AlfredHealth

Environmental Sustainability Report 2019–20

theAlfred

Caulfield HOSPITAL

Sandringham HOSPITAL

MSHC MELBOURNE SEXUAL HEALTH CENTRE

Contents

Message from the Chief Executive

Alfred Health's Environmental Sustainability Report 2019–20 outlines initiatives and activities to improve environmental performance and acknowledges challenges we face to reduce our environmental footprint.

The report shows the organisation-wide commitment to environmental sustainability at Alfred Health. We pride ourselves on being transparent about the impact of our operations on the environment, recognising the areas where we can improve and targeting activities towards achieving our environmental sustainability goals.

The Alfred Health Environmental Sustainability Strategy 2017–21[1] underpins our decision making for activities to achieve our environmental sustainability vision; to engage, educate and empower staff to create an environmentally sustainable workplace.

Alfred Health's Environmental Sustainability Committee is responsible for delivery of the Strategy. The Committee includes representatives from the Alfred Health Executive Committee, key departments and local work area Green Teams across Alfred Health.

The Victorian Public Health and Wellbeing Plan 2019–23[2] prioritises action to tackle climate change and its impact on human health. As a leader in Victorian public health, it is essential we prioritise reducing our environmental impact and demonstrate leadership within patients, visitors and staff in environmental sustainability.

1) Alfred Health Environmental Sustainability Strategy 2017–21
2) Victorian Public Health and Wellbeing Plan 2019–23

About

Alfred Health's purpose is to improve the lives of our patients and their families, our communities and humanity.[3] While our day-to-day operations have direct benefit to our community, the environmental impact of our activities is significant.

In 2019–20, COVID-19 spread across the world, most closely felt in Melbourne when a state of emergency was declared in March 2020. Social restrictions and isolation requirements for people affected by COVID-19 had significant impacts on the way we delivered healthcare.

While we saw a fall in total patient attendances, the increased infection risk of COVID-19 increased the use of personal protective equipment (PPE) to better protect our patients and staff. Our clinical waste generation increased during this time as a result of more intensive PPE use.

COVID-19 advanced progress towards more home-based care delivery and telehealth consultations for the safety of our patients, reducing the need for our patients to travel to our facilities.

Over a thousand staff worked from home to improve safety and ensure business continuity. This reduced occupancy of our work areas and associated utility use. A number of aged care and rehabilitation services at Caulfield Hospital transitioned to new models of care, leading to reduced utility use and associated carbon emissions at this facility.

Changes to the way we worked also saw an increase in the use of video conferencing and collaborative online working platforms, which reduced inter campus staff travel for meetings and paper consumption as staff accessed work documents digitally.

The report meets the environmental reporting requirements of the Department of Health *Policy and funding guidelines*, which covers greenhouse gas emissions, energy use, water consumption, waste generation and recycling rates. This year we've included reporting of transport fuel emissions associated with the vehicles we use for community services and inter campus deliveries.

The reporting boundaries include all utilities (electricity, water and gas) where Alfred Health pays the bill. Facilities where we are not the utility account holders (e.g. leased sites) are generally smaller operations where the environmental impact is immaterial compared to our hospital and clinic operations. These boundaries reflect the reporting requirements of the *National Greenhouse and Energy Reporting Act 2007*.

The environmental data management system (EDMS) records our environmental impact data. The EDMS generates reports related to our environmental performance. The EDMS is continuously reviewed and historical data may change slightly over time. For example, this year the inclusion of corporate transport reporting has changed historical carbon emissions. Our aim is to improve environmental reporting over time to demonstrate accountability and transparency for our activities with an environmental impact.

3) Alfred Health Strategic Plan 2016–20

Healthy habitats and environments

While Alfred Health's operations occur predominantly indoors, research shows spending time outdoors and in the natural environment improves human health and wellbeing. Where possible we encourage staff and patient participation in healthy habitats and environments by supporting outdoor activities and enjoyment of our outdoor spaces.

This includes improving the amenity and facilities in our outdoor spaces, and where possible increasing access to garden and outdoor environments. Over the last few years, we've installed new outdoor furniture across our facilities to support patients, visitors and staff to enjoy our outdoor spaces.

At Caulfield Hospital the installation of new picnic tables on the front lawns has provided a place for staff and visitors to enjoy outside the hospital buildings. The staff area of Building 18 has also been transformed with the development of a new potted garden and outdoor furniture, as well as redevelopment at the rear of the Aged Care Ward building.

The Sandringham Hospital has been enhanced with new garden furniture installed at the hospital entrance for use by visitors and staff. The hospital barbecue area barbeque area also been revitalised with outdoor furniture installed.

