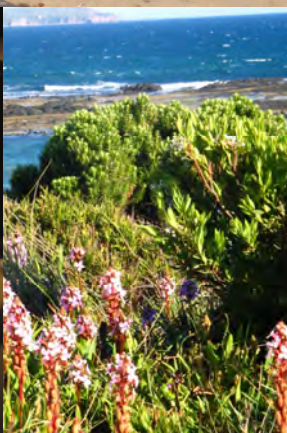


Sustainable Living Household Information Kit





Sustainable Living

Household Information Kit

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Sustainable Living

Household Information Kit

Section 1: Introduction

This kit is designed to help householders to reduce their impacts on the environment by reducing energy and water use and waste production.

It evolved from a three-year sustainability project for households and businesses, which was conducted by Phillip Island Landcare with funding from the Victorian Government Sustainability Fund.

We hope that this kit will empower people to make changes in their homes.

We also hope that it is valuable to other organisations planning to conduct sustainability projects in their own communities.

Background: Phillip Island sustainability project

Rationale

Phillip Island and San Remo are typical examples of the challenges facing rural Australia. These include increasing urban development pressures, resource needs and waste disposal issues. Engaging our community in sustainability practices is essential.

Sustainability is a term widely used in government policy and media, though it is not often translated into clear and practical ideas on how we as a community can *live* sustainably.

In 2005, as part of the Urban Landcare program, Phillip Island Landcare commenced the 'Practical Sustainability Seminar Series' to provide advice, examples and ideas for the home environment.

Many participants indicated they were motivated to change their actions at home, but found it difficult to decide which actions or changes would provide the most benefits.

In response, Phillip Island Landcare designed the three-year 'Sustaining Coastal Communities' project, which began in late 2008.

Project outline

The project worked with Phillip Island and San Remo residents, holiday home owners and businesses to reduce water and energy use and waste production.

The project provided each participant with a household or business sustainability audit, self-audit tools and support to plan improvements. The project also enabled participants to see how these changes could help to reduce their living costs. Seminars and events were run to involve the wider community.

Key aspects are outlined below:

- The project aimed to reduce participants' greenhouse emissions by 15%, water use by 30% and waste going to landfill by 50%.
- Over 60 homes and 20 businesses participated between 2009 and 2011.
- Some of the best individual achievements in the project included a 64% reduction in waste by smart shopping, reusing and recycling; a 46% reduction in energy use by first reducing household use and then installing a solar power system; and a 100% reduction in water by installing tanks.
- Participants attended an initial workshop to share stories and ideas.
- Each participant received a project information kit to help plan and track their progress.
- Sustainability audits were conducted in homes and businesses.
- Participants also used self-auditing tools to check their practices.
- A second workshop assisted participants to create action plans based on improvements identified during the audits.
- Four community information seminars were conducted per year to provide information on water, energy and waste reduction and other relevant topics. They included tours of flagship homes and businesses.
- An annual 'Sustainable Living Festival' showcased solutions, products and the work of local groups and organisations towards sustainability.
- An annual 'World Environment Day Expo' was held for local school children.
- Annual awards ceremonies showcased the achievements of participants.
- The project investigated the possibility of establishing a local, voluntary carbon offset program.
- The project culminated in the production of a brochure, 'Sustainable Phillip Island', which outlined a community vision, progress, and resources to assist residents to live more sustainably.

Funding

The primary funding source for this project was the Victorian Government Sustainability Fund, managed by Sustainability Victoria.

Financial and in-kind support for the project was also provided by the Bass Coast Shire Council, Phillip Island Nature Parks, Westernport Water, Western Port Biosphere Reserve and the Western Port Greenhouse Alliance.

Further information

The project was fully documented to enable it to be transferred to other communities. For further information on the project method and outcomes, please contact:

Lisa Wangman
Phillip Island Landcare Group
PO Box 272, Cowes Vic 3922
(03) 5951 3329

Section 2: Assessing my household

The process

Step 1: Set targets for energy, water and waste reduction

We recommend that you aim to reduce your current energy use, water use and waste production by the following percentages over the course of one year:

- Energy or greenhouse emissions by 15%
- Water use by 30%
- Waste going to landfill by 50%

Step 2: Conduct a home sustainability self-audit

Completing a home sustainability self-audit can identify potential actions to reduce energy use, water use and waste production.

At the end of this section, you will find three self-audit tools. The first two will help you identify areas where you can reduce your energy and water use. The third will help you to shop responsibly and reduce waste.

Step 3: Create an action plan

Ideas for actions or changes to improve household sustainability will come from your energy, water and waste self-audits. Section 3 includes action planning tips and a sample action plan to get you started.

Step 4: Track my progress

Before you begin implementing your action plan, gather any bills or information on your energy (electricity and/or gas) and water use for the past year.

These will give you a baseline picture of your current use of resources. You need a whole year of bills to form this baseline, since your water and energy use changes across the seasons.

Section 4 provides tables for you to enter billing information from the past year and the current year. As bills arrive for the current year, you can record information to

compare your current resource use with usage at the same time last year, allowing you to assess changes in your resource use and track progress towards your targets.

Energy self-audit tool

Most of our energy is produced using fossil fuels (e.g. coal-fired electricity). When used to create energy, fossil fuels release greenhouse gases (like carbon dioxide) and other pollutants into the atmosphere.

This self-audit tool has been adapted from the Banyule, Darebin, and Whittlesea Councils Sustainable Homes Program *Energy Smart Home Assessment 2007*. It aims to help you identify practical ways in which you can be more energy-efficient, which will protect our environment and save you money.

How to conduct your energy audit

- Allow around an hour to complete the audit.
- Work your way through each of the tables. Ask yourself the 'how do you use energy?' questions. Then tick the response that best matches your current energy use practices.
- Each response has a 'star' rating. Note the number of stars that correspond to your answer and add this to 'your total'. Tally up your results for each table. How do you compare?
- If you scored less than the maximum number of stars, read through the energy smart actions to identify the steps you can take to reduce your energy usage and protect the environment.
- When you've completed all the tables, use the energy audit summary at the end to summarise the energy-efficient actions you can introduce into your household action plan.

