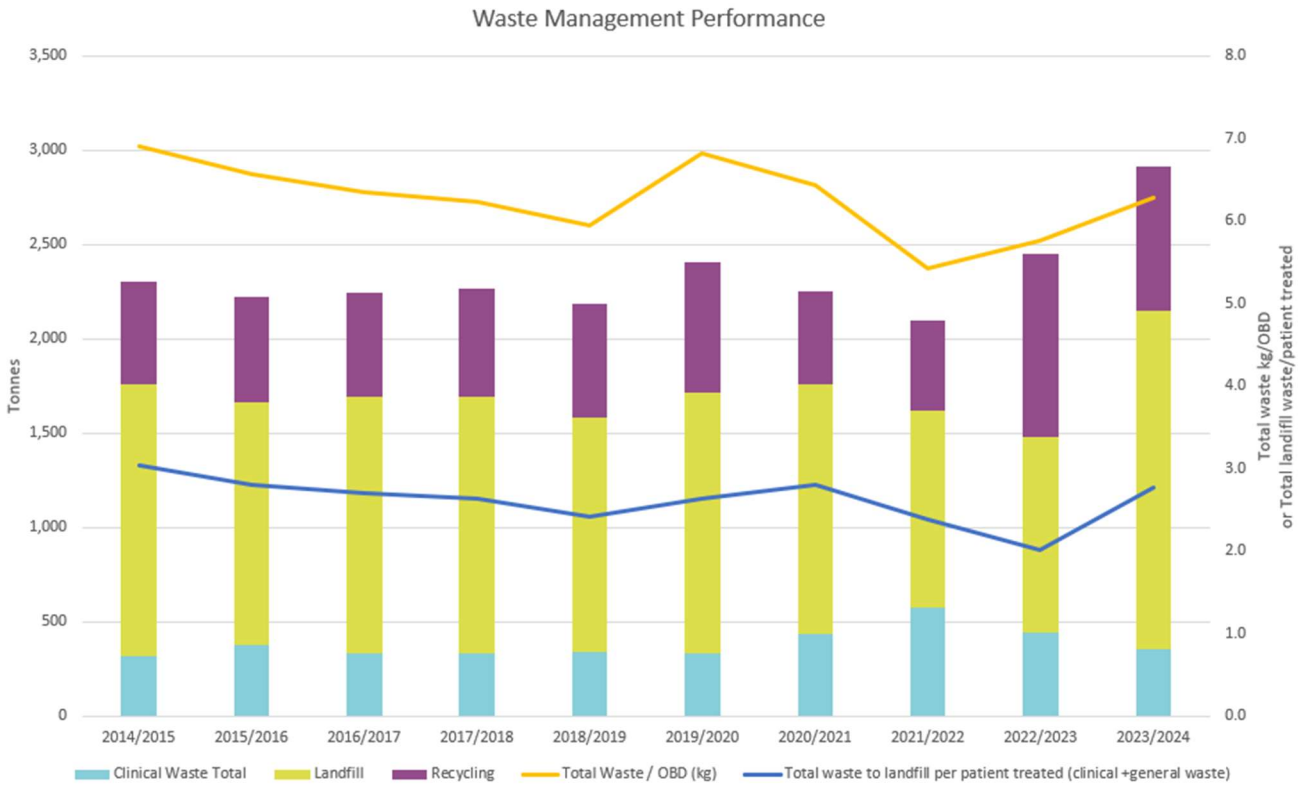


Figure 4: Waste generation with normaliser

2.4.1. Waste Audits and Waste Strategy

In 2024, waste audits were conducted across 7 sites with the objective to identify opportunities to improve waste management and collect baseline data. The waste audits comprised of the collection and quantification of clinical, general waste and mixed recycling generated from the wards/departments over a 24-hour time period.

The waste audits informed the development of a Waste Strategy 2025-2030 to guide the focus areas and deliverables to improve the overall landfill diversion rate, to correct segregation of wastes and consistency across our sites, including:

- the introduction of a paper and cardboard collections and waste food organics collection;
- trials for new waste diversion streams such various medical consumables;
- development of training and education tools for clinical waste management and clinical material recycling;
- to improve monitoring, measurement and assessment of waste data
- to improve collaboration with procurement services and suppliers to embed waste management principles at the procurement stages.

3. The journey ahead

The focus for the next year will be to continue delivering improvement in diversion of waste from landfill by implementing the Waste Strategy and to effectively manage waste in accordance with waste hierarchy and circular economy principles. The organisational transformation actions identified in our Sustainability Plan 2020-2025 will continue to be delivered including the sustainability governance framework for enhancing decision making, enhancing transparency of data captured for reporting and assessing performance of operations. Our sustainability journey also aims to increase the engagement of our workforce to build upon embedded sustainability as a core aspect of our business.

Western Health

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We welcome you at Western Health