ENVIRONMENTAL SUSTAINABILITY STRATEGY 2024-30

Barwon Health

CARING FOR OUR COMMUNITY AND OUR PLANET

We, Barwon Health, acknowledge the Traditional Owners of the land, the Wadawurrung people of the Kulin Nation.

We pay our respects to the Elders past, present and emerging. We thank the Traditional Owners for custodianship of the land, and celebrate the continuing culture of the Wadawurrung people acknowledging the memory of honourable ancestors.

Barwon Health

Be Proud

Barwon Health is committed to LGBTIQA+ inclusion

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FOREWARD BY THE CHIEF EXECUTIVE

In the 21st century, climate change has emerged as the most significant threat to global public health, with a growing body of research and evidence highlighting the detrimental effects of climate change on human wellbeing. It is imperative for us to recognise this pressing reality and take proactive measures to care not only for our community but also our planet.

Barwon Health is actively seeking avenues to diminish its carbon footprint. We are proud of the work we have done with the Barwon Renewable Energy Partnership (B-REP) to increase our renewable energy use. B-REP is a partnership with Barwon Water and GeelongPort that enables the three organisations to take a closer step towards net zero emissions by investing in 100% renewable electricity.

Recognising that there is more work ahead of us, I am pleased to present our Environmental Sustainability Strategy 2024-2030, which will guide our organisation on how to reduce our carbon footprint and align with the Victorian government's target of net zero emissions by 2045. This strategy articulates our commitment to become a more environmentally responsible and sustainable health service. This can be achieved while improving health outcomes.

It is acknowledged that adapting services and building resilience in the face of the impacts of climate change will be necessary for the health sector, and will require a dedicated strategy which is beyond the scope of this plan.

I appreciate our staff and key stakeholders, who are strong advocates for more action, and I value their contributions. As we take another step towards achieving environmental sustainability, I encourage everyone to get involved. Realising the goals and objectives outlined in this strategy will require robust collaboration and innovation. It is essential work. Together, we can make a difference and build a healthier, more sustainable future for all.

Frances Diver
Chief Executive

OUR COMMITMENT

Barwon Health recognises that environmental sustainability is integral to protecting the future health and wellbeing of our community and the planet.

We will lead by example among our staff, our community and the wider region.

WE ARE COMMITTED TO DECARBONISE OUR HEALTHCARE OPERATIONS BY REDUCING THE DIRECT AND INDIRECT EMISSIONS THAT WE CONTROL IN ALIGNMENT WITH THE VICTORIAN GOVERNMENT'S TARGET OF NET ZERO BY 2045.

WHY WE MUST ACT NOW

CLIMATE CHANGE ADVERSELY AFFECTS HUMAN HEALTH

Climate change caused by human activities is regarded as the biggest global public health threat in the 21st century. The healthcare system accounts for seven per cent of Australia's total greenhouse gas emissions and will need to change to respond to new and emerging health risks arising from changes in climate, for example changing patterns of disease, increased heat stroke, changes in vector-borne diseases and responding to extreme weather events such as floods and fires.

In 2019, the CSIRO report on the Barwon Region's climate projections[1] indicated that temperature will continue to increase, rainfall will decline overall but extreme rainfall events will become more intense, sea levels will rise, and the number of high fire danger days will increase. Our community will experience more severe climate events, particularly heatwaves, floods, drought and fires; all of which negatively impact human health and wellbeing as depicted in Figure 1.

OUR COMMUNITY IS GROWING RAPIDLY

Barwon Health serves a diverse community within the G21 region, which is comprised of the City of Greater Geelong, Colac Otway Shire, Surf Coast Shire, Borough of Queenscliffe and Golden Plains Shire. The number of residents living within the G21 region is approximately 375,000[2]. Driven by migration from Melbourne, the G21 population is forecast to increase by 30.7 per cent to approximately 477,230 in 2036, equivalent to a population growth rate of 2.2 per cent per annum. In particular, the City of Greater Geelong has been identified as one of the Top five Local Government Areas with the largest growth from 2021 to 2036[3]. This projected population growth will have a significant impact on health service demand, which consequently influences Barwon Health's activity and the environmental impact from its services.

GOVERNMENT COMMITMENTS TO REDUCE ENVIRONMENTAL IMPACT

Pledges to reduce negative environmental impact, declared at various levels of Government, require Barwon Health to have an organisation-wide strategy to support environmental sustainability.