A/B) Water heating and shower, baths and taps

How do you use energy?	Your energy actions			Energy smart actions
	<i>Not very energy smart</i>	<i>Moderately energy smart</i>	<i>Energy smart</i>	
What type of water heater do you have?	Electric	Gas ☆	Solar, 5-star gas, or heat pump ☆☆☆☆	3–4 tonnes of greenhouse gases are produced per year to power an electric water heater, the most environmentally friendly options are solar, 5-star gas or heat pumps.
Check your hot water heater temperature?	65°C or more	62°C ☆	60°C ☆☆	Australian standards require storage water heaters to be set at no less than 60°C. Instantaneous gas water heaters can be set to lower temperatures. For most units you can adjust the temperature down yourself. Internal thermostats require adjustment by a qualified tradesperson.
What is your shower's hot water flow rate?	15 litres per minute or more	12 litres per minute ☆	9 litres per minute or less ☆☆	AAA or 3-star rated showerheads give a great shower with less water. They are most suited to mains pressure gas and electric storage heaters. AAA rated tap aerators can also be inserted into existing showerheads and taps to increase water efficiency.

How do you shower and bathe?	Long showers & deep baths	Shower only or shallow baths ☆	Short showers (3 minutes or less) ☆☆	A bath can use over 100 litres of water. A short shower can use less than 30 litres.
Is there insulation (lagging) on your water heater pipes?	None	Some ☆	Insulation of hot water pipes ☆☆	Insulating exposed pipes with rubber tubing (known as lagging) reduces conducted heat loss from storage water heaters. Pipes that are warm to touch (such as hot water pipes) should be insulated, at least for the first metre from the tank. This insulation can be bought from hardware and plumbing stores.
Your total				= / 12 stars

C) Clothes washing & drying

How do you use energy?	Your energy actions			Energy smart actions
	<i>Not very energy smart</i>	<i>Moderately energy smart</i>	<i>Energy smart</i>	
What water temperature do you use for clothes washing?	Always hot or warm	Sometimes warm ☆	Always cold ☆☆	Most of the energy used for clothes washing goes into heating the water. If you need a new clothes washer, check the energy star rating. The more stars the more energy-efficient the washer will be.
How do you dry clothes?	Always use the dryer	Sometimes use the dryer ☆	Always dry on the line/clothes airer ☆☆	Use the dryer less. If you do need to use it, spin your clothes well before using the dryer. New dryers also have energy star ratings – look for 4 star or greater rated appliances.
Your total				= / 4 stars

D) Fridges & freezers

How do you use energy?	Your energy actions			Energy smart actions
	<i>Not very energy smart</i>	<i>Moderately energy smart</i>	<i>Energy smart</i>	
Do you have a second fridge or freezer?	Always running	Only running when needed ☆☆	No second fridge or freezer ☆☆☆	A second fridge or freezer can cost over \$100 to run. Do you really need it? If so, only run it when needed, e.g. for parties. Newer fridges can cost much less to run. Check the energy star rating – the more stars the better.
Where are your fridge(s) and freezers located?	In a hot spot	A sometimes warm spot ☆	In a cool spot ☆☆	Locate fridges and freezers in cool spots, away from direct and other heat sources, such as stoves.
Check your fridge and freezer temperature?	Running at less than 3°C	Frosts up occasionally ☆	Fridge does not frost up ☆☆	The recommended operating temperature for a fridge is 3 to 5°C. Below this, it costs more to run and can frost up. For freezers, the recommended range is -15 to -18°C. Adjust thermostats if required and regularly remove frost build-up.
Are your fridge and freezer well ventilated?	No air gap around the sides or top of the appliance	Some air gaps ☆	Plenty of space around fridge ☆☆	Fridges and freezers need gaps to the top, back and sides to shed excess heat. For appliances with exposed back coils, vacuum or wipe off dust. Also ensure doors seal well.
Your total				= / 13 stars

E) Insulation, F) Shading & G) Draught proofing

How do you use energy?	Your energy actions			Energy smart actions
	<i>Not very energy smart</i>	<i>Moderately energy smart</i>	<i>Energy smart</i>	
Is your home insulated?	No	Ceiling	Ceiling, walls and subfloor.	Insulating your home is the best way to keep it comfortable all year around and reduce your heating and cooling costs and greenhouse gas emissions. Insulation is measured by its thermal resistance and given an R value. In Melbourne it is recommended that you get insulation of R3 value for the ceiling, R 1.5- 2 for walls and R1 for subfloor (where there is a wooden floor).
		☆☆	☆☆☆☆	
Do you have shading on north facing windows?	None	Some	Shade summer sun only	Well designed eaves shade summer sun, while allowing winter sun in. Alternatively an external blind, pergola or deciduous vine can be used.
		☆	☆☆	
Do you have shade on the east and west windows?	None	Some	Well shaded in summer	It is important to externally shade east and west windows (especially west windows) in summer. Blinds, verandas or trees can be used.
		☆	☆☆	

Do you have curtains and pelmets over living room windows or double glazed windows?	None	Good Curtains	Good curtains and pelmets or double glazed windows	Heavy lined curtains and pelmets, or double glazing helps to keep heat in during winter and out on hot summer days. Pelmets (covers over the top of curtains) are important to stop draught caused by airflow between curtains and windows.
		☆	☆☆	
Are there draughts from external doors windows etc?	Large gaps	Some gaps	No gaps	Use special door and window seals, gap filler or door snakes to block draughts. Seal any gaps around skirting boards, ceilings and old air vents. Check that chimney flues and extraction fans are sealed when not in use, with products like 'Draft Stoppas'. Note: by law, rooms with unflued gas heaters must have adequate ventilation.
		☆	☆☆	
Your total				☆ / 11 stars

H) Heating & cooling

How do you use energy?	Your energy actions			Energy smart actions
	<i>Not very energy smart</i>	<i>Moderately energy smart</i>	<i>Energy smart</i>	
How much of your home do you heat and cool?	Whole house	All living areas ☆	Only the room that people are in ☆☆	Only heat and cool the rooms you are currently using. Close doors between these rooms and the rest of the house and zone your central heating system (if you have one). If heating is required at night (e.g. for medical reasons), only heat bedrooms.
What do you use for heating?	Ducted whole of house or many electric heaters.	Single room heaters ☆	Warm clothes and occasional heater. ☆☆	Ducted heating can be very expensive to run. A bar radiator or blow heater can also use as much energy as a single room reverse cycle air conditioner or a single room gas heater. Wearing warmer clothes and only heating when needed can significantly reduce heating costs and greenhouse gas emissions.

