# **Sustainability Plan**

#### 2013-2018



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# SUSTAINABILITY PLAN 2013-2018



## Foreword

This Sustainability Plan for Sydney Local Health District demonstrates the strong commitment and determination of the District to become an environmentally responsible, sustainable, adaptable and resilient organisation.

There is now overwhelming scientific evidence that climate change is occurring and that the most probable cause of this is human activity; primarily greenhouse gas emissions. The evidence suggests there is an urgent need to take action to mitigate the negative effects of global warming in order to avoid serious future environmental, health, social and economic consequences.

In addition to contributing to the broader social good, the health system has much to gain through implementing carbon reduction strategies. There is, for example, a strong financial incentive for providing low carbon health services. Reducing carbon, especially through improved energy efficiency, allows resources to be freed up for our important core purpose of improving health status and providing patient care.

This Sustainability Plan has been developed within the context of international, national, and local legislation and policies that require the District to reduce greenhouse gas emissions and meet defined reporting targets. It brings together strategies that have been devised at various levels of government and through a number of government agencies and instrumentalities into a single document and presents these within a public health framework. The plan, very importantly, addresses carbon reduction though an whole-of-organisation health promoting approach.

It requires all staff, personally and collectively, to address environmental sustainability. Strategies cover issues associated with sustainable energy and water usage, transport, food, waste disposal, procurement and capital works.

A comprehensive carbon audit is being developed as a linked project to develop the carbon baseline. This will allow the District to measure its progress in implementing strategies and will guide future action.

The Sustainability Plan for Sydney Local Health District paves the way for the District to be a healthcare leader in sustainability. We enthusiastically welcome this Plan and look forward to reporting significant progress in carbon reduction over the next five years.

Dr Teresa Anderson Chief Executive Sydney Local Health District

2. Hilling

Hon Ron Phillips Chair Sydney Local Health District Board



## 1. Introduction

There is now overwhelming evidence that climate change is occurring, primarily as a result of carbon dioxide emissions.<sup>1</sup> There is a need for rapid and drastic greenhouse gas emissions reductions if we are to avoid what has been called "the biggest global health threat of the 21st century".<sup>2</sup> The health sector has a pivotal role to play in mitigating and adapting to the challenge. There is now awareness of the health sector's contribution to the problem, due to its significant carbon footprint,<sup>3</sup> its role in environmental stewardship, and as a potential exemplar of sustainable progress.

The World Health Organisation has drawn attention to the likely devastating impacts of climate change on human health.<sup>4</sup> These include respiratory disease due to air pollution, increased transmission of infectious disease, and the consequences of extreme weather events, such as heatwaves and floods. The effects of climate change on water and food security and extreme climatic events are likely to pose the greatest challenges to the health sector.<sup>5</sup> Environmental problems impact most heavily on the most vulnerable members of society.<sup>2</sup> The healthcare sector has an important part to play both in protecting these vulnerable citizens, and more broadly, as an advocate, to ensure that the public health implications of climate change remain on the national and global agendas.

There are potentially significant health, economic and social co-benefits in policies that seek to reduce greenhouse gases. The Stern Review, a comprehensive analysis of the economics of climate change, concluded that the economic benefits of strong, early action against climate change far outweigh the costs of doing nothing.<sup>6</sup> Strategies to reduce energy consumption and increase efficiency in power and water use are cost-saving measures, allowing money to be redirected into patient care. In addition, sustainability policies based on low-energy, low-carbon transportation that encourage active transport, such as walking or cycling, will have immense benefits to personal health. These policies aim to achieve: less obesity and cardiovascular disease, better air quality, increased social contact, and improved mental wellbeing.<sup>7</sup> Health sector engagement in sustainable solutions may provide unprecedented opportunities to address long-standing inequities and improve the health of the population.

The Sustainability Plan for Sydney Local Health District has been developed in recognition of the urgent need to act on climate change, and to comply with international, national and local legislative and regulatory requirements. It presents an opportunity for a whole-of-organisation response that is based on sound public health principles. This document outlines the sustainability strategies that health services have taken so far and provides a detailed plan for future activities to reduce the District's carbon footprint. It describes the strategies and actions required to achieve effective carbon management across health care organisations in the strategic areas of governance, energy, water, procurement, transport, food, waste, and capital works.

A carbon audit will be undertaken, linked to the plan, which will provide the Sydney Local Health District with a baseline from which to measure the impact of this range of strategies in reducing carbon.



# 2. The planning process

#### 2.1 Sustainability committee

In 2012 Sydney Local Health District established the SLHD Sustainability Committee with high level representation from the District and its facilities. The purpose of the Committee was to implement the District's sustainability agenda.

In line with recommendations from the NSW Government, interstate and overseas authorities for health facilities to reduce their carbon footprint, the then Sydney South West Area Health Service Area Managers' Group, in 2010, established an Area Sustainability Committee. This committee replaced the existing Area Healthy Hospitals Steering Committee, which had been responsible for the implementation of policies and initiatives in relation to: smoke-free environment; healthier food choices; workplace breastfeeding; and physical activity opportunities for staff and visitors. This Plan was developed under the auspices of this Committee.

#### 2.2 Energy and water sustainability initiatives

While the SLHD Sustainability Committee is a relatively recent development, environmental concerns and sustainable objectives have influenced health service operations since 2006/2007. The Office of Environment and Heritage, formerly known as the Department of Environment Climate Change and Water mandated energy and water savings action plans for Royal Prince Alfred and Concord hospitals. These action plans were based on detailed water and energy audits, the plans commenced in 2008 and expired in 2012 with the vested savings being largely fulfilled. It is a NSW Government requirement that health facilities report annually on energy and water usage, along with reports on transport fuel, fleet data and waste. This reporting system is more than just a government requirement. It enables SLHD to monitor progress and identify where carbon emissions can be reduced.

