

# The Kilmore & District Hospital

## Environmental Sustainability Strategy

2017 - 2020



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# Introduction

Environmental management is an integral part of our Mission. It is clear that changes in the environment can have positive or negative impacts on health and social wellbeing. The Kilmore & District Hospital (TKDH) has a vital role as a health care provider, to ensure that the provision of that health care is offered in an environmentally responsible and safe manner.

This Environmental Sustainability Strategy 2017-2020 builds on previous efforts to drive an increased level of environmental sustainability across the health service.

This strategy outlines TKDH's achievements to date, provides actions/objectives around 7 key focus areas and gives baseline data to monitor improvements. The strategy also proposes a monitoring and review schedule which aims to ensure that the environmental performance indicators are continually being measured and evaluated.

TKDH's integrated internal and external communication plan will inform our community and staff about key objectives. This will include public reporting on our website highlighting our achievements each year.

This strategy highlights how we will strive for environmental best practice and continuous improvement as we seek to minimise our footprint.

# Our Environment






As a rural healthcare provider TKDH provides a wide range of healthcare services for our community. Like most businesses our facility generates a noteworthy amount of emissions into the environment.

TKDH encompasses acute services, sub-acute services, surgical services, maternity services, Urgent Care Centre, outpatient services, residential aged care services, district nursing, oncology services, medical imaging & pathology.

As a rural hospital we have a direct impact upon the environment as a result of our core business areas, such as;

- Producing greenhouse gases through the consumption of energy (lighting, heating, cooling, refrigerants and transport).
- Consumption of non-renewable resources such as water (personal cleaning, washing, professional cleaning (including sterilisation), personal consumption, heating & cooling and garden maintenance).
- The production and disposal of waste which contributes to landfill (general office waste, clinical waste, e-waste, recyclable waste and food waste).

# Our Sustainability Achievements

Water	
	<ul style="list-style-type: none"> <li>• Low water flow aerators have been installed in taps and showers throughout the building as a water reduction initiative.</li> </ul>
	<ul style="list-style-type: none"> <li>• rainwater Harvesting in 2 stages (550kL Holding tanks)</li> </ul>
	<ul style="list-style-type: none"> <li>• steriliser water is recycled for use on gardens and surrounds</li> </ul>
	<ul style="list-style-type: none"> <li>• Ozone laundry in Hostel - chemical reduction, water reduction &amp; natural gas reduction</li> </ul>
	<ul style="list-style-type: none"> <li>• Dual flusher toilet cisterns</li> </ul>
Electricity	
	<ul style="list-style-type: none"> <li>• CSSD electrical efficient Steriliser installed</li> </ul>
	<ul style="list-style-type: none"> <li>• Skylights installed in corridors in the hospital</li> </ul>
	<ul style="list-style-type: none"> <li>• LED Low energy lights installed across the entire facility (internal)</li> </ul>
	<ul style="list-style-type: none"> <li>• Use of outside air for cooling in the winter</li> </ul>
	<ul style="list-style-type: none"> <li>• Installation of LCD TV's in patient care has reduced electricity usage</li> </ul>
	<ul style="list-style-type: none"> <li>• Movement detectors installed in some areas for lighting</li> </ul>
	<ul style="list-style-type: none"> <li>• High efficiency bed pan washer</li> </ul>
Natural Gas	
	<ul style="list-style-type: none"> <li>• Installation of new condensing boilers</li> </ul>
	<ul style="list-style-type: none"> <li>• Solar heating for supplementation of hospital hot water</li> </ul>
	<ul style="list-style-type: none"> <li>• Solar heating for supplementation of Nursing Home hot water</li> </ul>
	<ul style="list-style-type: none"> <li>• Solar heating for supplementation of Hostel hot water</li> </ul>
	<ul style="list-style-type: none"> <li>• Ozone laundry in Hostel - chemical reduction, water reduction &amp; natural gas reduction</li> </ul>
Waste	
	<ul style="list-style-type: none"> <li>• Collection of printer cartridges for recycling</li> </ul>
	<ul style="list-style-type: none"> <li>• Battery collection program</li> </ul>
	<ul style="list-style-type: none"> <li>• Redundant mobile phone recycling</li> </ul>
	<ul style="list-style-type: none"> <li>• commingle collection &amp; recycle bins</li> </ul>
Procurement and Transport	
	<ul style="list-style-type: none"> <li>• Purchase of Diesel fuel cars where applicable</li> </ul>
	<ul style="list-style-type: none"> <li>• Review procurement options to consider the purchase of biodegradable items</li> </ul>