What do you use for cooling?	Ducted whole of house	Single room ☆	Ceiling fans and night breeze ☆☆	Ceiling fans can significantly improve comfort, whilst using a lot less energy than air conditioners. They also work well with air conditioners and reversible ceiling fans assist with winter heating. Opening doors and windows on summer evenings to let in the cool breeze will also help cool. If using an air conditioner, choose an evaporative cooler over a refrigerative air conditioner as they are cheaper and more energy-efficient to run.
What is your living room temperature in winter?	24°C or more	22°C ☆	20°C or less ☆☆	Lowering the thermostat of heaters by one degree can reduce energy use by 10%.
What is your living room temperature in summer?	21°C or less	23°C ☆	25°C or more ☆☆	Raising the thermostat of cooling systems by one degree can reduce energy use by 10%
Your total				= / 10 stars

I) Lighting

How do you use energy?	Your energy actions			Energy smart actions
	Not very energy smart	Moderately energy smart	Energy smart	
What types of lights do you use?	Halogen down lights or incandescent globes	Some fluorescent s/compact fluorescent s	Mainly fluorescents/compact fluorescent s	Fluorescent/compact fluorescent lights use much less energy than incandescent globes or halogen “down lights”. Of the three, halogen down lights are the most inefficient. Compact fluorescents can replace incandescent globes that are not on dimmer circuits. They are very cheap to run, use 80% less energy and last longer.
Do you regularly turn off lights?	Lights left on all the time	Lights turned off occasionally	Lights turned off when no one in room	It's okay to turn fluorescent lights off when you leave the room – even for only a few minutes. (It's an old myth that this is a waste of energy.) Motion sensors can be used to automatically control outside lights.
Your total				= / 4 stars

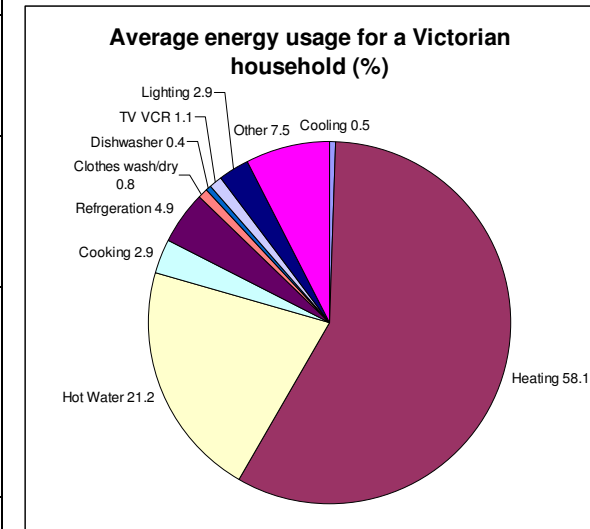
J) Standby, cooking & other

How do you use energy?	Your energy actions			Energy smart actions
	<i>Not very energy smart</i>	<i>Moderately energy smart</i>	<i>Energy smart</i>	
Do you have a pool?	Heated and filter always runs	Solar or no heating, filter runs for less than 6 hrs/day and regularly cleaned ☆	No pool ☆☆	A pool pump running 6hrs/day can cost \$300 - \$600 /yr. A gas pool heater can cost \$600 - \$800 /yr. Consider a solar pool heater and blanket. Keep intake grates clean and backwash filters when necessary. Saltwater chlorinators can double energy use of pump.
Do you heat your bed?	Waterbed	Electric blanket used just before bed ☆	No heating ☆☆	Waterbeds can be very costly to run. Making the bed each day reduces heat loss. If you need an electric blanket, turn it on just before going to bed and off once you have got into bed.
What are your main forms of cooking?	Electric stove and oven	Occasional microwave ☆	Microwave and/or gas cooker ☆☆	The most environment tally friendly cooking options are microwaves or gas cookers. Ensure seals on ovens work well. Place lids on saucepans.

How do you turn off your appliances with remote controls (soft switches)?	Turn on and off with remote control	Turn off at the wall sometimes ☆	Always turn off at the wall and have no standby power ☆☆	Appliances with remote controls or “soft switches” such as TV’s, stereos, computers, microwaves and some washing machines can consume considerable energy when in “stand-by” mode. Turn these off at the wall (either manually or with a timer) when not in use.
Do you have a computer? If so, how do you turn computers and computer screens off?	Left on for long periods	Use Energy Star Sleep features ☆	Monitor & PC turned off, or don’t have a computer ☆☆	Most modern computers can be set to enter “sleep” mode when not used for a certain period (such as 15 minutes). Turning the monitor off (using its button) when away for even a short time can reduce energy use by half.
Your total				= /8 stars

Energy audit summary

How do you use energy?	Your score	What you can do to become more energy smart? Transfer these actions into your household action plan (see section 3).
A & B : Water heaters, showers, baths and taps	/ 12	
C : Clothes washing and drying	/ 4	
D : Fridges and freezers	/ 13	
E, F, & G : Insulation, shading and draught proofing	/ 11	
H : Heating and cooling systems	/ 10	
I : Lighting	/ 4	
J : Standby, cooking and other	/ 8	



(Source: Wilkenfeld, 1999)

Water self-audit tool

Our water use and management can damage the environment in a number of ways. For example:

- When we draw our water supply from rivers and aquifers, we can damage them through over-extraction.
- When our water comes from desalination, we use large amounts of energy.
- Water that runs off non-porous surfaces – like driveways, paving and roads – flows directly into waterways via the stormwater system, carrying pollutants such as oil, nutrients and bacteria with it. (Unlike sewage, stormwater is NOT treated to reduce its damage to our waterways and oceans.)