Sandringham Hospital has been enhanced with new green-friendly garden furniture.

Environmental citizenship

Fostering a culture of environmental stewardship helps empower our staff to create an environmentally sustainable workplace. This demonstrates Alfred Health's environmental stewardship to our patients, visitors and the broader community.

During 2019–20, environmental sustainability featured in a number of our staff events. We launched our Wellness Wheel in August 2019, a holistic approach to thinking about wellness for our staff. The wheel includes an environmental component, showing respect to the environment around you and creating a space to support wellbeing.

As part of our partnership with Monash University, a presentation to students of the Master of Public Health contributed to building environmental citizenship within our community.

Ride 2 Work day in October celebrated staff commuting to work by bike with a staff breakfast, recognising the benefits of riding to both their personal health and the environment through reduced transport carbon emissions.

In conjunction with Clean Up Australia Day, our Operating Suite teams held a Reduce Bluey Use event. The theatre teams focussed on opportunities to reduce the use of absorbent pads (aka blueys) in operating procedures without impacting safe patient care.

Alfred Health staff have been involved in the Reduce Bluey Use campaign. It identifies opportunities to reduce the use of absorbent pads in our theatres, saving money in purchase and disposal while also reducing our waste to landfill.

Green procurement

The goods and services we need to deliver healthcare have an impact on the environment. The manufacturing of consumables, the utilities we use and waste generated from the use of medical products all contribute to our environmental impact.

Efficient use of goods and services, and minimising the environmental impact of our purchasing decisions improves our environmental performance. Alfred Health includes environmental sustainability in decision-making within our supply chain.

As part of recent upgrades to outdoor spaces at our hospital, we've used recycled plastic outdoor furniture in new installations and when replace existing fixtures. The furniture consists of composite post-consumer plastics, designed for use in the Australian environment and offering increased durability.

Greenhouse gas emissions

Victoria's public hospitals generated more than 735,000 tonnes of carbon emissions (CO2-e) from energy use during 2019–20.[4] Energy use at Alfred Health generated over 45,000 tonnes CO2-e during this time, contributing more than 6% of health facility greenhouse gas emissions from energy use.

As one of the state's largest health services, we have a responsibility to reduce greenhouse gas emissions in our service to reduce environmental impact and limit the burden of climate change on humanity.

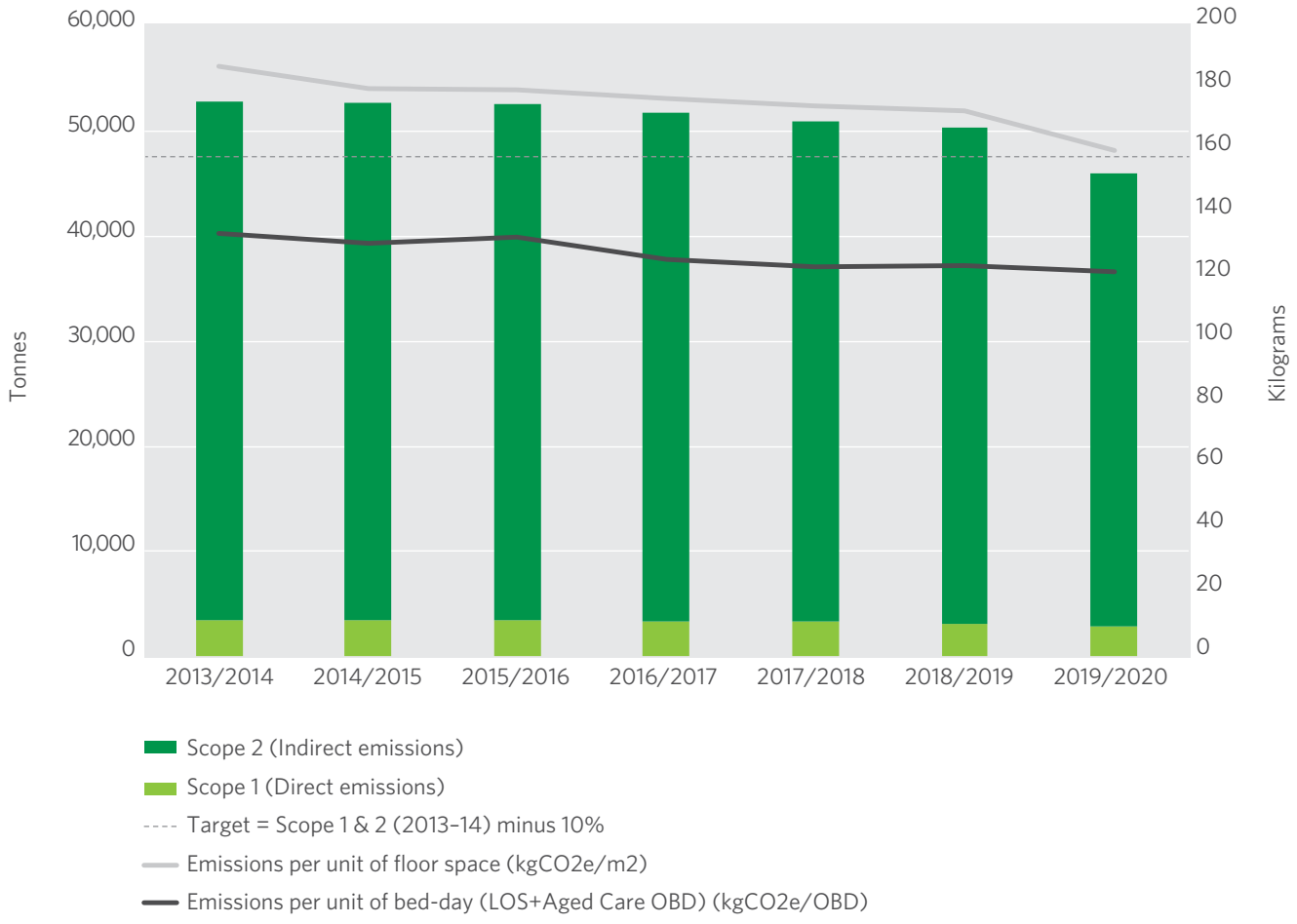
The Department of Health's Public environmental reporting guidelines[5] require health services to report on Scope 1 (direct emissions such as burning natural gas) and Scope 2 (indirect emissions such as grid electricity) greenhouse gas emissions from energy consumption.