# Our Environment Sustainability – Key Focus Areas

<b>Environmental Sustainability Leadership</b>	<p><b>Improve Environmental Sustainability Leadership and culture across the Facility</b></p> <p>Introduction of TKDH Sustainability program through the Facilities, Space &amp; Sustainability committee</p>
<b>Energy and Greenhouse Emissions</b>	<p><b>Reduce Energy consumption by &gt;1 % PA.</b></p> <ul style="list-style-type: none"> <li>• Ensure all new equipment are designed or purchased with consideration of energy efficiency</li> <li>• Record and graph monthly energy consumption and Tonnes of CO2-e</li> </ul> <p><b>Source:</b> Department of climate change and Energy Efficiency 2011. <i>“National Greenhouse Accounts Factors”</i>, Accessed at <a href="http://www.climatechange.gov.au/~media/publications/greenhouse-acctg/nga-factors-july-2011.pdf">http://www.climatechange.gov.au/~media/publications/greenhouse-acctg/nga-factors-july-2011.pdf</a></p>
<b>Water</b>	<p><b>Reduce Water Consumption by &gt;1% PA</b></p> <ul style="list-style-type: none"> <li>• Investigate opportunities for installation of additional rainwater tanks.</li> <li>• Benchmark Performance to identify areas for improvement.</li> <li>• Ensure that new equipment purchases are with consideration of water efficiency</li> <li>• Investigate the use of new ozone laundry</li> </ul>
<b>Electricity</b>	<p><b>Reduce Electricity Consumption by &gt;1% PA</b></p> <ul style="list-style-type: none"> <li>• Expand LED light installation to include external lighting</li> <li>• Investigate Solar power feasibility</li> <li>• Review options to enhance sky lighting</li> <li>• Review option for power factor correction equipment</li> </ul>
<b>Waste</b>	<p><b>Reduce the volume of general and clinical waste by &gt; 1% PA.</b></p> <ul style="list-style-type: none"> <li>• Evidenced by an increased participation in waste avoidance and recycling programs to improve overall waste diversion from landfill by &gt; 10% by 2020</li> <li>• Increase visual waste segregation compliance audits to improve segregation accuracy</li> <li>• E-waste is growing up to 3 times faster than general municipal waste in Australia. It covers a range of items, including televisions, computers, mobile phones, kitchen appliances, white goods and potentially some medical equipment. E-waste management to be enhanced:-             <ul style="list-style-type: none"> <li>○ Collection of printing cartridge</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Collection of batteries</li> <li>○ Collection of mobile phones</li> <li>● Collection of redundant workable medical equipment for 3<sup>rd</sup> World Countries</li> </ul>
<p><b>Procurement</b></p>	<p><b>To ensure environmental responsiveness is integral to the procurement process.</b></p> <ul style="list-style-type: none"> <li>● Improve our procurement choices by considering the full life cycle of a product from manufacturing to disposal</li> <li>● Work in partnership with key suppliers &amp; Health Purchasing Victoria to increase the number of TKDH suppliers who practice Environmental Sustainability</li> </ul>
<p><b>Transport and Travel</b></p>	<p><b>Reduce the greenhouse gas emissions associated with transport and fleet vehicles.</b></p> <ul style="list-style-type: none"> <li>● Develop a plan to replace vehicles with diesel fuelled or hybrid options</li> </ul>

# Our Environmental Strategy

This strategy provides the organisation with a clear statement as to our objectives, targets and requirements in managing the environment. The strategy will be reviewed in 2020 to ensure alignment with future business objectives.

- A commitment to environmental impact reduction in energy, waste, water and emissions.
- Reduction targets of at least 1% year by year.
- Development of a TKDH Environmental Management system.
- Reporting on our environmental performance annually.
- Increasing the accuracy of our reporting.