Therefore, it is important to minimise our water use and manage our stormwater carefully.

This self-audit tool has been adapted from the Banyule, Darebin, and Whittlesea Councils Sustainable Homes Program *Water Smart Home Assessment 2007*. It aims to help you identify practical ways in which you can be more water-efficient, which will protect our environment and save you money.

It may be possible to reduce your household water consumption by 50% or more!

How to conduct your water audit

- Allow around an hour to complete the audit.
- Work your way through each of the tables. Ask yourself the ‘how do you use water?’ questions. Then tick the response that best matches your current water use practices.
- Each response has a ‘frog’ rating. Note the number of frogs that correspond to your answer and add this to ‘your total’. Tally up your results for each table. How do you compare?
- If you scored less than the maximum number of frogs, read through the water smart actions to identify the steps you can take to reduce your water usage and protect the environment.
- When you’ve completed all the tables, use the water audit summary on the back page to summarise the water smart actions you can introduce into your household action plan.

A) Garden (and outdoors) – Approx. 31% of household use

How do you use water?	Your water actions			Water smart actions
	<i>Not very water smart</i>	<i>Moderately water smart</i>	<i>Water smart</i>	
How much of your garden requires watering?	More than 75%	Between 25% - 75%	Less than 25% or I don't have a garden	Reduce the amount of garden that requires regular watering by planting indigenous (locally native plants) and low water use plants.
	0 frogs	2 frogs	6 frogs	
Do you use mulch on your garden?	No	Sometimes	Regularly	Mulching around plants dramatically reduces water loss by as much as 70%. Mulch should be laid at least 75 mm thick. Look for mulch that includes some recycled greenwaste content, for a better environmental product.
	0 frogs	2 frogs	4 frogs	

Do you water your garden and if so how?	Inefficiently, e.g. poorly controlled automatic sprinkler system (now illegal)	Moderately efficiently e.g. semi-automatic sprinkler, careful use (now illegal)	Efficiently, by hand, with timer, or carefully maintained automatic or drip style irrigation system	Only provide as much water as your garden needs. Use moisture meters and rain sensors to ensure you are not over watering or do a simple test by pushing your finger into the soil. If the soil feels damp or sticks to your finger, it does not need watering. Watering your plants only once or twice a week also helps them develop deeper roots and become more resistant to hot weather. Drip irrigation systems are also typically more efficient in their water use.
	0 frogs	0 frogs	4 frogs	
What time of the day do you water?	Always during the day	Sometimes during the day (only by hand) sometimes in morning or evening	In the early morning and evening only	Watering your gardening in the cooler times of the day dramatically reduces the amount of water that is lost through evaporation.
	0 frogs	1 frog	2 frogs	

Have you improved your soil's ability to hold water?	No 0 frogs	Partially, by adding some compost/or organic matter/water crystals/flakes etc. 2 frog	Yes, through the addition of compost/or organic matter/water saving crystals/flakes etc. 4 frogs	Adding compost, organic matter, water crystals or flakes helps increase your soils ability to hold water, hence reduce watering needs.
Do you have a swimming pool?	Yes, with no cover 0 frogs	Yes, with a regularly used pool cover 1 frog	No 2 frogs	Swimming pools are big water users. Install a pool cover and ensure you have no leaks.
Do you backwash the water from your swimming pool or spa into the sewer or stormwater?	Yes, into the stormwater 0 frogs	Don't know 0 frogs	Yes, sewer or I don't have a pool or spa 1 frog	Make sure swimming pools are backwashed into the sewer not the stormwater. Pool chemicals can be harmful to the environment.
How do you wash your car?	Frequently / in the street with a hose 0 frogs	Frequently / on the lawn with a bucket and trigger hose 0 frogs	Rarely / At a car wash that recycles water or I don't have a car 2 frogs	Wash your car less frequently and use a car wash – typically the water is recycled.

How do you clean your driveways, paths and footpaths?	With a hose or blowing the dirt into the kerb gutter with a blower vac 0 frogs	With a broom or rake 2 frogs	With a broom and I keep the kerb gutters outside my house clean 4 frogs	Use a broom to clean driveways and footpaths and don't sweep leaves, dirt or clippings into the gutter or stormwater drain.
How do you fertilise your garden or lawn?	I fertilise frequently and use large quantities 0 frogs	I use only as much as needed and monitor carefully 1 frog	I don't need to use fertilizers on my style of garden 3 frogs	Fertilisers are high in nutrients which harm creeks and rivers. Use them sparingly.
How do you manage pests and diseases in your garden?	I use chemicals (e.g. pesticides and herbicides) regularly and in any weather 0 frogs	I use chemicals sparingly, always read the label and never apply in wind and rain 1 frog	I use non-chemical control methods (e.g. companion planting, pest traps) 3 frogs	Like fertilizer, chemicals should be used sparingly and never applied in wind and rain. They can be harmful to humans, plants, other organisms, creeks and rivers.
Does your car leak oil or radiator fluid?	Yes or don't know 0 frogs	Rarely 1 frog	Never, and I keep my car regularly serviced, or I don't have a car 4 frogs	Check your car regularly for leaks and keep it well serviced.