Australia has formally joined the Paris Agreement, an internationally binding treaty that came into force in 2016[4]. The goal of the Paris Agreement is to strengthen the worldwide response to the threat of climate change by:

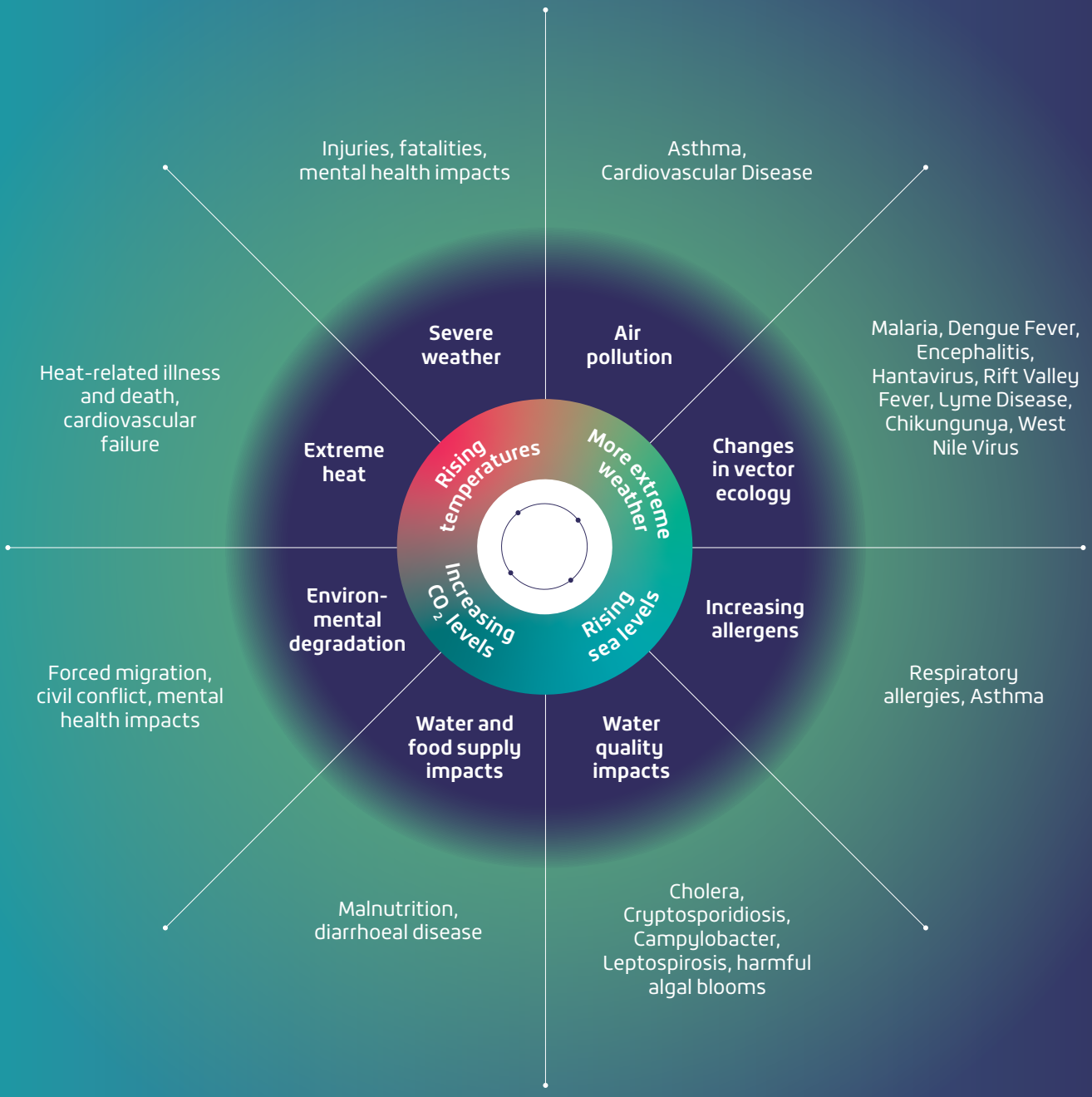
- Holding the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels.
- Pursuing efforts to limit temperature increase to 1.5 degrees Celsius.

Within Australia, the Federal Government has committed to achieving net zero emissions by 2050. The Victorian Government has a more ambitious target, aiming to reach net zero emissions by 2045[5].