The Alfred Health Environmental Sustainability Strategy 2017–21 sets a target to reduce greenhouse gas emissions by 10% from 2013–14. Since 2013–14, greenhouse gas emissions at Alfred Health have reduced by over 6,000 tonnes CO2-e, a 12% reduction over this time.

Emissions per m^2 floor area have reduced by 13.6%, while emissions per admitted bed-day have reduced by 8.3%. Carbon emissions per floor area provides a clearer understanding of our energy intensity, as services such as lighting and air conditioning continue to consume electricity despite reduced service delivery.

Reduction in carbon emissions from energy use over the last year are seen across each of our hospital sites as a result of ongoing upgrades to ageing equipment and infrastructure. There have been significant reductions at Caulfield Hospital of almost 25%. This is as a result of evolving models of care which see some inpatient services transition to home base care and the separation of the electricity supply to some of the aged care facilities, which are now under the operation of the neighbouring Hammond Care.

Figure 1: Greenhouse gas emissions (CO2-e)



4) DHHS Annual Report 2019–20
5) Public environmental reporting guidelines

Energy

The stationary energy Alfred Health consumes makes up the majority of our greenhouse gas emissions. Stationary energy includes grid electricity, natural gas, and electricity and steam energy produced by the cogeneration unit at The Alfred. Lighting and air conditioning associated with our 24-hour operation, clinical activities and day-to-day operation has a significant energy demand.