Do you pick up the droppings of your pet (dog, cat, horse)?	Never 0 frogs	Sometimes 1 frog	Always, or not applicable 2 frogs	When walking the dog, carry a plastic bag or 'pooper scooper' to pick up their droppings.
When painting, plastering or cleaning, do you allow washwater or waste products to go down the storm water drain?	Always 0 frogs	Sometimes 0 frogs	Never 3 frogs	Don't pour wastewater, paint, washing up water or anything else down the stormwater drain or gutter – or leave it where it may end up in the gutter.
When you are building, renovating or landscaping do you contain sand and other materials so they don't blow or wash into gutters?	Never 0 frogs	Sometimes 0 frogs	Always 3 frogs	Keep sand, soil and other materials well away from stormwater drains and gutters. You should protect these materials with bundling, tarps and other covers, hay bales or similar materials.
Your total				= / 47 frogs



Water saving AAA rated shower heads give a great shower, whilst saving up to 20,000 litres of water per person per year!

For more information on saving water go to:

www.savewater.com.au

www.yvw.com.au

www.ourwater.vic.gov.au

www.greenplumbers.com.au

To do a more thorough interactive water audit you can go to:

education.melbournewater.com.au/content/home_water_investigator/

B) Bathroom – Approx. 33% of household use

How do you use water?	Your water actions			Water smart actions
	Not very water smart	Moderately water smart	Water smart	
Do you have a water saving AAA or 3 star rated shower head?	No 0 frogs	Don't know 0 frogs	Yes 4 frogs	AAA rated shower heads give a great shower with less water. They are not suitable for gravity fed or some instantaneous gas hot water systems.
What are your showering and bathing patterns	Frequent long (8 minutes or more) showers and deep baths 0 frogs	Medium length (3-8 mins) and occasional baths 1 frog	Short showers (3 mins or less) and no baths 3 frogs	A bath can use well over 100 litres of water. A short shower can use less than 30 litres of water.
Is your hot water system thermostat set to be between 50 – 65 degrees Celsius	No 0 frogs	Don't know 0 frogs	Yes 1 frogs	Adding cold water to cool very hot water is wasteful. Reducing your water temperature will save you money on your energy bill.
Do you turn the tap off whilst brushing your teeth?	No 0 frogs	Sometimes 0 frogs	Mostly or always 1 frog	A running tap can use 16 litres of water per minute. Wet your brush and fill a glass for rinsing.
Do you rinse your razor under a running tap?	Yes 0 frogs	Sometimes 0 frogs	Rarely or never 1 frog	Fill the sink/basin with a little warm water for rinsing your razor instead.
Your total				= / 10 frogs

C) Toilet – Approx. 14% of household use

How do you use water?	Your water actions			Water smart actions
	Not very water smart	Moderately water smart	Water smart	
What type of flush system do your toilets have?	Single flush 0 frogs	9/4.5 litre dual flush 2 frogs	6/3 litre dual flush or fitted with a water saving device 4 frogs	Single flush and even some dual flush systems use large amounts of water. Dramatically reduce water use by installing dual flush systems or by modifying your existing system. The latter can be done by putting bottles of water into your cistern to reduce its water holding capacity.
Your total				= / 4 frogs

D) Laundry – Approx. 14% of household use

How do you use water?	Your water actions			Water smart actions
	Not very water smart	Moderately water smart	Water smart	
What type of washing machine do you use?	Standard top loader 0 frogs	Top loader with suds saving 2 frogs	Front loader or AAA or 3 star rated top loader 3 frogs	Front-loading washing machines generally use one-third less water than top loaders. Go to www.wsaa.asn.au/frame2.html to identify water efficient models or look for the AAA or 3 star rating.
How full are your loads of washing?	Mainly small loads 0 frogs	Mainly large loads but some small 0 frog	Usually full loads 1 frogs	Use full loads as much as possible. Adjust the load setting on your machine if it isn't full.
Your total				= / 4 frogs

E) Kitchen – Approx. 5% of household water use

How do you use water?	Your water actions			Water smart actions
	<i>Not very water smart</i>	<i>Moderately water smart</i>	<i>Water smart</i>	
How do you wash dishes?	With a dishwasher, small loads 0 frogs	With a dishwasher, full loads only 1 frog	Full loads, or washing by hand 2 frogs	If you use a dishwasher, ensure that it is full when you run it and use the economy cycle if possible. Look for water efficient AAA or 3 star rated appliances.
Do you where convenient and appropriate capture 'warm up' water for use on plants, rinsing dishes, washing fruit and vegetables or other cleaning tasks?	No 0 frogs	Sometimes 1 frog	Often – Always 2 frogs	'Warm up' water can be used to water plants, rinse dishes, wash fruit, vegetable and do other cleaning tasks.
Your total				= / 4 frogs

F) Taps and leaks – Approx. 2% of household use

How do you use water?	Your water actions			Water smart actions
	<i>Not very water smart</i>	<i>Moderately water smart</i>	<i>Water smart</i>	
What is your tap water flow rate?	15 litres per minute or more 0 frogs	Between 9 – 15 litres per minute 1 frog	9 litres per minute or less 2 frogs	Flow rates on taps can be checked by measuring how many litres of water flow out in one minute with the tap on full. AAA or 3 star rated aerators, flow restrictors or washers can be used to reduce flow rates.
Do you have any taps or toilet cisterns that leak?	Yes 0 frogs	Don't know 0 frogs	No 2 frogs	Fix any leaking taps and toilet cisterns. You can check your toilet cistern for leaks by putting a few drops of food dye into the cistern. If you have a leak, coloured water will appear in the bowl before the toilet has been flushed.
Your total				= / 4 frogs