The hospitals and facilities of SLHD are significant consumers of energy and water, as are their national and international counterparts. Energy and water consumption for the 2011-2012 financial year was as follows:

- 83 gigawatt hours of electricity and 157 terajoules of gas, about the same level of energy use as 10,000 households
- 537 megalitres of water, more than half an Olympic pool consumed per day
- 99,323 tonnes of carbon dioxide emitted, around the same as the annual greenhouse gas emissions of 18,000 cars

A number of effective measures have already been taken to address energy and water consumption within these healthcare facilities such as:

- Upgrading air-conditioning;
- Installing energy efficient lighting;
- Flow restrictors to wash basins and showers.

These initiatives generated significant financial savings and reduced the 2008/09 CO<sub>2</sub> emissions of the combined SLHD and South West Sydney LHD by 6,370 tonnes, a greenhouse gas reduction equivalent to removing 1,200 cars from our roads. The development of the *Sustainability Plan for Sydney Local Health District* will ensure that this health service will continue to prioritise water and energy efficiency.

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#### 2.3 Baseline greenhouse gas emissions analysis

In order to establish the current or baseline greenhouse gas emissions, a baseline audit will be undertaken. This baseline carbon audit uses financial and output data for operational aspects of all facilities, to calculate the GHG output. It covers, energy, water, procurement, transport, food, and waste.

The baseline carbon audit will inform carbon reduction planning and implementation by making managers aware of their carbon output; thus enabling them to compare performance with other facilities and assess their carbon emissions over time.



# 3. Policy, planning and legislative context

This Plan has been developed within the context of a number of international, national, state-wide policies, plans and legislation.

Policy	Key Issues
United Nations Framework Convention on Climate Change (1994)	The Convention on Climate Change entered into force in 1994. It sets an overall framework for intergovernmental efforts to confront the challenge posed by climate change.
	Under the Convention, governments:
	Gather and share information on greenhouse gas emissions, national policies and best practices;
	Launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts;
	• Cooperate in preparing for adaptation to the impacts of climate change.
	The Convention is subject to ratification, acceptance, approval or accession by States and by regional economic integration organisations. Australia is a party to the Convention.
Kyoto Protocol (2007)	The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. It sets binding targets for industrialised countries to reduce greenhouse gas emissions. While the Convention encourages countries to reduce greenhouse gas emissions, the Protocol commits them to reductions. Australia signed the instrument of ratification of the Protocol in December 2007.
	<b>Target:</b> Australia's Kyoto target is to limit greenhouse gas emissions in the 2008-2012 period to 108 per cent of 1990 emissions.
	<b>Reporting:</b> Australia reports annually to the United Nations Framework Convention on Climate Change through the National Greenhouse Gas Inventory.
World Health Organization Workplan on Climate Change and Health (2008)	The WHO was requested by the 61st World Health Assembly in 2008 to develop and implement a work plan to support member states in the protection of human health from climate change.
	The Climate Change and Health Workplan aims to:
	• Support health systems in order to enhance capacity for assessing and monitoring health vulnerability, risks and impacts due to climate change;
	Identify strategies and actions to protect human health, particularly of the most vulnerable groups;
	Share knowledge and good practices.
	The plan identifies four key areas: advocate and raise awareness; strengthen partnerships; enhance scientific evidence; strengthen health systems.

Policy	Key Issues
NSW State Plan (2012)	The State Plan is NSW Government's strategic vision for the future of the State. This document sets the following priorities and targets:
A Plan To Make NSW Number One	• Contain electricity costs. Assist business and households to realise annual energy savings of 16,000 GWh by 2020.
	• Increase the share of commuter trips made by public transport to 28 per cent by 2016.
	• Increase walking and cycling. More than double the bicycle trips made in Greater Sydney region. Increase the walking trips by 25 per cent.
	<ul> <li>Increase water recycling in Sydney to 70 billion litres per year. Save 145 billion litres of water per year through conservation in 2015.</li> </ul>
	Increase renewable energy by 20 per cent by 2020.
	Increase recycling.
	• Minimise climate change effects by working with government agencies and universities to deliver improved climate projections.
NSW Government Sustainability Policy	This policy outlines means for the government to improve the sustainable use of water and energy use, reducing greenhouse gas emissions, improve waste and fleet management and purchase sustainability.
	The NSW Government Sustainability Policy is the Government policy most relevant to health services. It identifies health facilities as responsible for 53 per cent of all NSW Government building energy use and calls for the development of a specific NSW Health Sustainability Strategy, which is to be the responsibility of NSW Health. The requirements of NSW Health will be:
	• To develop energy and water saving strategies to target sites where the greatest saving opportunities can be obtained;
	• To support the NSW Government in its commitment to becoming carbon neutral by 2020.
	Financing will be provided through the NSW Treasury Loan Fund and/or Climate Change Fund.
	<b>Target:</b> NSW Government is committed to becoming carbon neutral by 2020.
	The NSW Government Sustainability Policy also incorporates the following:
	NSW Energy Efficiency Strategy;
	NSW Sustainable Water Policy;
	Cleaner NSW Government Fleet Initiative;
	NSW Waste Reduction and Purchasing Policy.