The Victorian Renewable Energy (Jobs and Investment) Act 2017, aims to achieve 65 per cent renewable energy by 2030 and 95 per cent renewable energy by 2035[6], and is one mechanism to assist the Victorian Government to reach the net zero target. Some measures already underway are the Victorian Renewable Energy Target (VRET) 1[7], VRET 2[8], Victorian Gas Substitution Roadmap[9] and the Victoria's Zero Emissions Vehicle (ZEV) Roadmap[10].

IMPACT OF CLIMATE CHANGE ON HUMAN HEALTH

Figure 1: Impact of climate change on human health[11]



ENVIRONMENTAL PERFORMANCE

The environmental performance of an organisation can be illustrated by its 'carbon footprint', which is the organisation's overall greenhouse gas emissions. Using the Greenhouse Gas Protocol (GHGP)[12] Corporate Standard, Barwon Health's emissions are categorised as the following:

Scope 1: Direct emissions, which occur from sources that are owned or directly controlled by Barwon Health. These include gas, electricity and back-up generators used for power, petrol and diesel used by fleet vehicles, anaesthetic gases such as nitrous oxide, and refrigerants.

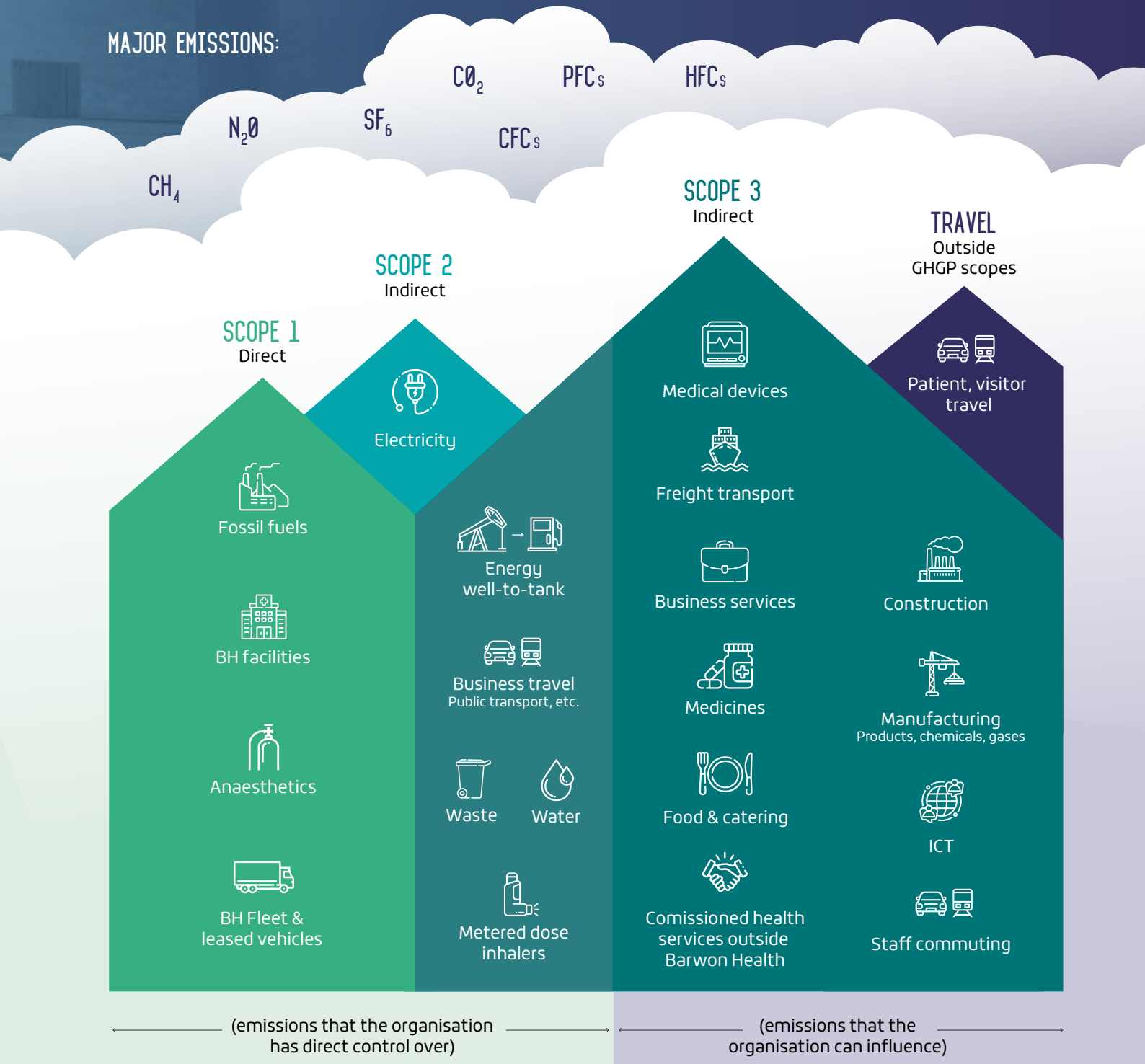
Scope 2: Indirect emissions from the generation of purchased energy, largely grid electricity.