G) Water source

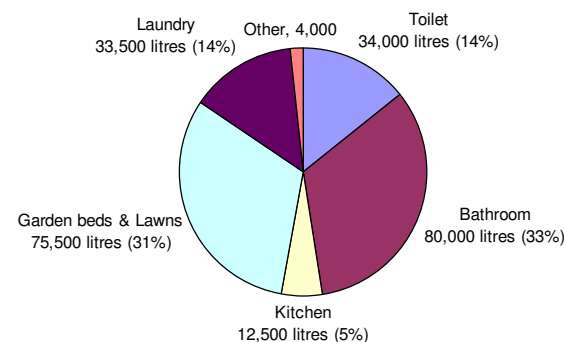
How do you use water?	Your water actions			Water smart actions
	Not very water smart	Moderately water smart	Water smart	
What sources of water do you use?	Mains water only 0 frogs	Some use of rainwater or greywater 6 frog	Extensive use of rainwater and greywater 12 frogs	Reduce the amount of mains water you use by installing a rainwater tank. Connect it to your toilet and laundry and use it to water the garden. As a general rule, get the largest tank you can fit in your available space. Install a greywater diverter or treatment system and re-use greywater (except kitchen water) for toilet flushing and in the garden. When reusing greywater in the garden ensure you use low phosphorus, salt and nitrogen detergents, as these can be harmful to your plants and soils. Typically liquid detergents are better than powder detergents in this regard. Go to www.lanfaxlabs.com.au for a list of suitable detergents.
Can you locate the sewer and stormwater connections outside your house?	No 0 frogs	Not sure 0 frogs	Yes 2 frogs	Know where each of your sewer and stormwater connections are. You should also make sure your stormwater connections are legal.

Your total				=	/ 14 frogs
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Water audit summary

How do you use water?	Your score	What you can do to become more water smart? Transfer these actions into your household action plan (see section 3).
A – Garden (and outdoors)	/ 47	
B – Bathroom	/ 10	
C – Toilet	/ 4	
D – Laundry	/ 4	
E – Kitchen	/ 4	
F – Taps and leaks	/ 4	
G – Water source	/ 14	

Water consumption for the average Melbourne household



Waste & green purchasing self-audit tool

This self-audit tool has been adapted from the Banyule, Darebin, and Whittlesea Councils Sustainable Homes Program *Watching your Wasteline: A home waste green purchasing audit*.

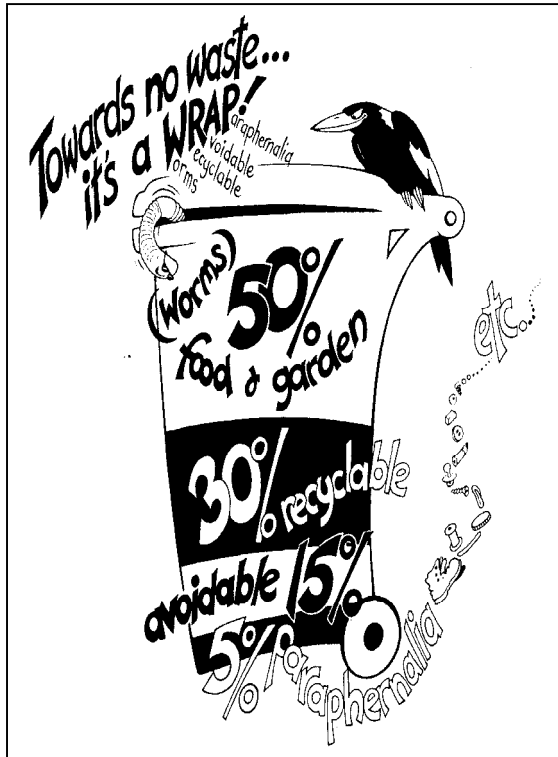
Use this guide to identify areas where you can take action to reduce waste through recycling, composting, worm farming and green purchasing.

How to conduct your waste and purchasing audit

- Allow around an hour to complete the audit.
- Work your way through each of the tables. Ask yourself the 'how do I dispose of waste or shop?' questions. Then tick the response that best matches your current energy use practices.
- Each response has a bin or trolley rating. Note the number of bins or trolleys that correspond to your answer and add this to 'your total'. Tally up your results for each table. How do you compare?
- The less bins and shopping trolleys you get, the better you are doing. Look for ways to improve your score, reduce waste and increase your green purchasing.
- When you've completed all the tables, use the waste audit summary at the end to summarise the actions you can introduce into your household action plan.

WATCHING YOUR WASTELINE

A home waste – green purchasing audit



Name(s): _____

The date this audit was
completed: _____




































































Recording the date you undertake this audit will help you keep track of your progress. Remember that usage changes depending on need, family size and other variables such as the size of your garden.





























Use this guide to identify those areas where you can take action to reduce waste, increase recycling, composting and worm farming and green purchasing within your home. As you go through the guide, tick the box that most represents you and total your score in bins and shopping trolleys at the end of each section. The less bins and shopping trolley's you get, the better you are doing. Look for ways to improve your score, reduce waste and increase your green purchasing.

Understanding the diagram on the left and a few facts:

- Food and garden waste makes up 50% of waste in the average households garbage bin.
- Recyclables make up 30% of waste in the average households garbage bin. Main items include glass bottles and jars, aluminium and steel cans, paper and cardboard, cartons and plastic bottles (codes 1, 2, 3, 4, 5, 6, 7).
- Waste generated that is avoidable makes up 15% of the average households garbage bin. This includes products you could buy that have less packaging or products that you don't really need!
- Paraphernalia refers to items required for specific activities that are a part of human existence in a western culture. In other words the left over bits that are society's fault. For example hair pins, stockings, buttons, CDs.

WHAT DO YOU DO WITH YOUR WASTE?

What do you do with your waste?	YOUR ACTION/SCORE			
What type of garbage bin(s) do you have?	None No bins	1 small garbage bin (80 or 120 litre) 	1 large garbage bin (240 litre)  	More than 1 garbage bin    
How full is your garbage bin each week?	Less than 25% full 	Between 25% to 50% full  	Between 50% TO 100% full   	Always full    
How often do you put out your garbage bin?	Monthly or less often 	Every three weeks  	Fortnightly   	Weekly    
Do you recycle your glass bottles and jars?	I avoid glass bottles and jars No bins	Always 	Sometimes   	Never    
Do you recycle your aluminium and steel cans?	I avoid aluminium and steel cans No bins	Always 	Sometimes   	Never    
Do you recycle your paper and cardboard?	I avoid paper and cardboard No bins	Always 	Sometimes   	Never    
Do you recycle your cartons?	I avoid cartons No bins	Always 	Sometimes   	Never    
Do you recycle plastic bottles with the codes 1, 2, 3, 4, 5, 6, 7 ?	I avoid plastic bottles No bins	Always 	Sometimes   	Never    