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Policy	Key Issues
NSW Energy Efficiency Strategy	The purpose of the strategy is to:
	• Reduce greenhouse gas emissions from energy consumption in NSW;
	<ul> <li>Reduce the impact of rising energy prices on business and the community;</li> </ul>
	• Delay the need to construct additional energy generation and distribution infrastructure in NSW, reducing costs within the State economy.
	This strategy contains a range of measures to meet these goals including NSW public sector energy savings which requires public sector agencies, including health services, to reduce their energy consumption in line with the NSW Government Sustainability Policy targets.
	Target: To reduce energy use to year 2000 levels by 2019-20.
	<b>Reporting:</b> Each agency, including health services, reports annually to the Office of Environment and Heritage NSW on its measures to reduce energy use.
NSW Sustainable Water Policy	This policy has been incorporated into the <i>NSW Government Sustainability Policy</i> . It requires NSW government agencies to be more efficient in their use of water, and reduce wider environmental impacts associated with water use by minimising use, optimising efficiency and using alternative water sources where appropriate.
	<b>Reporting:</b> Each agency, including health services, reports annually to the Office of Environment and Heritage on its water consumption.
Cleaner NSW Government Fleet Initiative	This initiative was developed as part of the NSW Cleaner Vehicles and Fuels Strategy and has now been incorporated into the <i>NSW Government</i> <i>Sustainability Policy</i> . It applies to passenger and light commercial vehicles of less than 3.5 tonnes. It aims to:
	• Encourage procurement of smaller, cleaner and less polluting vehicles
	Reduce fuel consumption and greenhouse gas emissions
	Save on vehicle purchase and running costs
	All general government agencies, including health services, need to develop a Fleet Improvement Plan outlining how the agency will meet government targets for improved environmental performance for its light vehicle fleet.
	<b>Reporting:</b> Each agency, including health services, reports annually to the Office of Environment and Heritage

Policy	Key Issues
NSW Waste Reduction and Purchasing Policy	The policy requires all state government agencies to develop and implement a WRAPP Plan to reduce waste and increase the purchase of recycled content materials in four areas:
	Paper products;
	Office consumables;
	Vegetation and landscaping material;
	Construction and demolition material.
	The policy requires agencies, including health services, to fully implement their WRAPP plans throughout all parts of their organisations.
	Targets:
	• A minimum of 85 per cent of all copy paper purchased by NSW government in 2014 to contain recycled content.
	• A minimum 4-star rating under the Minimum Energy Performance Standards Scheme or Water Efficiency Labelling and Standards Scheme on all products purchased where relevant, available and fit for purpose.
	<b>Reporting:</b> Each agency, including health services is required to report every two years to the Office of Environment and Heritage.
Energy Administration Amendment (Water and Energy Savings)	This legislation required certain high water and energy users to prepare Water and Energy Savings Action Plans. The plans involve assessing current water or energy use and identifying ways to save.
	RPA and Concord hospitals were required to develop five year action plans which detailed energy and water saving projects and targets.
	The Treasury Loan Fund provides financial support for NSW Health, government agencies and local councils to implement projects which will save water and energy.
	<b>Reporting:</b> Health services are required to report annually to the Office of Environment and Heritage through the Online System for Comprehensive Activity Reporting.



# 4. Principles for action

The purpose of this Plan is to integrate public health principles, excellence in public governance and sustainability. The core principles of this Plan are to:

- Ensure sustainability informs all health policy and planning decisions
- Enable health care facilities to reduce their greenhouse gas emissions
- Promote energy and water efficiency in health facilities and reduce the wider environmental impacts associated with water and energy use
- Meet the challenge of rising prices expected for energy, fuel, water and waste management
- Ensure energy efficiency in transportation
- Ensure less waste is produced across health facilities and recycling is increased
- Enable the considerable purchasing power of health services to drive efficiency and environmental sustainability
- Improve the health of populations through the important co-benefits of policies to reduce greenhouse gas emissions

The Sustainability Plan for Sydney Local Health District is thus aligned with the NSW Government Sustainability Policy<sup>8</sup>

# 5. Action areas

Sydney Local Health District supports the following eight priority areas for development and implementation of carbon reduction and sustainability strategies: governance, energy, water, procurement, transport, food, waste and capital works. The following provides examples of strategies in these areas.

Priorty Action Area	Example
<b>5.1 Governance</b> Sustainability should be a part of the organisation's governance structure. There needs to be an awareness of the impact that healthcare service delivery has on the environment, on people, and the long-term management of this problem made a corporate responsibility. Environmental impact and sustainability needs to be considered alongside health in all policy considerations. Workforce engagement and commitment, at all levels, is critical to promote a culture of change that will be required for the successful delivery of carbon reduction strategies. <sup>3</sup>	In January 2010 Sydney South West Area Health Service developed a Sustainability Committee. This Committee was formed out of a need to develop a strategy for the implementation of sustainability policies, including the reduction of carbon emissions; measure the existing energy consumption and carbon footprint of the health services in Sydney and South Western Sydney LHDs; encourage sustainability measures amongst staff, in particular travel to work, and food and water consumption; and regularly monitor progress towards predetermined energy consumption and water use targets. The establishment of this committee emphasises the need for all staff, both personally and collectively, to address carbon reduction and sustainability.
<b>5.2 Energy</b> The energy sector was responsible for 75.8 per cent of Australia's 2008 national inventory of GHG emissions. <sup>9</sup> The burning of fossil fuels to heat, cool and power the healthcare sector is a significant source of greenhouse gas emissions. Hospitals are highly energy-intensive, therefore energy-saving strategies directed at hospitals provide significant opportunities to reduce carbon consumption. <sup>10</sup> Energy is becoming increasingly expensive by conserving energy, improving the efficiency of operational pathways, and investing in renewable energy sources, facilities can reduce GHG emissions and save money. In addition, less reliance on carbonbased energy systems will result in more resilient health facilities that are less vulnerable to disruption and natural disaster. <sup>5</sup>	Using the Building Management Control System, time schedules for air-handling and fan coil units have been centrally adjusted to match occupancy hours of the building, enabling these high energy systems to be switched off when not in use.
<ul> <li><b>5.3 Water</b></li> <li>Healthcare facilities consume large amounts of water. In addition, significant amounts of energy are invested in the heating, pumping and disposal of water.<sup>5</sup> There is a need to closely monitor water use, improve efficiency of use, and reduce leakages. Over 10 per cent of all water is lost through leakages, which often go unnoticed for long periods, wasting large amounts of this precious resource.<sup>3</sup></li> <li>Healthcare services can also have a positive impact by reducing or eliminating the use of bottled water in their facilities. The environmental impacts of bottled water have been well documented and include the consequences of producing and disposing of plastic bottles, and the energy required to bottle water, which is as much as 2000 times the energy cost of producing tap water.<sup>11</sup></li> </ul>	Sydney Water had introduced a free two year period of web monitoring of the main water meters for site consumption and for identifying water leaks. The continuation of this service will then be available at a cost of approximately \$5000 per year. RPA has been trialling this monitoring for the two year free period since 2008. This simple initiative can efficiently address the problem of water leakage in hospitals.