Scope 3: Indirect greenhouse gas emissions which occur as a result of organisational activities not owned or controlled by Barwon Health. These include "upstream" emissions from the production and transport of the many products and items of equipment used by Barwon Health, and "downstream" emissions such as emissions from the waste created by Barwon Health, which is sent to landfill or incinerated.

Figure 2 provides an overview of a typical health service's carbon footprint.

BOUNDARIES OF CONTROL AND INFLUENCE

Figure 2: Overview of scope 1 - 3 emissions and boundaries of control and influence (adopted from NHS Delivering a Net Zero Report)[13]



BARWON HEALTH EMISSIONS

2022/23 financial year

Under the National Greenhouse and Energy Reporting (NGER) Scheme, Barwon Health is required to report its Scope 1 and 2 emissions annually. In the 2022/23 financial year, Barwon Health's emissions as reported to the NGER Scheme were:

Scope 1: 10,725 tonnes CO2-e (carbon dioxide equivalent)

Scope 2: 18,594 tonnes CO2-e

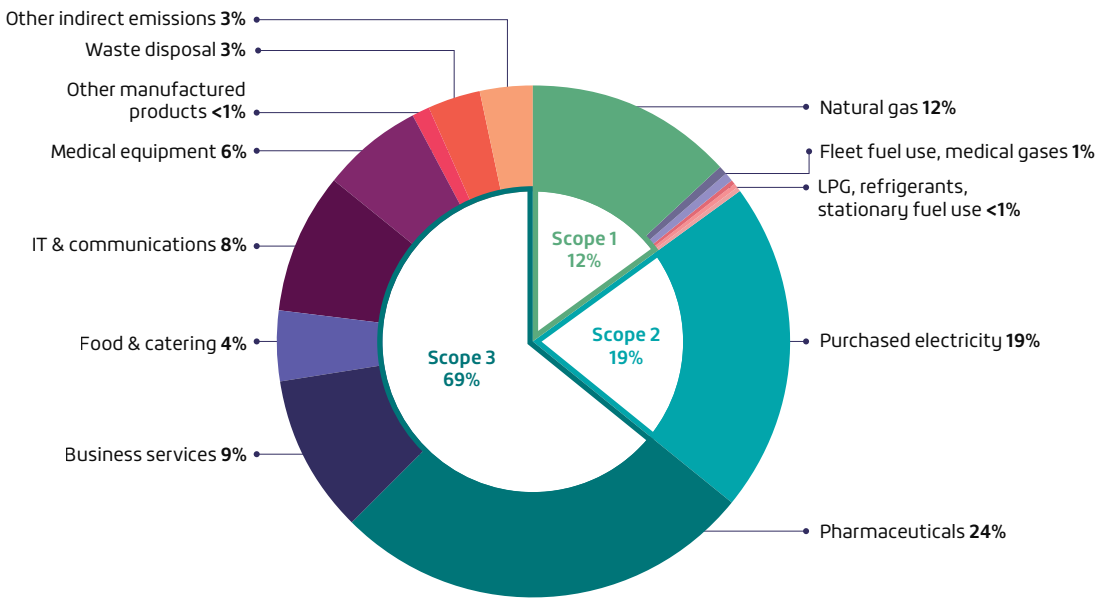
Our Scope 3 (indirect) emissions for 2022/23 were estimated using the Global Green and Healthy Hospitals' (GGHH) Climate Impact Checkup Tool

Scope 3: 66,408 tonnes CO2-e

Barwon Health's total carbon footprint (Scopes 1, 2 and 3) was therefore estimated to be 97,030 tonnes CO2-e in 2022/23. As highlighted in Figure 3, the majority (69%) of our carbon footprint is attributed to Scope 3 emissions. This is consistent with the global climate footprint breakdown for health services outlined in the 2019 Health Care Without Harm report[14].