What do you do with your waste?	YOUR ACTION/SCORE			
Do you recycle your organic waste (food and garden waste) on-site at home?	I have a compost bin or worm farm (purchased or home made) to recycle my food and garden waste No bins	I have a compost bin or worm farm and a green waste bin for my excess waste 	I only have a green waste bin and I don't recycle my kitchen / food waste   	No organic recycling facility at all    
How much of your food/kitchen waste are you currently recycling through your compost bin or worm farm?	All to most (100% - 75%) No bins	Half (around 50%) 	Some (around 25%)  	None or I don't have a compost bin or worm farm    
How much of your garden waste are you currently recycling?	All to most 100% - 75% (or I don't have a garden or I have a waste wise garden) No bins	Half (around 50%) 	Some (around 25%)  	None    
Do you use your compost or worm castings on your garden?	Yes always No bins	Sometimes 	No  	I don't have compost or worm castings   
Your Total / 47				

A bit on LANDFILL...

Landfilling is much less attractive than reducing, reusing and recycling! Landfill tips attract pest species like birds and rats. They smell. Imagine your smelly bin multiplied by the number of smelly bins in your town all in the one spot! Noisily filled with rumbling trucks and tractors. Landfill tips can cause ground water pollution. They can release toxic chemicals to the surrounding environment. As material breaks down they release greenhouse gases – in particular methane. Landfills are dusty and they require loads of topsoil to cover the waste materials. Once the landfill is full the land subsides or settles causing the land to be very carefully (and very expensively) managed. Hands up if you want to live next door to a landfill?

A week of house hold recycling


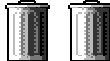



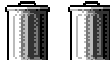

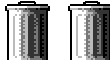

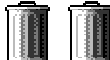
saves 3.6kg of waste to landfill, 90 litres of water, 3kg of greenhouse gas pollution and enough electricity for nearly a month's use of a 40 watt light used 4 hours a night.



















A bit on PLASTIC CODES...



















The Plastic Coding System is a series of symbols that identify the most common plastic material used in the manufacture of a product or packaging. The symbols are usually embossed on the bottom of plastic containers and bottles. Their purpose is to assist collectors with sorting the collected plastics by material type. They do not necessarily indicate that the product can be recycled or is made from recycled content. Many imported products come in packaging that have a recycle symbol marked on them; however, because of limited markets, they are not recycled in Australia but may be recyclable overseas. Check which plastics can be recycled with your local council.
















WHAT DO YOU DO WITH HARMFUL PRODUCTS?


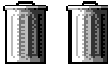
Certain products must be disposed of carefully. You can't pour them down the sink or put them out with your kerbside collection as they can cause long-term damage to waterways, vegetation, soil and the environment. They are also dangerous for children and pets. The following table will help you identify which products in your home should be disposed of differently. The table refers to the contents of containers only – where all product is used, empty containers can be placed in the recycling or rubbish bin according to their labelling.

PRODUCT	YOUR ACTION/SCORE		
This column refers to the contents of containers only – where all product is used, empty containers can be placed in the recycling or rubbish bin according to their labelling	Where do you currently dispose of this product?		
In the home			
Empty aerosol cans (Insect spray)	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin 
Floor-care products	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin 
Kitchen/bathroom cleaners	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin 
Pharmaceuticals	n/a do not buy/use/dispose of these products No bins	Returned to your local pharmacy. 	In the rubbish bin 
Computers	n/a do not buy/use/dispose of these products No bins	**Through Byteback collection program. 	In the rubbish bin 

PRODUCT This column refers to the contents of containers only – where all product is used, empty containers can be placed in the recycling or rubbish bin according to their labelling	YOUR ACTION/SCORE Where do you currently dispose of this product?		
Nail polish and remover	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
Fluorescent tubes and compact fluoro light globes.	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
Smoke detectors	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service or I return these to the manufacturer 	In the rubbish bin  
Batteries	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
In the shed			
Fuels	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
Gas cylinders	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  

PRODUCT This column refers to the contents of containers only – where all product is used, empty containers can be placed in the recycling or rubbish bin according to their labelling	YOUR ACTION/SCORE Where do you currently dispose of this product?		
Fertilizer	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
Paints and paint stripper	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
Weed killer and poisons (rat poison)	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
Pool chemicals	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
Solvents and glues	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
In the car			
Engine oil	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  

PRODUCT This column refers to the contents of containers only – where all product is used, empty containers can be placed in the recycling or rubbish bin according to their labelling	YOUR ACTION/SCORE Where do you currently dispose of this product?		
Coolant/antifreeze	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
Mobile phones	n/a do not buy/use/dispose of these products No bins	Through the Mobile Muster sites in participating retail stores or Australia Post. www.mobilemuster.com.au 	In the rubbish bin  
Fire extinguishers	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
Old car batteries	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service. 	In the rubbish bin  
Car wax and car body filler	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service or I return these to the manufacturer 	In the rubbish bin  

Brake and transmission fluid	n/a do not buy/use/dispose of these products No bins	**Through the roaming Detox Your Home chemical collection service or I return these to the manufacturer 	In the rubbish bin 
Your Total / 46			

None of the products above are suitable for your normal kerbside collection and cannot be poured down the sink.













Sustainability Victoria (formally EcoRecycle Victoria) runs a **Detox Your Home Program. This is a free chemical and hazardous waste disposal service. Farm or commercial industrial chemicals and waste asbestos are not accepted. Twenty litre containers are the maximum capacity accepted.



















Sustainability Victoria also runs a ByteBack service for safe disposal of old computers.
















For more information, visit sustainability.vic.gov.au.



















HOW DO YOU SHOP?
















Why buy litter and waste or products that are harmful to the environment? There are three key areas we can work on to ensure a waste-wise, green-purchasing shopping experience! These are avoiding unnecessary or waste-generating products, buying recycled, and buying products that are not harmful to the environment. Work out your trolley score for waste-wise shopping and green purchasing.