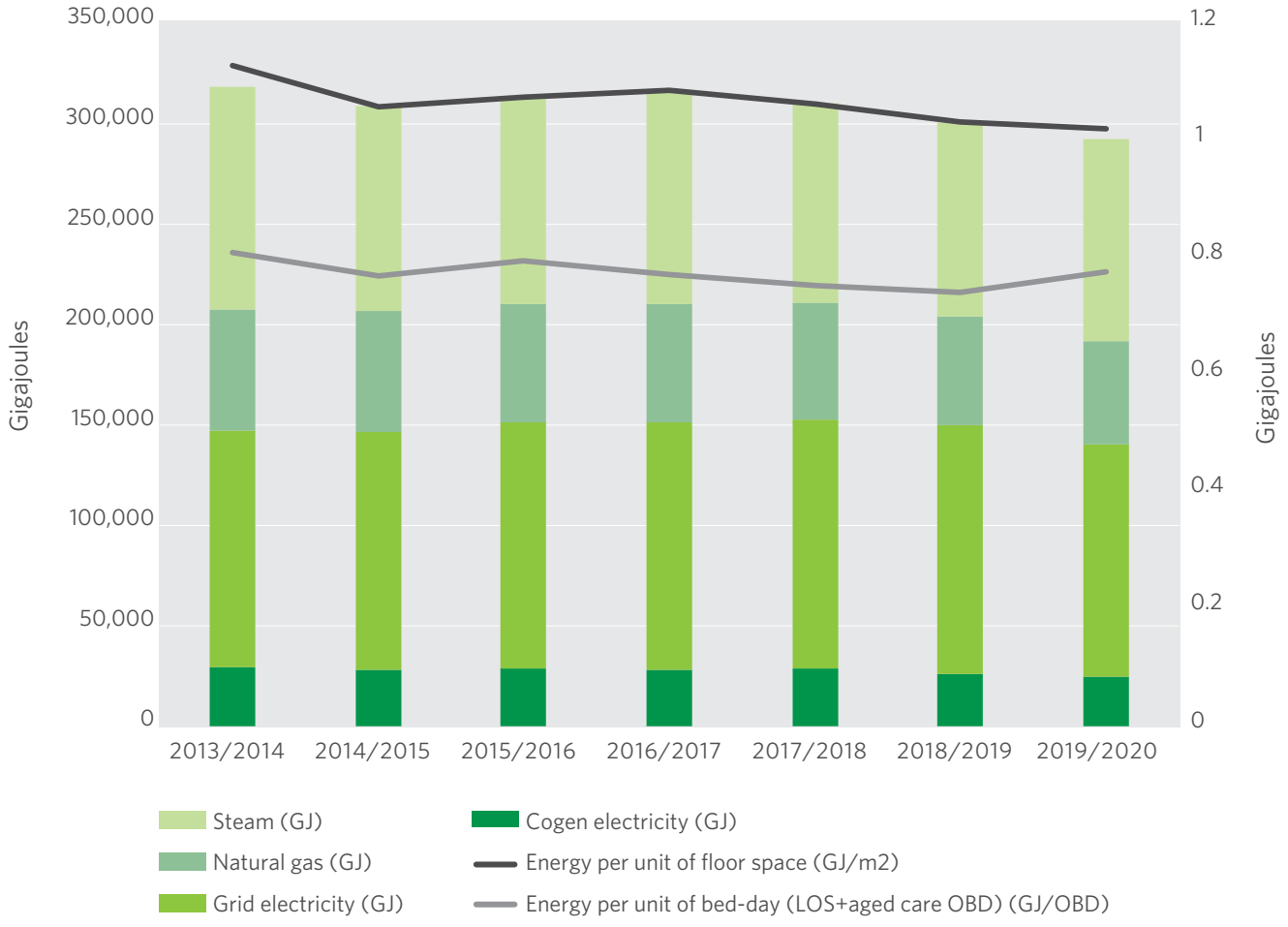
Grid electricity made up almost 40% of our stationary energy consumption in 2019–20, with the remainder consisting of steam (34%), natural gas (18%) and electricity from our cogeneration unit (8%). Our energy supply remains reliant on fossil fuels for continued operation. As a result, Alfred Health endeavours to improve energy efficiency through infrastructure and equipment upgrades to reduce energy use and environmental impact.

Since 2013–14, our total stationary energy consumption has reduced by over 26,000 Gigajoules (8%). We've seen a corresponding reduction in energy use per m^2 of 10% since 2013–14. While energy use per m^2 floor space has fallen overall, there was an increase in energy use per bed-day in the last year. This was due to the change in hospital occupancy due to COVID-19 during this time.

Following an energy audit at Melbourne Sexual Health Centre (MSHC) in May 2019, energy efficient LED lighting was installed to replace existing fluorescent lighting in February 2020. The project improved the indoor environment for staff and visitors, while reducing carbon emissions from energy use at MSHC by 25%. The upgrade reduced annual electricity costs by $12k with project costs expected to be recovered through power cost savings in under two years.

In conjunction with support services provider Spotless, 26 inefficient thermal air hand dryers were replaced with jet air hand dryers in public toilets at The Alfred. This significantly improved energy efficiency while eliminating the use of paper towel in these areas. The success of this project saw a broader rollout of jet air hand dryers and removal of paper towel dispensers in 24 public toilets at our Caulfield and Sandringham hospitals during 2019–20.