The high proportion of Scope 3 emissions highlights the need for Barwon Health to further consider actions to reduce Scope 3 emissions, in addition to taking action to reduce Scope 1 and 2 emissions that are more directly within our control.

Figure 3: Estimated Barwon Health emission sources breakdown for FY2022/23




3M
TRIDENT

WHAT WE ARE ALREADY DOING

1. ESTABLISHMENT OF THE ENVIRONMENTAL SUSTAINABILITY EXECUTIVE COMMITTEE

In 2023, an Environmental Sustainability Executive Committee was established to lead, coordinate and provide oversight of the organisation's efforts to reduce our environmental impact. The Committee has members from across Barwon Health, including representatives from executive, clinical, corporate and support services. The Committee meets regularly and considers a wide range of issues related to environmental sustainability and will provide oversight for the implementation of this strategy.

2. BARWON RENEWABLE ENERGY PARTNERSHIP (B-REP)

B-REP is a formal partnership between Barwon Health, Barwon Water and GeelongPort to bring the three organisations closer to achieving net zero emissions. A Public Private Partnership energy contract has been established utilising electricity from the Mount Gellibrand Wind Farm to offset part of the electricity used by each of the partners. For Barwon Health, this will be approximately 15 gigawatt-hours, which is equivalent to the total electricity used at University Hospital Geelong each year. This contract creates Large-scale Generation Certifications (LGCs), which is a mechanism by which Barwon Health can offset its Scope 2 emissions. In 2023-24, Barwon Health will offset 12,750 tonnes of carbon dioxide emissions. For more details please visit the Australian Government Clean Energy Regulator (www.cleanenergyregulator.gov.au).

3. ENVIRONMENTALLY FRIENDLY INFRASTRUCTURE

As a large service delivery agency and employer, Barwon Health has significant infrastructure that contributes to our carbon footprint. To reduce our environmental impact, we are committed to optimising our existing infrastructure to enhance efficiency in both energy and water usage, as well as ensuring that all new capital developments are designed, constructed and operated in an environmentally friendly manner. Our commitment is measured through:

- Achieving National Australian Built Environment Rating System (NABERS) rating of 5 and 4 stars out of 6.0 for energy and water efficiency respectively, at University Hospital Geelong.
- Upgrading lighting to LED and installing solar systems across all Barwon Health sites.
- Incorporating environmentally sustainable design (ESD) principles into new buildings. For example, the new 16-bed Mental Health and Wellbeing Unit at the McKellar Centre has been designed to minimise the need for space heating and cooling, has solar panels and features electric vehicle charging stations.

4. ELECTRIC VEHICLES

Barwon Health has 16 electric fleet cars and charging facilities at University Hospital Geelong and the McKellar Centre. We have also partnered with South West Healthcare and Western District Health Service to provide charger access for staff who are driving electric fleet cars across the Barwon South West region.

5. WASTE REDUCTION AND RESOURCE RECOVERY PROGRAM

Barwon Health has a comprehensive recycling and resource recovery program. We collect and separate a wide range of waste materials including cardboard, commingled waste, e-waste, fluorescent tubes, mattresses, food waste, PVC, packaging plastics, paper, polystyrene foam and wood.

We collaborate with local organisations such as Geelong Disabled People's Industries (GDP) to recover valuable materials for reuse and reprocessing. Recently, we partnered with Deakin University in implementing a study to reduce personal protective equipment (PPE) waste and we installed a new state-of-the-art dishwashing system at the McKellar Centre Central Production Kitchen that reduces water and electricity usage.

6. LOCAL 'GREEN' GROUPS

A number of local 'green' groups have been established by Barwon Health staff who are passionate about environmental sustainability to actively drive sustainable practices within their workplace. These include the Operating Services Sustainability Group, Barwon Health Climate Doctors Group and the Pharmacy Green Group. Local links have also been developed with Deakin University who have appointed a senior academic (Dr Mike Forrester) to support health sector sustainability.