# Our Current Environmental Footprint

The following is an indication of our levels of impact across energy, waste, and water for the whole organisation.

The data below represents our performance to date and provides the baseline (2015-2016) from which the performance of the 2017 – 2020 Environmental Sustainability plan data will be measured each financial year.

## Energy Consumption

Total energy consumption by emery type	2012-13	2013-14	2014-15	2015-16	2016-17	Target
Electricity (GJ)	2,777.29	2,712.18	2,935.06	7,236.89	Due July	>1%
Natural Gas (GJ)	6,813.17	6,166.84	6,378.82	7,367.10	Due July	>1%
Total	9,590.46	8,879.02	9,313.88	14,603.99	Due July	>1%
Normalised energy consumption	2012-13	2013-14	2014-15	2015-16	2016-17	Target
Energy Usage m2	0.9901	0.9167	0.9616	1.272	Due July	>1%
Energy Usage OBD ? what is this	0.3512	0.3625	0.4059	0.5548	Due July	>1%
Energy Usage Separation	0.7459	0.6186	0.6527	0.8832	Due July	>1%

## Carbon Emissions

Total Carbon Emissions	2012-13	2013-14	2014-15	2015-16	2016-17	Target
Total Carbon CO2e	352.19	319.02	330.14	385.95	Due July	>1%
Carbon CO2e/m2	0.0363	0.0329	0.0340	0.0336	Due July	>1%
Carbon CO2e/OBD	0.0129	0.0130	0.0144	0.0147	Due July	>1%
Carbon CO2e/Separation	0.0274	0.0222	0.0231	0.0233	Due July	>1%

## Water Consumption

Total Water (kL)	2012-13	2013-14	2014-15	2015-16	2016-17	Target
Water consumption	6000	7320	8390	8017	Due July	>1%
Total	6000	7320	8390	8017	Due July	>1%
Normalised water consumption	2012-13	2013-14	2014-15	2015-16	2016-17	Target
Water Usage kL/m2	0.6195	0.7557	0.8662	0.6986	Due July	>1%
Water Usage kL/OBD	0.2197	0.2989	0.3656	0.3046	Due July	>1%
Water Usage kL/Separation	0.4666	0.5100	0.5879	0.4849	Due July	>1%

## Waste Generation

Total waste generation by type (T)	2012-13	2013-14	2014-15	2015-16	2016-17	Target
Recycling (tonnage)					Due July	>1%
Clinic Waste (tonnage)					Due July	>1%
General Waste (tonnage)					Due July	>1%
Total					Due July	>1%
Normalised waste generation	2012-13	2013-14	2014-15	2015-16	2016-17	Target
% of waste generated (recycled)					Due July	>1%
Total combined Waste					Due July	>1%
Waste/OBD (kg)					Due July	>1%

Data for waste generation is unavailable at present. Will be included when available

## Data influencing environmental impact

	2012-13	2013-14	2014-15	2015-16	2016-17
Floor area (m2)	9686	9686	9686	11476	11476
Separations	12858	14354	14270	16535	Due July
OBD - Total site	27306	24493	22946	26322	Due July