Figure 2: Energy (GJ)



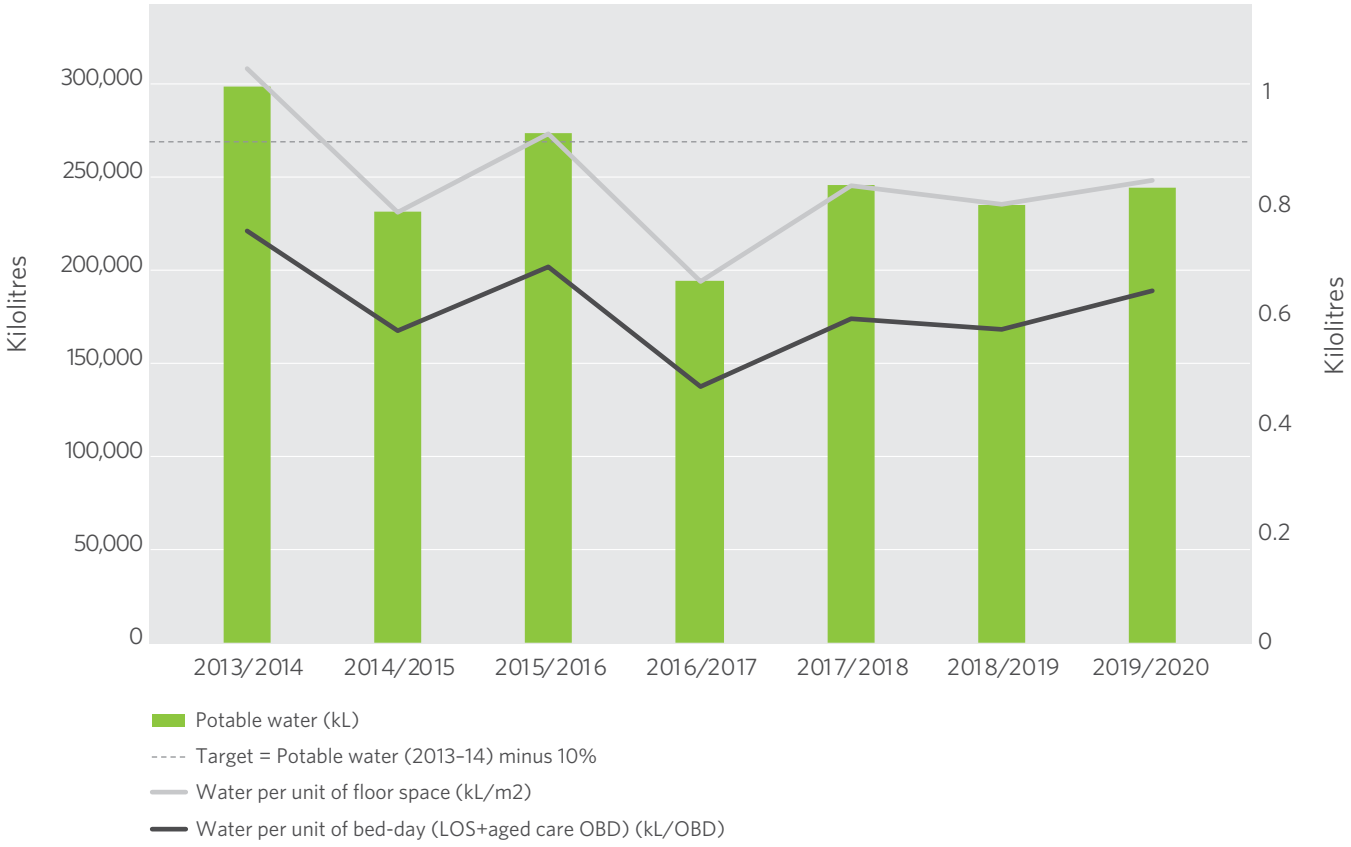
Water

Alfred Health consumed 244 megalitres of water in 2019–20. This was a slight increase in consumption compared to 2018–19, however previous investigations into our water consumption data have shown variances due to metering issues.

Healthcare delivery is water intensive, from clinical operations such as haemodialysis and sterilising medical equipment, to water consumed by chillers to service our buildings. We continue to replace end-of-life infrastructure with modern efficient equipment to help reduce our water consumption.

The Alfred Health Environmental Sustainability Strategy 2017–21 sets a target to reduce potable water consumption by 10% from 2013–14. Since 2013–14, potable water use at Alfred Health has reduced by over 54 million litres, an 18% reduction over this time.

Figure 3: Water (kL)



Waste and recycling

Alfred Health is dedicated to minimising our waste to landfill and increasing recycling rates to reduce waste disposal costs and environmental impacts. Healthcare delivery generates significant waste associated with single-use disposable items such as paper towel, soft plastic packaging and personal protective equipment.