Priorty Action Area	Example
<ul> <li><b>5.4 Procurement</b></li> <li>In the UK, nearly 60 per cent of the NHS carbon footprint is attributed to procurement. This is more than the emissions from either building energy use or transport.<sup>3</sup> A significant proportion of this is the carbon invested in pharmaceuticals and medical equipment.<sup>10</sup> While such goods are integral to healthcare service provision, careful consideration must be given to ensuring that sourcing and purchasing processes are efficient, and the wastage is minimised. The financial, social and environmental impact of a product from raw material to disposal, a whole lifecycle approach, must become a part of all purchasing decisions. The few life cycle analyses that have been done of medical products have found that re-use is generally financially and environmentally preferable to single use.<sup>12, 13</sup></li> <li>As a major government sector procurer, healthcare</li> </ul>	The NHS (UK) has developed a Procuring and Sustainability Policy which contains a flexible framework for developing sustainability in procurement in the following areas: people, policy, strategy and communications, procurement process, engaging suppliers, measurement and results.
demand for sustainable, low carbon procurement options.	
<b>5.5 Transport</b> Globally, transport's GHG emissions are rising faster than any other energy using sector. Emissions are predicted to be 80 per cent higher than current levels by 2030. <sup>14</sup> In Australia transport is dominated by the car and around 80 per cent of Australians use private cars to commute to work. <sup>15</sup> Health care facilities rely on transport systems to move patients, staff, supplies and waste. The healthcare sector can reduce its transport-related emissions through strategies that focus on reducing travel or by making travel less emissions-intensive by using higher efficiency or alternative-fuel vehicles. <sup>3</sup> This can be achieved through encouraging the use of bicycles, public transport and carpools, by purchasing from local suppliers or suppliers who use fuel-efficient transport, and by minimising the need to travel by making use of technology, such as videoconferencing. <sup>3</sup> Strategies to reduce transport- related emissions have clear co-benefits: reducing congestion, air and noise pollution, reducing obesity and improving cardiovascular and mental health. <sup>7</sup> These health benefits have the potential to save the health system vast sums of money.	The SLHD Health Promotion Service's Active Travel Project promotes the use of public transport, walking and cycling to and from health service facilities in Sydney. This strategy has involved the development and promotion of Transport Access Guides that outline how to get to hospitals and other health services using active transport. An Aboriginal and Torres Strait Islander TAG is available for services in the inner west of Sydney. A growing interest in cycling is evident in the increasing numbers of staff taking part in Ride2Work Day. In 2009 this annual event, promoted by the Health Promotion Service, attracted participants from RPA, CRGH, and Balmain facilities.
<b>5.6 Food</b> A diet which contains substantial amounts of animal products and energy-intensive, highly-processed food is detrimental to the environment. <sup>16</sup> The livestock sector is an important contributor of greenhouse gas emissions. Land use changes, primarily deforestation, are responsible for the majority of these emissions. <sup>17</sup> There is an opportunity to contribute to a decrease in GHG emissions by encouraging a reduction in the consumption of highly processed foods and animal products by staff, visitors and patients in the hospital.	Well considered sourcing and purchasing decisions that result in the provision of fresh, locally grown produce will save energy in production and transportation, and result in less waste. The environmental services waste team of Concord Repatriation General Hospital conducted a food waste audit. It had been identified that over 25 per cent of CRGH waste was generated from Food Services. This is mainly plate waste rather than production waste. The audit demonstrated that 42 per cent of this food service waste was compostable. Unopened food products from breakfast and lunch services contributed significantly to an additional 29 per cent of non-compostable food service waste. The food wasted in our hospitals ends up in landfill, producing methane, a powerful GHG. <sup>3</sup>