WHAT WE ARE GOING TO DO NEXT

Barwon Health has identified six strategic priorities, aggregated from the ten Global Green and Healthy Hospitals key agenda areas. Each strategic priority is accompanied by a goal and objectives, focused on promoting sustainable practices to reduce greenhouse gas emissions.

BARWON HEALTH'S SIX STRATEGIC PRIORITIES FOR ENVIRONMENTAL SUSTAINABILITY

STRATEGIC PRIORITY: LEADERSHIP

Leadership is essential for the successful integration of environmental sustainability into healthcare systems [15]. As a major regional health service, we will continue to demonstrate leadership by incorporating environmental sustainability as a core organisational focus, extending beyond isolated practices to reshape the organisation's systems and processes towards carbon-neutral operations.

The Barwon Health Board will provide the leadership to meet our commitment to decarbonise our healthcare operations. The Board will identify, support and advocate for initiatives that reduce our climate footprint.

Goal: Embed environmental sustainability into organisational day-to-day operations

Objectives:

- Facilitate regular communication and staff education on environmental sustainability, including the establishment of the Green Champions' network.
- Collaborate and partner with external stakeholders such as Barwon Water, GeelongPort, Deakin University, City of Greater Geelong and Geelong Sustainability on environmental sustainability initiatives.
- Report progress towards environmental sustainability goals and objectives.

STRATEGIC PRIORITY: ENERGY, WATER AND BUILDINGS

Health services create a significant environmental impact through extensive consumption of energy derived from fossil fuels [16] and the heavy reliance on potable water[17]. Implementing energy-saving measures and transitioning to cleaner, renewable energy sources such as solar and wind energy can effectively cut down both energy expenditures and greenhouse gas emissions. Enhancing water efficiency and exploring the use of alternatives like rainwater and recycled water will reduce dependence on scarce potable water.

Goal: Enable Barwon Health's infrastructure to support carbon-neutral operations

Objectives:

- Ensure all Barwon Health's capital developments are designed to minimise carbon emissions and water use.
- Upgrade existing infrastructure to reduce carbon emissions and improve energy and water efficiency ratings through the Energy Performance Contract (EPC) supported by the Victorian Government.

STRATEGIC PRIORITY: WASTE AND CHEMICALS

In 2022-23, Barwon Health produced 1,929 tonnes of waste, all of which was sent to landfill, with management and disposal costing $934,666. The average amount of waste per patient treated was 5.4 kg, an increase from 4.84 kg the previous year.

Beyond the financial implications, disposal of solid waste contributes to greenhouse gas emissions through decomposition in landfill. We will continue to evaluate and improve our waste management practices across all Barwon Health's sites.

Goal: Actively reduce, reuse and recycle waste

Objectives:

- Seek opportunities to reduce single use medical and non-medical items.
- Improve and expand recycling streams across all facilities.
- Review processes and operations within food services to maximise opportunities to reduce waste and associated emissions.
- Reduce the use of, and disposal of, toxic chemicals appropriately at all sites.
- Collaborate with local organisations to reuse and recycle waste.

STRATEGIC PRIORITY: PHARMACEUTICALS

The global pharmaceutical industry significantly impacts the environment through the production and disposal of medicines, contributing to large volumes of greenhouse gas emissions and chemical waste. In Australia, pharmaceuticals contribute 19 per cent to the healthcare system's carbon footprint[18]. Barwon Health will seek ways to safely reduce the unnecessary use of pharmaceuticals, improve pharmaceutical waste collection and disposal, and increase recycling of pharmaceutical packaging.

Goal: Reduce environmental impact associated with pharmaceutical use

Objectives:

- Continue to improve pharmaceutical waste disposal and recycling.
- Work towards reducing unnecessary medicine prescriptions.

STRATEGIC PRIORITY: PURCHASING AND FOOD

Hospitals acquire a wide range of products to provide services for consumers. The choices made during the procurement process can have far-reaching consequences. These choices determine the products and materials used within healthcare facilities, which, in turn, affect the sector's carbon footprint. Adopting eco-friendly procurement policies, including prioritising green products and sourcing locally, can significantly lower environmental impact. By leveraging our substantial purchasing influence we can shape the supply chain, compelling manufacturers to establish sustainable practices, including reducing packaging waste and using environmental responsible production methods[19].

Goal: Reduce carbon footprint through purchasing decisions

Objectives:

- Incorporate environmental sustainability as a core policy in relevant procurement contracts.
- Prioritise products that have a lower carbon footprint and packaging or use recycled materials.