The Alfred Health Environmental Sustainability Strategy 2017–21 sets a target to increase waste diversion from landfill by 15% from 2013–14. Since 2013–14, total recycling at Alfred Health has increased by almost 240 tonnes, a 48% increase over this time. Our recycling rate in 2019–20 was 19%, well below the Victorian public health service average of 29%.[6]

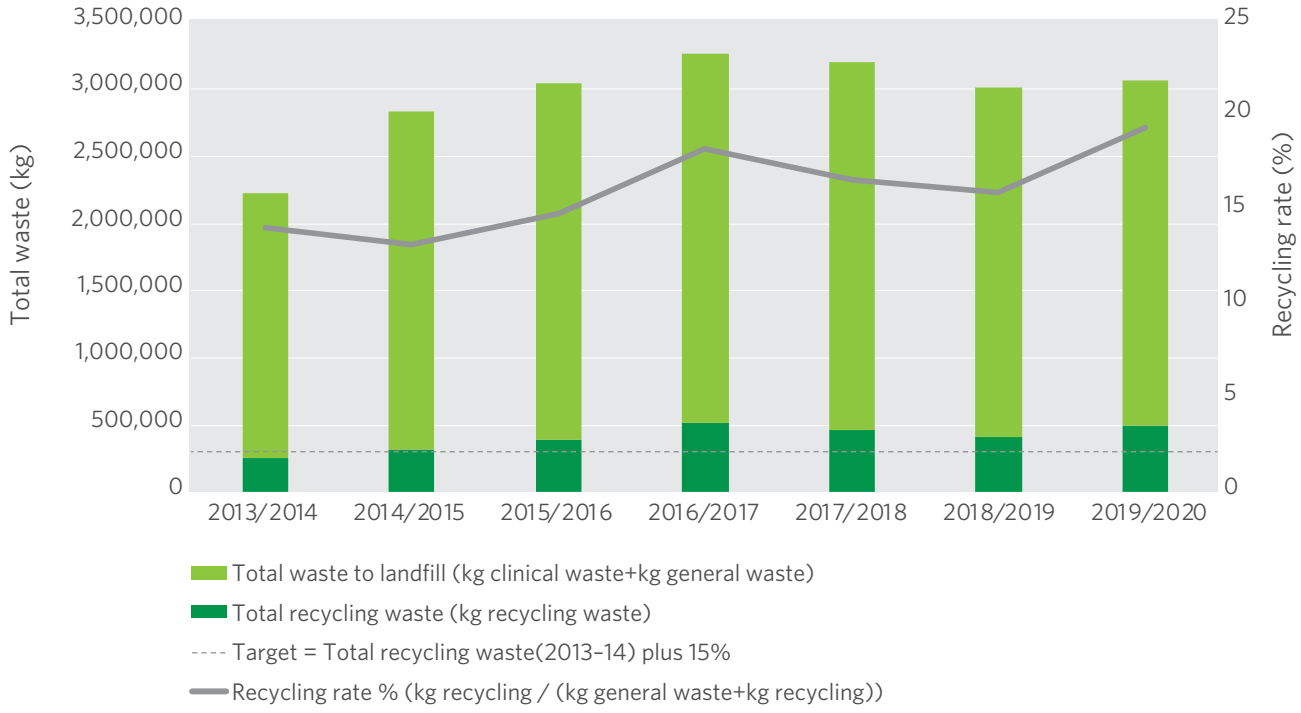
While the recycling results are positive, our waste to landfill per patient treated has increased from 3.36kg per patient in 2013–14 to 4.17kg per patient in 2019–20, a 19% increase in waste per patient. Total waste generated has increased by 800,000 kilograms during the same period, a 27% increase.

To help reduce waste to landfill and increase recycling, we trialled a waste standardisation strategy at Sandringham Hospital. The "War on Waste" strategy aimed to improve waste segregation through standardised colours, signage and placement of waste infrastructure.

The strategy doubled recycling rates and reduced waste to landfill by 10% at Sandringham Hospital. This also resulted in a 6% saving in waste disposal costs at the facility. The project was a finalist in the Premier's Sustainability Awards 2020.[7]

Sandringham Hospital has been leaders in improving waste segregation with its War on Waste strategy

Figure 4: Waste and recycling



6) DHHS Annual Report 2019–20
7) Premier's Sustainability Awards 2020

Sustainable travel and transport

Alfred Health aims to reduce carbon emissions from corporate transport and encourage zero and low-carbon transport. This includes our vehicle use for business operations, and within staff, visitors and patients travelling to our facilities.

Our sustainable transport objectives include increasing use of active transport and low carbon modes of transport such as walking, cycling and public transport. Digital public transport timetable displays at reception and the Active Travel Zone at The Alfred support our community to travel sustainably.