<b>5.7 Waste</b> The disposal of waste into landfill and incinerators releases large amounts of GHG into the atmosphere. Disposal of hospital clinical waste is particularly costly at approximately 10 times the cost of general waste. It also requires extensive energy-intensive treatment prior to deposition in landfill. <sup>18</sup> There are large financial and environmental benefits to be gained from the thorough separation of hospital infectious and general waste and careful waste management. Source reduction, through careful procurement, is the most effective way of reducing GHG emissions. This not only reduces emissions from waste disposal but also reduces the energy-related emissions from raw material acquisition and the manufacturing process. <sup>19</sup> Health facilities can also be more efficient in waste management by reducing waste and emissions through recycling and using reusable, rather than disposable, products. <sup>1</sup>	Staff at Concord Repatriation General Hospital theatres formed a Waste Action Group to develop strategies to reduce the amount of waste produced in operating theatres. The group initiated a three month trial of recycling non-contaminated, co-mingled plastic waste products, such as packaging material and unused items from custom packs. These operating theatres generate nine tonnes of recyclable plastic per year making this important scheme an effective way of reducing waste. The trial established a high level of acceptability and compliance with the waste segregation process by staff. In addition, the group established procedures to successfully divert glass products from sharps containers to recycling, and introduced ink cartridge and battery collection.
<b>5.8 Capital Works</b> Sustainability can be incorporated into the design and construction of facilities, minimising carbon emissions and reducing energy consumption from the outset. Design features, such as building orientation and natural ventilation, can maximise daylight, shade, and reduce a building's energy requirements. Landscape features, such as green roofs, and trees and native vegetation planted on site, can mitigate the heat-island effect, reducing the cooling requirements of buildings. <sup>10</sup> All capital works decisions require a broad approach to sustainability, including carbon reduction requirements in project briefs and contracts, and in arrangements for transport and delivery of services. <sup>3</sup> Not only are there environmental and economic advantages associated with green building principles, there is a growing body of evidence supporting sustainable hospitals as healing environments that support staff retention, job satisfaction and improve patient outcomes. <sup>20</sup> The Green Star environmental rating system for buildings. Green Star – Healthcare v1 is used to evaluate hospital design. Projects that obtain a score of four stars or above are eligible for formal certification and recognised as 'best practice'. <sup>21</sup>	Major capital works projects undertaken by NSW Health aim for a four Star green rating. These principles are set as the benchmark for contractors in the planning and design of new buildings. All capital projects undetaken in SLHD look at options for sustainability including rainwater re-use, solar loading, use of recycable materials and use of low energy light globes. Drought tolerant plants are used in landscaping throughout the District. Hot water taps are used sparingly to reduce the need to heat water. The c-bus system is installed in office accommodation which automatically turns off lights at a predetermined time.

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# Sustainability action plan:

Action area: Governance			
Objective: To make sustainable development and carbon	reduction an integral part of the organisation's governa	nce, performance and partnerships	
Strategy	Performance Indicator	Timeframe	Responsible Person/Group
Establish a Sustainability Implementation Committee at the LHD, at each facility and in Community Health services across the LHD. Committee responsibilities nclude, devising an annual sustainability business blan consistent with the LHD Sustainability Plan which specifically outlines the means of achieving targets	Facility/service business plan developed and agreed by the LHD committee. Annual report on progress	June 2013 2014 and annually	LHD Committee Facility/Service Committees
Sustainability principles and practices included in staff prientation	Proportion of facilities with sustainability included in staff orientation	December 2013	Director, Operations General Managers
ncorporate sustainability governance into performance agreements at Executive and Senior Manager level	Number of Executives/Senior Managers completing sustainability requirement of performance agreement	Financial year 2013-14 Performance Agreements	Director, Operations General Managers
dentify Tier 2 officer at LHD and an appropriate senior officer at facility level to be responsible for sustainability ssues	Number of positions appointed	July 2013	Local Health District General Managers
Provide regular feedback on performance targets to staff, and provide an opportunity for staff to feedback progress on sustainability initiatives	Annual forum and report on progress to all staff	2013 and annually	Chief Executive General Managers
Use regular meetings with external stakeholders to address system-wide sustainability issues	Number of meetings held	Ongoing	Chief Executive General Managers
Undertake the SLHD Baseline Carbon Audit	Baseline Carbon Audit undertaken	December 2013	Chief Executive

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Action Area: Energy			
Objective:         To develop an energy effi           Key Performance Indicator:         To develop an energy effi	cient organisation cient, sustainable organisation by reducing energy con	sumption by 10 per cent of 2011/1	2 levels by 2017/18
Strategy	Performance Indicator	Timeframe	Responsible Person/Group
Investigate sources of funding for energy saving projects e.g. Treasury Loan Fund	Establish 2-4 projects per facility for development	December 2013 and ongoing	Director, Operations General Managers
Plan and investigate potential for future use of renewable energy sources	Each facility to investigate 1 renewable energy source	December 2013 and ongoing	General Managers
Investigate and implement options for retrofitting existing buildings with energy-saving mechanisms	Annual report on energy efficiency of buildings	December 2013 and ongoing	General Managers
Adjust air-conditioning to achieve energy efficiency and sustainability targets e.g. thermostat settings	Number of facilities with air-conditioning adjusted to target thermostat settings	December 2014	General Managers
Increase energy efficiency in lighting of buildings	<ul> <li>Annual report on energy efficiency in lighting</li> <li>Proportion of energy efficient light bulbs</li> </ul>	December 2013 and ongoing	General Managers
Ongoing monitoring of energy use, with sub-metering where required and practicable	Meet government reporting targets	Ongoing	General Managers
Develop measurement systems to detect energy use above targets	Number of occasions of energy use above target	December 2013 - Baseline annually	General Managers
Develop strategies for promoting awareness of energy reduction initiatives among staff	List of strategies in Annual Report	Annually	Director, Operations
Action Area: Water			
Objective: To reduce water use Key Performance Indicator: To reduce water use in he	salth service facilities by 10 per cent from 2011/12 leve	sk by 2017/18	
Strategy	Performance Indicator	Timeframe	Responsible Person/Group
Develop monitoring processes to identify water leakage including installation of sub-meters	Number of facilities with sub-meters	June 2014	General Managers
Improve water efficiency in washbasins, sinks and toilet systems	Annual report of water efficiency in facilities as per regulatory requirements	December 2013 and anually	General Managers
Increase capacity for rainwater harvesting	Number of facilities with rainwater harvesting	June 2016 and ongoing	General Managers