# TKDH Sustainability Action Plan 2017 – 2020

	Strategies Measures/KPI's	Action/Activities	Person Responsible	By When	Progress	Measure of Success
<b>Objective 1: Improve Environmental Sustainability Leadership &amp; Culture across TKDH Campuses</b>						
<b>LEADERSHIP</b>	1.1 TKDH Environmental Sustainability framework implemented	<ul style="list-style-type: none"> <li>Environmental Sustainability strategy and plan approved by Board of Management.</li> </ul>	DFSS	June 2017		<ul style="list-style-type: none"> <li>Strategy approved and available to staff</li> </ul>
		<ul style="list-style-type: none"> <li>Confirm Environmental Sustainability Budget and priority projects.</li> </ul>	Capital budgets approved by the Board	July 2017		<ul style="list-style-type: none"> <li>No. of Sustainability projects funded</li> </ul>
		<ul style="list-style-type: none"> <li>Develop strategies to obtain and maximise external funding or share cost structure to maximise sustainability project delivery</li> </ul>	CEO	Ongoing		<ul style="list-style-type: none"> <li>No. of Sustainability projects funded</li> </ul>
		<ul style="list-style-type: none"> <li>Ensure all legislated and public reporting is completed in line with established time frames</li> </ul>	DFSS	Ongoing		<ul style="list-style-type: none"> <li>Reporting time frames met</li> </ul>
		<ul style="list-style-type: none"> <li>Ensure timely and accurate collection and recording of Environmental Sustainability data. Develop an ES scorecard to enable review of progress to targets</li> </ul>	DFSS/Mgr I&ES	March 2017	Update targets annually June	<ul style="list-style-type: none"> <li>Scorecard in place with – data collection accurate and timely</li> </ul>
	1.2 Develop a communication strategy to enhance commitment to sustainability across the campus	<ul style="list-style-type: none"> <li>Include articles in hospital newsletter highlighting recent achievements/activities</li> </ul>	FS&S Committee	Ongoing		<ul style="list-style-type: none"> <li>Number of articles</li> </ul>
		<ul style="list-style-type: none"> <li>Presentation of Environmental Sustainability goals and achievements at hospital forum</li> </ul>	DFSS	Bi-annually		<ul style="list-style-type: none"> <li>Forum attendance</li> </ul>
		<ul style="list-style-type: none"> <li>Intranet site continually updated to represent achievements, projects, events and news items</li> </ul>	DFSS	Ongoing		<ul style="list-style-type: none"> <li>No. of hits to site</li> </ul>
		<ul style="list-style-type: none"> <li>Create an awards system for the most effective environmental initiatives</li> </ul>	FS&S Committee	2017		<ul style="list-style-type: none"> <li>Number of initiatives submitted in 12 months.</li> </ul>
	1.3 Conduct environmental awareness events.	<ul style="list-style-type: none"> <li>Promote environmental achievements at internal and external events</li> </ul>	FS&S Committee	Ongoing		<ul style="list-style-type: none"> <li>No. of events/no. of staff attending</li> </ul>
		<ul style="list-style-type: none"> <li>Support a community awareness program eg. "Lights out" campaign or Clean up Australia.</li> </ul>	FS&S Committee	Ongoing		<ul style="list-style-type: none"> <li>No. staff participating in the awareness campaign</li> </ul>
	1.4 Expand the network of Green leaders across the Facility	<ul style="list-style-type: none"> <li>Expand the green leader program including training and quarterly meeting program.</li> </ul>	FS&S Committee	2017 - 20		<ul style="list-style-type: none"> <li>No. of additional registered green leaders per annum</li> </ul>

	Strategies Measures/KPI's	Action/Activities	Person Responsible	By When	Progress	Measure of Success
<b>Objective 2: Reduce greenhouse Gas Emissions</b>						
<b>GHG Emissions EMISSIONS</b>	2.1 Determine the carbon footprint of TKDH	<ul style="list-style-type: none"> <li>Measure carbon emissions, establish local experts and monitor and report emissions on the performance dashboard.</li> </ul>	Mgr I&ES	Ongoing		<ul style="list-style-type: none"> <li>Baseline data report includes Greenhouse Gas Emissions and reduction target</li> </ul>
<b>Objective 3: Reduce Energy Consumption by &lt;1% per annum</b>						
<b>ENERGY</b>	3.1 Identify and implement energy reduction opportunities where funded	<ul style="list-style-type: none"> <li>Per Key Focus Areas listed above</li> </ul>	FS&S Committee	Ongoing		
	3.2 New or refurbished facility are designed with energy efficiency options	<ul style="list-style-type: none"> <li>Ensure design consultants provide energy efficient criteria to support all projects</li> </ul>	PCG	Ongoing		
	3.3 Educate staff and contractors on reducing energy usage.	<ul style="list-style-type: none"> <li>Commence lights out campaign across TKDH.</li> <li>Awareness campaigns, articles in the newsletter and Intranet.</li> </ul>	FS&S Committee	Ongoing		<ul style="list-style-type: none"> <li>Relevant Staff involvement.</li> </ul>
	3.4 Ensure new equipment is energy efficient	<ul style="list-style-type: none"> <li>Work with Procurement to endeavour to ensure energy efficient options are considered when purchasing/replacing equipment.</li> </ul>	Mgr I&ES	Ongoing		