In response to feedback from staff, in April 2020 a secure bicycle parking facility was established at Caulfield Hospital. With shower facilities nearby, the new bike park holds up to 20 bikes and includes a bicycle repair station. This project was a collaboration between Population Health, Caulfield Hospital Staff Wellbeing Group and Non-Clinical Support Services.

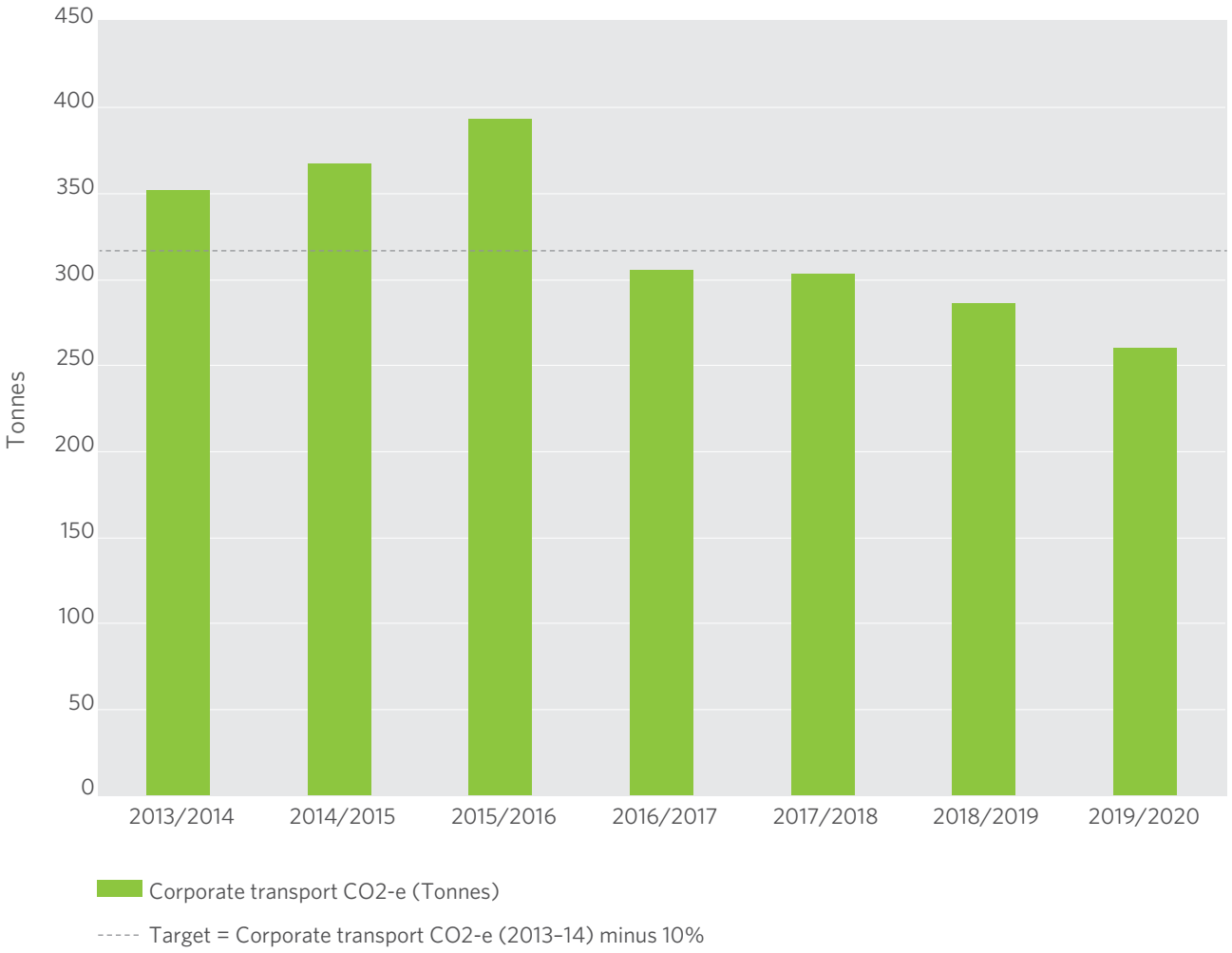
The Alfred Health *Environmental Sustainability Strategy 2017–21* sets a target to reduce greenhouse gas emissions from our fleet by 10% from 2013–14. Carbon emissions from vehicle use have reduced by over 90 tonnes in this time, a 26% reduction in emissions.

While carbon emissions from our vehicle fleet have reduced, we've seen an increase in carbon emissions per kilometre over the last four years. Reported vehicle kilometres relies on odometer readings when fuel purchases are made. Our fleet provider has indicated missing data in more recent years as a reason for reduced total kilometres and increased carbon emissions per kilometre.