Action Area: Procurement			
<b>Objective:</b> To sustainably procure p <b>Key Performance Indicator:</b> To establish a policy and	products process for sustainable procurement in SLHD		
Strategy	Performance Indicator	Timeframe	Responsible Person/Group
Reduce paper use e.g. electronic record keeping, paperless meetings and encourage use of portable technology e.g. tablets, printing double-sided set as default	Reduction of paper use from baseline (baseline to be determined by facility/department)	December 2013 Baseline and annual audit	General Managers
Reduce use of disposable items and increase reusable items, where appropriate, in both clinical and non-clinical areas	Reduction in proportion of disposable items in each facility	December 2014 Baseline and annual audit	General Managers
Local procurement, whole lifecycle costs and environmental impact should be a part of all purchasing decisions	Sustainablilty procurement policy developed for the District	December 2014	Director, Operations General Managers
Work in partnership with suppliers to improve sustainable procurement e.g. liaise with NSW Health to determine carbon footprint of state contracts for procurement items, such as pharmaceuticals	Annual report on proportion of suppliers with low- carbon procurement processes	December 2014 and annual report	Director, Operations
Action area: Transport			
Objective: To reduce the environme Key Performance Indicator: To reduce the number of	ental impact associated with staff and patient travel f fleet kilometres travelled from 2011/12 baseline to 201	7/18	
Strategy	Performance Indicator	Timeframe	Responsible Person/Group
Increase proportion of green vehicles in fleet	Green vehicles 5 per cent of fleet by 2015	June 2015	Director, Operations
Increase use of E10 fuel	Increase proportion of fleet using E10 from baseline of 25 per cent	December 2014	Director, Operations
Develop a Workplace Travel Plan which incorporates a baseline audit of staff travel and active transport options, including provision of appropriate facilities to encourage active transport	<ul> <li>Workplace Travel Plan developed</li> <li>Number of bike racks installed in health facilities</li> </ul>	June 2014	Director, Operations General Managers
Make videoconferencing and teleconferencing available and accessible to a wider range of staff	Number of departments with access to videoconferencing	June 2014	Director, Operations General Managers
Develop a plan for staff parking that promotes sustainability	Sustainable staff parking policy developed	December 2015	Director, Operations
Alter business models and models of care to consider better integration of service provision, reducing the need to travel	Proportion of facilities with models of care that considers sustainability objectives	2016/17	General Managers/Clinical Directors

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Work in partnership with existing suppliers to improve sustainable, low-carbon food transportation and production	Actions undertaken to influence low carbon food transportation and production	June 2016	Director, Operations General Managers
Action Area: Food			
Objective:To develop a sustainableKey Performance Indicator:Proportion of food supplie	approach to food procurement, wastage reduction and ers meeting sustainable objectives	d staff and community education	
Strategy	Performance Indicator	Timeframe	Responsible Person/Group
Work in partnership with existing suppliers to improve sustainability in food	Proportion of suppliers meeting sustainability objectives	June 2016	Director, Operations General Managers
Make hospital and community health land available for staff/community fruit and vegetable gardens, where appropriate	Hospital garden plan developed	June 2014	General Managers
Ensure vegetarian options are available and prominently displayed in retail services	Proportion of retail services with vegetarian options available	December 2014	General Managers
Aim for at least one 'red meat free' day per week in retail services	Number of SLHD retail services offering 'red meat free' day	December 2015	General Managers
All future retail tenders must consider environmental impact and ability to provide varied and healthy vegetarian options	Proportion of new tenders meeting sustainability objectives	December 2015	Director, Operations General Managers
Continue to provide vegetarian and vegan options on patient menus	Proportion of facilities providing vegetarian/vegan options	December 2013 and ongoing	General Managers
Develop process of feedback on patient and retail menus to reduce food wastage and assess acceptability of changes	Proportion of facilities with feedback process in place	December 2014	General Managers
Install plumbed water coolers and minimise use of bottled water	Number of plumbed water coolers in each facility	June 2015	General Managers
Develop educational materials and promote sustainable, healthy food options across the organisation	Number new resources developed	Ongoing	Director, Population Health General Managers

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Action Area: Waste			
Objective:To reduce waste in healtKey Performance Indicator:To reduce clinical waste	h services produced in health services by 15 per cent of 2011/12	2 levels by 2017/18	
Strategy	Performance Indicator	Timeframe	Responsible Person/Group
Provide a balanced risk assessment of all costs associated with waste to establish a position on single use versus re-use/sterilisation policies	Life-cycle analysis established for 2-3 single use items	December 2015	Director, Operations General Managers
Work with contractors to clarify clinical waste definition to reduce clinical waste and accept comingled plastic waste, including clinical products not visibly contaminated with blood	Accepted definition established and in use; proportion of contractors using definition	Ongoing	Director, Operations General Managers
Identify new avenues for increasing segregation of waste and recycling e.g. plastics in operating theatres	Annual report on recycling initiatives	December 2015 and Annual Report	Director, Operations General Managers
Segregate food waste to allow for composting in facilities	Facilities report on use of composting. Annual update on composting	Ongoing	General Managers
Develop strategies for promoting awareness of sustainable waste management procedures among staff	Annual Report	Ongoing	Director, Operations
Action Area: Capital Works			
Objective:To ensure all new develoKey Performance Indicator:All new capital works att	pments are energy efficient and sustainable ain level 4 green star rating		
Strategy	Performance Indicator	Timeframe	Responsible Person/Group
Capital development complies with all current sustainability codes, policies and standards	Report on NABERS for Hospital ratings of all new developments	Ongoing	Director Capital Works General Managers



# Abbreviations

BMS	Building Management System
CO <sub>2</sub>	Carbon Dioxide
CRGH	Concord Repatriation General Hospital
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
KL	Kilolitre
KPIs	Key Performance Indicators
KWh	Kilowatt Hour
LHD	Local Health District
NABERS	National Australian Built Environment Rating System
NHS	National Health Service, United Kingdom
OSCAR	Online System for Comprehensive Activity Reporting Database
RPA	Royal Prince Alfred Hospital
TAG	Transport Access Guide
WHO	World Health Organization
WRAPP	Waste Reduction and Purchasing Policy

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# Glossary

#### Abatement

A reduction in the amount or intensity of greenhouse gas emissions as a result of actions taken by a company or individual.