	Strategies Measures/KPI's	Action/Activities	Person Responsible	By When	Progress	Measure of Success
<b>Objective 4: Reduce Water Consumption by &lt;1% per annum</b>						
<b>WATER</b>	4.1 Understand the water usage pattern for TKDH	<ul style="list-style-type: none"> <li>Map water usage on a quarterly basis</li> <li>Monitor areas/departments of heavy usage and identify options to improve.</li> </ul>	Mgr I&ES	Ongoing		
	4.2 Review water capture and reuse systems	<ul style="list-style-type: none"> <li>Investigate the feasibility of installing additional water tanks.</li> <li>Increase stormwater capturing capacity by adding additional captures to existing buildings.</li> </ul>	Mgr I&ES	2017		<ul style="list-style-type: none"> <li>Funding available and water tank installed.</li> </ul>
	4.3 Reduce water usage in patient areas	<ul style="list-style-type: none"> <li>Review dual flush toilets in all areas</li> <li>Review options for automatic garden watering system</li> </ul>	Mgr I&ES	2017		<ul style="list-style-type: none"> <li>Reduced water meter readings</li> </ul>
<b>Objective 5: Reduce Waste by further by &lt;1% per annum increase % of waste recycled by &lt;1%per annum</b>						
<b>WASTE</b>	5.1 Monitor and track waste volumes to identify major generators and waste reduction opportunities	<ul style="list-style-type: none"> <li>Explore the feasibility of purchasing waste weighing and tracking systems. Develop cost benefit submission for executive approval.</li> </ul>	Mgr I&ES	2017	Pending Capital approval	<ul style="list-style-type: none"> <li>More extensive waste segregation analysis</li> </ul>
		<ul style="list-style-type: none"> <li>Target waste reduction programs for the top 3 waste generators <ul style="list-style-type: none"> <li>Theatre</li> <li>Acute</li> <li>kitchen</li> </ul> </li> </ul>	FS&S Committee	2017 - 2018		<ul style="list-style-type: none"> <li>Increase waste diversion</li> <li>Reduction in chemicals</li> </ul>

	Strategies Measures/KPI's	Action/Activities	Person Responsible	By When	Progress	Measure of Success
WASTE CONT'D	5.2 Review opportunities to reduce waste & costs and improve diversion rates	<ul style="list-style-type: none"> <li>Undertake waste stream benchmarking against similar waste generators at other hospitals. (eg. Theatre to theatre) to identify opportunities to reduce waste and improve practice.</li> </ul>	FS&S Committee	Ongoing		<ul style="list-style-type: none"> <li>Waste diversion targets and rate increase</li> </ul>
		<ul style="list-style-type: none"> <li>Investigate the feasibility of implementing water bottle refill station to reduce (avoid) the large volume of plastic water bottles to be recycled.</li> </ul>	FS&S Committee	2017		
		<ul style="list-style-type: none"> <li>Investigate the financial feasibility of diverting organic waste. Pending review of current and new systems.</li> </ul>	Food Services Manager			
	5.3 Maximise recycling opportunities to improve diversion rates	<ul style="list-style-type: none"> <li>To implement table recycling and encourage, improve in the utilisation of recyclable products eg cups, knife, forks</li> </ul>	Food Services Manager	2018		<ul style="list-style-type: none"> <li>Recycling tonnage increase</li> <li>Reduction in purchase of garbage bags.</li> </ul>
		<ul style="list-style-type: none"> <li>Explore feasibility in food service of implementing commingle recycling from patient tray</li> </ul>	Food Services Manager	2018		<ul style="list-style-type: none"> <li>Increase recycling</li> </ul>
		<ul style="list-style-type: none"> <li>Introduce education and installations of external public area commingle bins.</li> </ul>	Mgr I&ES	2018		<ul style="list-style-type: none"> <li>Increase recycling</li> </ul>
		<ul style="list-style-type: none"> <li>Continue to develop opportunities to reuse furniture and equipment</li> </ul>	Mgr I&ES	Ongoing		<ul style="list-style-type: none"> <li>Internal Furniture reuse program available on the intranet site</li> </ul>
	5.4 Monitor Legislative compliance	<ul style="list-style-type: none"> <li>Conduct audits to monitor compliance to waste management legislation/standards and identify diversion opportunities and cost savings</li> </ul>	DFSS	Ongoing 2017		<ul style="list-style-type: none"> <li>Clinical waste audit annually</li> <li>Visual waste audit program 2 x monthly</li> </ul>