STRATEGIC PRIORITY: TRANSPORTATION

Transportation within the healthcare sector, including the movement of patients, staff and medical supplies has a significant ecological impact via extensive greenhouse gas emissions, energy consumption and air pollution. Health services can lower this impact by implementing a range of sustainable and innovative measures such as the provision of telemedicine and transitioning to zero-emissions vehicles.

Goal: Reduce carbon emissions by improving transportation strategies for patients and staff

Objectives:

- Reduce unnecessary consumer and staff travel through process and system improvement and adoption of digital solutions.
- Continue to upgrade Barwon Health fleet from using fossil fuels to zero-emissions technologies.
- Encourage and facilitate active transport for consumers and staff.
- Collaborate with relevant stakeholders to improve access to public transport.

WHAT ARE THE MEASURES OF OUR SUCCESS

We will measure our success towards achieving the strategic goals and objectives using the indicators outlined in Table 1. These measures will be reported in the Environmental Performance section of our Annual Reports.

Table 1. Evaluation framework for the Environmental Sustainability Strategy 2024-2030

INDICATOR	UNIT
Scope 1 emissions	tonnes CO2-e
Scope 2 emissions	tonnes CO2-e
Scope 3 emissions*	tonnes CO2-e
Clinical waste	tonnes
Landfill waste	tonnes
Water use	megalitres
Recycling rate	%
NABERS Energy rating (University Hospital Geelong)	# stars
NABERS Water rating (University Hospital Geelong)	# stars
NABERS Energy rating (McKellar Centre)	# stars
NABERS Water rating (McKellar Centre)	# stars
National Weighted Activity Unit (NWAU)	#

* estimated using the GGHH carbon inventory tool.

The NWAU indicator includes acute admitted care, subacute care, emergency care and non-admitted care activity. It is useful for reporting against emissions, as the level of emissions generated is closely linked to service activity.

	YEAR									
	2022/23 (BASELINE)		2023/2024		2025/26		2027/28		2029/30	
	Total	NWAU	Total	NWAU	Total	NWAU	Total	NWAU	Total	NWAU
	10,725									
	18,594									
	68,860									
	285									
	1,644									
	200									
	35.7									
	5.0									
	4.0									
	3.0									
	3.0									
	108,495									

REFERENCES

1 Clarke JM, Grose M, Thatcher M, Round V & Heady C. 2019. Barwon Climate Projections 2019. CSIRO, Melbourne Australia.

2 https://profile.id.com.au/g21-region/population?EndYear=2011&DataType=UR

3 https://www.planning.vic.gov.au/guides-and-resources/data-and-insights/victoria-in-future

4 https://unfccc.int/process-and-meetings/the-paris-agreement

5 https://www.premier.vic.gov.au/setting-ambitious-emissions-reduction-target

6 https://www.energy.vic.gov.au/renewable-energy/victorian-renewable-energy-and-storage-targets

7 https://www.energy.vic.gov.au/renewable-energy/victorian-renewable-energy-and-storage-targets/victorian-renewable-energy-target-auction-vret1

8 https://www.energy.vic.gov.au/renewable-energy/victorian-renewable-energy-and-storage-targets/victorian-renewable-energy-target-auction-vret2

9 https://www.energy.vic.gov.au/renewable-energy/victorias-gas-substitution-roadmap

10 https://www.energy.vic.gov.au/__data/assets/pdf_file/0036/575676/Zero-Emission-Vehicle-ZEV-Roadmap.pdf

11 https://www.cdc.gov/climateandhealth/effects/default.htm

12 https://ghgprotocol.org/corporate-standard

13 https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2022/07/B1728-delivering-a-net-zero-nhs-july-2022.pdf

14 https://noharm-global.org/sites/default/files/documents-files/5961/HealthCaresClimateFootprint_092319.pdf

15 https://greenhospitals.org/leadership

16 https://greenhospitals.org/energy

17 https://www.health.vic.gov.au/planning-infrastructure/managing-health-and-environmental-risks-of-water-supply

18 Malik, A., Lenzen, M., McAlister, S., & McGain, F. (2018). The carbon footprint of Australian health care. The Lancet. Planetary health, 2(1), e27–e35. https://doi.org/10.1016/S2542-5196(17)30180-8

19 https://greenhospitals.org/purchasing

NOTES

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