#### Active transport

The term 'active transport' relates to physical activity undertaken as a means of transport. This includes travel by foot, bicycle and other non-motorised vehicles. Use of public transport is also included in the definition as it often involves some walking or cycling to pick-up and from drop-off points.

#### Adaptation

In order to adapt to the effects of climate change actions must be undertaken to help communities adjust, through behaviour change, design and delivery of services and planning and infrastructure. Action must also be taken to protect our natural assets and ecosystems.

#### Annex I

As agreed through the *Kyoto Protocol*, Annex I is a list made up of industrialized countries that have committed to reduce their greenhouse gas emissions by a collective average of 5.2 per cent by the first commitment period (2008-2012) from 1990 levels. Australia's target is 108 per cent of 1990 levels for the first commitment period.

#### Base year

A specific year or an average over multiple years against which emissions are tracked over time.

#### **Biofuels**

Biofuels are renewable fuels made from biomass that can be used to supplement or replace the fossil fuels, including petroleum and diesel, used in transport. The two main biofuels currently used are ethanol and biodiesel. Ethanol is produced from the fermentation of sugar or starch in crops such as corn and sugar cane. Biodiesel is made from vegetable oils in crops such as soybean, or from animal fats.

#### Cap and Trade

A specific type of emissions trading system where total emissions are limited or 'capped'. Permits are allocated or auctioned up to the set cap, and a market allows those participants emitting less than their quota to sell their excess permits to emitters needing to buy extra to meet their cap.

#### Carbon credit

A generic term to assign a value to a reduction or offset of greenhouse gas emissions. A carbon credit is usually equivalent to one tonne of carbon dioxide equivalent (CO<sub>2</sub>-e). A carbon credit can be used by a business or individual to reduce their carbon footprint by investing in an activity that has reduced or sequestered greenhouse gases at another site.

#### Carbon dioxide (CO<sub>2</sub>)

The most abundant of the greenhouse gases,  $CO_2$  currently contributes to around 75 per cent of Australia's greenhouse gas emissions. It is produced as a by-product of oil and gas production, burning fossil fuels and biomass. All animals, plants, fungi and microorganisms also produce  $CO_2$ . It has a global warming potential of 1.

#### Carbon dioxide equivalent (CO<sub>2</sub>-e)

CO<sub>2</sub>-e is a measurement to express the relative effect to carbon dioxide a specific amount of greenhouse gases has. It is calculated by multiplying the amount of tonnes of the greenhouse gas by its global warming potential.

#### Carbon footprint

A form of carbon calculation that measures the amount of carbon dioxide equivalent that a country, a business, an industry or an individual produces or is responsible for. The footprint calculates the direct and indirect level of CO<sub>2</sub>-e emissions. Direct emissions include the burning of fossil fuels for energy and transportation and indirect emissions focus on the whole lifecycle of products from procuring raw materials to waste management.

#### Carbon neutral

A voluntary mechanism where an activity, event, household, business or organisation is responsible for no net emissions of greenhouse gases and can therefore be declared carbon neutral in that specific area. Carbon neutrality can be achieved reducing emissions as far as possible (e.g. energy efficiency, purchasing renewable energy) and then purchasing offsets for any residual emissions in order to achieve zero net emissions.

#### Carbon offset

A carbon offset is a monetary investment in a project or activity elsewhere that abates greenhouse gas emissions or sequesters carbon from the atmosphere that is used to compensate for emissions from your own activities. Offsets can be bought by a business or individual in the voluntary market (or within a trading scheme), a carbon offset usually represents one tonne of  $CO_2$ -e.

#### Carbon price

An economic value placed on the emission of greenhouse gases into the atmosphere from human activity. A carbon price usually takes the form of either a carbon tax or as the cost of permits in an Emissions Trading Scheme. The price is designed to create an incentive to reduce emissions.

#### Carbon sequestration

Carbon sequestration refers to the capture and long-term storage of carbon in forests and soils or in the oceans. For example trees and other plants sequester carbon dioxide from the atmosphere as they grow, through the process of photosynthesis.

#### Carbon tax

A form of carbon price on greenhouse gas emissions where a fixed price is set by the government for carbon emissions for certain sectors. The price is often passed on from business to consumers.

#### Climate change

Climate change is generally understood to refer to a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods.

#### **Direct emissions**

Emissions of greenhouse gases from sources within the boundary or control of an organisation or facility's processes or actions. Examples of direct emissions include burning of fossil fuels for energy and transportation and emissions from industrial processes.

#### 24 Ecological footprint

A resource accounting tool that can measure how much land and water area a person or a specific group, for example, an event, a business, a city or a country requires to produce the resources it consumes and to absorb its waste. The footprint is measured in global hectares.

#### **Emissions Trading Scheme**

An ETS can operate within businesses, states, countries and internationally. Through an ETS an organisation is allocated an allowance for the amount of *greenhouse gases* it can produce. These systems allow those who reduce emissions beyond their obligations to sell their excess emission capacity to others within the ETS who are unable to meet their own emission reduction targets. There are two broad types of emissions trading schemes, 'cap and trade' and 'baseline and credit'.

#### Energy efficiency

Reducing the amount of energy used for a given service or level of activity in order to produce the same level of enduse service. Energy efficiency improvements are predominantly achieved through using technologically more advanced equipment. For example, using compact fluorescent light globes reduces the amount of electricity required for lighting.

#### Food miles

A calculation of the distance and mode of transport foodstuffs have travelled throughout the complete production process and until they reach the consumer. These calculations enable simple comparisons to be drawn between the use of energy and the level of *greenhouse gas emissions* associated with different food products.

#### Garnaut Climate Change Review

Australia's State and Territory Governments commissioned the Review in April 2007 and the results have guided the Australian government in developing its policy responses to climate change.