Ride 2 Work Day with a staff breakfast. The day recognises the benefits of riding to personal health and the environment through reduced transport carbon emissions.

Sustainable travel and transport

Figure 5: Transport emissions (CO2-e)



Appendices

Greenhouse gas emissions

Total greenhouse gas emissions (tonnes CO2e)	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Scope 1	3,457	3,469	3,436	3,349	3,330	3,100	2,918
Scope 2	49,332	49,163	49,095	48,319	47,596	47,240	43,088
Total	**52,789**	**52,632**	**52,531**	**51,668**	**50,926**	**50,340**	**46,007**

Normalised greenhouse gas emissions	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Emissions per unit of floor space (kgCO2e/m2)	186.90	180.14	179.80	176.84	174.49	172.85	160.47
Emissions per unit of Separations (kgCO2e/Separations)	541.49	487.48	468.52	444.62	424.10	412.05	396.46
Emissions per unit of bed-day (LOS+Aged Care OBD) (kgCO2e/OBD)	134.14	130.95	132.93	125.72	123.72	123.91	122.14

Stationary energy

Total stationary energy purchased by energy type (GJ)	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Cogen electricity	29,022	27,455	28,529	27,595	28,539	25,927	24,234
Electricity	118,078	118,861	122,445	123,396	123,620	123,581	115,745
Natural gas	60,481	60,422	59,051	59,065	58,740	54,604	51,574
Steam	110,819	101,793	103,544	106,656	98,866	96,406	100,571
Total	**318,400**	**308,531**	**313,569**	**316,713**	**309,767**	**300,518**	**292,124**

Normalised stationary energy consumption	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Energy per unit of floor space (GJ/m2)	1.13	1.06	1.07	1.08	1.06	1.03	1.02
Energy per unit of separations (GJ/separations)	3.27	2.86	2.80	2.73	2.58	2.46	2.52
Energy per unit of bed-day (LOS + aged care OBD) (GJ/OBD)	0.81	0.77	0.79	0.77	0.75	0.74	0.78

Embedded generation

Total embedded stationary energy generated by energy type (GJ)	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Normalised embedded generation	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Embedded generation per unit of floor space (GJ/m2)	0	0	0	0	0	0	0
Embedded generation per unit of separations (GJ/separations)	0	0	0	0	0	0	0
Embedded generation per unit of bed-day (LOS + aged care OBD) (GJ/OBD)	0	0	0	0	0	0	0

Water

Total water consumption by type (kL)	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Potable water	299,075	231,508	273,700	194,262	246,060	234,952	244,434
Class A recycled water	0	0	0	0	0	0	0
Reclaimed water	0	0	0	0	0	0	0
Total	299,075	231,508	273,700	194,262	246,060	234,952	244,434

Normalised water consumption (Potable + Class A)	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Water per unit of floor space (kL/m2)	1.06	0.79	0.94	0.66	0.84	0.81	0.85
Water per unit of separations (kL/separations)	3.07	2.14	2.44	1.67	2.05	1.92	2.11
Water per unit of bed-day (LOS + aged care OBD) (kL/OBD)	0.76	0.58	0.69	0.47	0.60	0.58	0.65

Water re-use and recycling	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Re-use or recycling rate % (class A + reclaimed / potable + class A + reclaimed)	0	0	0	0	0	0	0

Waste	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Total waste generated (kg clinical waste+kg general waste+kg recycling waste)	2,225,618	2,837,972	3,045,812	3,262,440	3,206,792	3,012,201	3,060,770
Total waste to landfill generated (kg clinical waste+kg general waste)	1,966,232	2,516,337	2,660,144	2,748,438	2,747,303	2,600,974	2,562,280
Total recycling waste (kg recycling waste)	259,386	321,634	385,667	514,001	459,489	411,228	498,490
Total waste to landfill per patient treated ((kg clinical waste+kg general waste)/PPT)	3.36	4.17	4.42	4.39	4.33	4.12	4.17
Recycling rate % (kg recycling/(kg general waste+kg recycling))	14.08	13.16	14.79	18.25	16.61	15.92	19.35

Transport

Corporate transport	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Reported vehicle kilometres ('000km)	641	828	1,088	1,369	1,290	1,328	1,042
Tonnes CO2-e corporate transport	352.145	367.361	393.473	305.450	303.220	286.337	260.588
Tonnes CO2-e per 1,000 reported kilometres	0.549	0.444	0.362	0.223	0.235	0.216	0.250