	Strategies Measures/KPI's	Action/Activities	Person Responsible	By When	Progress	Measure of Success
<b>Objective 6: Increase expenditure on green products by &lt;1% per annum &amp; reduce packaging waste &gt;1%per annum</b>						
<b>PROCUREMENT</b>	6.1 Develop and promote environmental consideration into procurement decisions for goods and services.	<ul style="list-style-type: none"> <li>Review current effectiveness of the TKDH procurement policy to support consideration of sustainability principles</li> </ul>	DFSS	2017		<ul style="list-style-type: none"> <li>Review product purchasing patterns for Environmental sustainability consideration</li> </ul>
<b>Objective 7: Reduce our GHG emission associated with our Transport and Travel by &lt; 1% P.A</b>						
<b>TRANSPORT &amp; TRAVEL</b>	7.1 Develop an understanding of the transport and travel environmental footprint of TKDH.	<ul style="list-style-type: none"> <li>TKDH Fleet Management Contractor to provide monthly reports relating to petrol consumption, kilometres travelled CO2 emission levels of TKDH vehicle fleet.</li> <li>Develop baseline data on travel and transport</li> </ul>	DFSS	Ongoing	Working with fleet Management Contract or to establish baseline data.	<ul style="list-style-type: none"> <li>Baseline data established including monthly collation of data displayed on Sustainability @ TKDH site.</li> </ul>
	7.2 Establish reduction targets to reduce the environmental foot print of TKDH transport and travel choices	<ul style="list-style-type: none"> <li>Establish vehicle CO2 emission reduction targets</li> <li>Investigate the feasibility of reducing the car fleet, through the removal of unused vehicles and the establishment of a pool software to enable more efficient use of fleet</li> <li>Consider the purchase of additional hybrid vehicles when replacing fleet vehicles</li> <li>Provide information to staff on fuel efficient driving</li> </ul>	DFSS	2017		<ul style="list-style-type: none"> <li>Reduced vehicle CO2 emission related to the procurement of fuel efficient vehicles.</li> <li>No. of hybrid vehicles purchased</li> <li>No. of fleet vehicles reduced</li> </ul>

## Monitoring, review and continuous improvement

The effectiveness of the plan will be monitored by tracking the following through an Environmental Sustainability Scorecard.

### Monitoring schedule

What	How	How often	Records	Who
Energy Use	Retailer invoices	Monthly	Reports from invoices	Mgr I&ES
Water Use	Retailer invoices	Monthly	Reports from invoices	Mgr I&ES
Gas Consumption	Retailer invoices	Monthly/Bi Monthly	Reports from invoices	Mgr I&ES
Fuel Use	Monthly bills	Monthly	Spreadsheets	DFSS
Green Purchasing	Recorded through purchase order forms	Monthly	Spreadsheet showing % of total purchase	Procurement
General Waste	Contractor data	6 monthly	Spreadsheet showing weighed waste & recycling	Mgr I&ES
Clinical Waste	Contractor data	Monthly	Invoice/report from contractor	Mgr I&ES
Recycling	Contractor data	Monthly	Invoice/report from contractor	Mgr I&ES
Commuter Styles	Travel Survey	Annually	Travel survey reports	DFSS

## Review and Progress Reporting

- The progress of the environmental Sustainability Strategy will be reviewed by the Facilities, Space & Sustainability committee bi-annually.
- Strategy to be reviewed annually. Performance progress and key achievements to be reported publicly through annual report on the TKDH website.
- The Environmental Sustainability Action Plan is reviewed annually.

## The Future

This Environmental Sustainability Strategy demonstrates TKDH organisational wide commitment to reducing the adverse environmental impacts associated with the day to day operations and activities.