#### Geosequestration

Also known as carbon capture and storage, geosequestration is the process of capture, transport, injection and storage of CO<sub>2</sub> in underground geological formations for the primary purpose of mitigating greenhouse gas emissions.

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#### **Global Warming Potential**

The GWP enables a comparison to be drawn between the six greenhouse gases. The GWP is a relative scale, where  $CO_2 = 1$ . The other gases are given a number based on their effect on the atmosphere relative to  $CO_2$ . The GWP changes relative to the time horizon, for example Methane has a GWP of 21 over 100 years, meaning it has 21 times the amount of heating capacity of  $CO_2$ .

#### Greenhouse effect

The greenhouse effect is a term that describes how natural gases in the earth's atmosphere allow infrared radiation from the sun to warm the earth's surface, but they also prevent much of the heat escaping from the earth's atmosphere. Human actions are increasing the concentrations of these gases, which is contributing to global climate change.

#### Greenhouse gas protocol

The GHG protocol is an international accounting tool for government and business developed by the World Resources Institute and the World Business Council on Sustainable Development. The protocol provides an international standard reporting system that can be used for every aspect of reporting, from national to small business.

#### Greenhouse gases (GHG)

GHGs in the earth's atmosphere absorb and re-emit infrared radiation. The *Kyoto Protocol* lists six major greenhouse gases, which vary in their relative warming effect. The six gases are: carbon dioxide  $(CO_2)$ , methane  $(CH_4)$ , nitrous oxide  $(N_2O)$ , HFCs (hydrofluorocarbons), PFCs (perfluorocarbons) and sulphur hexafluoride  $(SF_6)$ . The majority of  $CO_2$  is generated by fossil fuel combustion  $CH_4$  from livestock farming, and agriculture for the generation of  $N_2O$ . The last three are generated from human industrial activities and have no natural sources.

#### Indirect emissions

Indirect emissions are a consequence of the activities of an organisation, but occur from sources owned or controlled by another organisation. Indirect emissions include, for example, the consumption of purchased electricity, heat or steam, or indirect emissions from transport related activities in vehicles not owned or controlled by the organisation, outsourced activities, air travel and waste disposal.

#### Intergovernmental Panel on Climate Change

IPCC is a scientific intergovernmental panel set up by the World Metreological Organisation and by UNEP. It provides reports which assess the latest scientific, technical and socio-economic evidence on climate change. With representatives from 130 nations it is the world's pre-eminent scientific advisory body on climate change.

#### **Kyoto Protocol**

An international agreement aiming to stabilise atmospheric concentration of greenhouse gases, but requiring separate ratification by governments. The Kyoto Protocol, among other things, sets binding targets for the reduction of greenhouse-gas emissions by industrialised countries. It entered into force for ratifying countries in February 2006 and commits developed nations to collectively cut their greenhouse gas emissions by 5.2 per cent of 1990 levels by 2008-2012. It came into force in Australia on 11 March 2008.

#### Kyoto Protocol Mechanisms

The three market-based mechanisms introduced by the Kyoto Protocol are Clean Development Mechanism, Joint Implementation and Emissions Trading. CDM enables developed countries to generate tradeable credits by setting up projects that reduce greenhouse gases in developing countries. The JI mechanism allows developed countries to earn emission reduction units when they finance projects in another developed countries to trade emissions credits in order to reach their emissions targets.

#### Life cycle assessment

LCA is the investigation and valuation of the environmental, economic and social impacts of a product or service. A product's life cycle starts when the raw materials are extracted from the earth through to processing, transport, use, reuse, recycling or disposal. For each of these stages, the impact is measured in terms of the resources used and environmental impacts caused.

#### Mitigation

Climate change mitigation measures are actions designed to reduce the magnitude and consequences of global climate change.

#### National Australian Built Environment Rating System

NABERS is a national initiative managed by the NSW Department of Environment, Climate Change and Water. NABERS is a performance-based rating system for existing buildings. NABERS rates a building on the basis of its measured operational impacts on the environment, and provides a simple indication of how well you are managing these environmental impacts compared with your peers and neighbours.

#### Permit

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A permit is a legal permission authorising the holder to emit a defined quantity of greenhouse gases. In an emissions trading scheme a permit is usually equivalent to one tonne of  $CO_2$ -e. If a company emits less greenhouse gases than authorised they can sell their permits within the trading scheme.

#### Power down

Relates to the facility for some computers to go into power saving mode after a period of inactivity.

#### Renewable energy

Energy produced from renewable resources, such as wind, solar, geothermal energy and biofuels.

#### **Renewable resources**

A natural resource qualifies as a renewable resource if it is replenished by natural processes at a rate comparable to its rate of consumption. Wind, solar, oxygen, fresh water, timber, and biomass can all be considered renewable resources. However they can become non-renewable resources if used at a rate greater than the environment's capacity to replenish them. Renewable resources are used in the production of renewable energy.

#### Sustainability

There is now abundant scientific evidence that humanity is living unsustainably. Returning human use of natural resources to within sustainable limits will require a major collective effort. Sustainable development refers to development that meets the needs of the present without compromising the ability of future generations to meet their own needs. However, sustainability has become a wide-ranging term that can be applied to almost every facet of life on Earth, from local to a global scale and over various time periods. In the sense of human sustainability on planet Earth, sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It is usually noted that this requires the reconciliation of environmental, social and economic demands - the "three pillars" of sustainability.

#### United Nations Framework Convention on Climate Change

UNFCCC was established in 1992 at the Rio Earth Summit. An international framework was agreed that aimed at stabilising atmospheric concentrations of greenhouse gases. The UNFCCC agreed to the Kyoto Protocol in 1997 to implement emission reductions in industrialised countries.

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