SHOPPING ACTION	YOUR ACTION/SCORE			
Do you use a jeep, basket or reusable shopping bag such as calico bags and say no to plastic bags?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you reuse plastic shopping bags around the home or return them to larger supermarkets for recycling?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time or I don't have any plastic shopping bags in my home  1 trolley
Do you take your own containers when buying foods?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time or I do not buy these types of products.  1 trolley
Do you buy products in plastic packaging that have the codes 1, 2, 3, 4, 5, 6, 7 and can generally be recycled?	Never 4 trolleys	Less than 25% of products I purchase are packaged in recyclable plastic codes  3 trolleys	Around 50% of products I purchase are packaged in recyclable plastic codes  2 trolleys	Almost or certainly 100% of products I purchase are packaged in recyclable plastic codes  1 trolley

SHOPPING ACTION	YOUR ACTION/SCORE			
Do you avoid over packaged products?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you avoid packaging made from more than one material that cannot be separated? For example plastic laminated paper.	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you buy products in concentrated form and buy refills when available?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you avoid disposable products such as paper plates and plastic utensils?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you support organisations and stores that have environmentally conscious products, packaging and practices?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you buy fresh food rather than packaged or processed food?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley

Do you buy in bulk?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you buy products in packaging that has recycled content?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you buy products that are made from recyclable materials, ie recycled toilet paper, napkins, tissues or garden products like mulch and compost made from recycled green waste or garden furniture made from recycled plastic? <i>Fast Fact: Recycled products use up to 40 times less water and energy to create than those from raw materials!</i>	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you use microfibre or natural cleaning products (e.g. vinegar / bi-carb of soda) rather than chemical based cleaning products?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you buy laundry and washing detergents that are low in salt, phosphorus and nitrogen?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley

Do you buy organic food products?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you buy energy efficient (4 star or greater) products?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you buy water efficient (AAA or greater) products?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you buy low emission/low volatile organic compound products, i.e. low emission paints, floor coverings, furniture, bench coverings etc?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you choose products that are durable and repairable?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you reuse and repair products rather than purchasing new ones where possible?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley

Do you choose products that are reusable?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you buy good quality second hand products?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you buy just what you need and are able to judge the amount you will actually use?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you attempt to buy locally produced items that use less energy?	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Do you write or call businesses and manufacturers to lobby for green products to be sold, less packaging and more to be made from recyclable materials.	Never 4 trolleys	Less than 25% of the time  3 trolleys	Around 50% of the time  2 trolleys	Almost or certainly 100% of the time  1 trolley
Your Total / 104				

WHAT DO YOU DO WITH YOUR WASTE?

Your total / 47

WHAT DO YOU DO WITH HARMFUL PRODUCTS?

Your total / 46

HOW DO YOU SHOP?

Your total / 104

EXAMPLE WASTE REDUCTION PLAN

1. Put a "no junk mail" sticker on my letter box
2. Put containers for recyclables and food waste in my kitchen to help separate my waste
3. Donate useful household items, toys and clothing I no longer need to charity
4. Put one less bag each week in my garbage bin
5. Buy yogurt in recyclable containers
6. Buy recycled toilet paper

OUR WASTE REDUCTION PLAN

Write your actions below to work on that you have identified by filling out this audit

1.
2.
3.
4.
5.
6.
7.

Section 3: Action planning

What is action planning?

Action planning helps you work out the path towards reducing your household energy and water use and waste generation.

Ideas for actions or changes to improve household sustainability will come from your energy, water and waste self-audits.

This section includes action planning tips and a sample action plan to get you started. It also includes blank tables in which you can record your own action plans for energy, water and waste.

There are many simple, free or inexpensive actions that you can implement quickly. When completing your action plans, we suggest that you include three simple short-term actions that you can complete within three months, plus three long-term actions that may take up to a year to complete.

Sample action plan

Action	How will you complete this action?	Who will be involved in this action?	Approx costing	Action complete date	Action done
Short term action 1 (energy) I will repair damaged seals on my oven and check seals on my fridge	Step 1 – check fridge over with paper in seals Step 2 – get rubber to fix oven seal	Me & hardware store for advice	Around \$30 - 50	(In 3 mths) 28/2/2010	
Short term action 2 (water) I will buy a digital shower timer to keep your shower to 4 minutes or less	Step 1 – investigate retailers, order and buy Step 2 – cut down shower time by 30 seconds each week	Me & product retailer	Around \$15 - 20	(In 3 mths) 24/1/2010	
Short term action 3 (waste) I will put one less rubbish bag each week in my garbage bin	Step 1 – smarter shopping, less packaging, only buy what I need Step 2 – ensure what I do buy has recyclable packaging	Me	Free	(In 3 mths) Start doing this week	
Long term action 1 (energy) Install an energy efficient heating system instead of inefficient portable electric heater	Step 1 – investigate models, costs and star ratings Step 2 – buy and install to central location in house	Me & retailers for advice & maybe electrician for installation	Between \$200 - 500	(6mths – 1yr) 25/4/2010	
Long term action 2 (water) I will install a grey water diversion system to water the garden and fruit trees	Step 1 – investigate products and piping Step 2 – dig trenches around plants in 2 areas and install pipes	Me & friends to dig trenches & nursery to supply mulch & hardware products	Around \$100	(6mths – 1yr) 31/7/2010	
Long term action 3 (waste) Buy and use a pet poo converter to compost dog droppings.	Step 1 – investigate prices and products – buy converter Step 2 – buy worms and set up and start using	Me, retailers, worms and my dog	Around \$100	(6mths – 1yr) 28/3/2010	

Action planning tips – energy

Simple tips: Short-term actions to reduce energy use

Green power

- Switch to green power. Contact your electricity supplier or visit www.greenpower.gov.au.

Electric appliances

- Switch off appliances at the wall to reduce your use of standby power.
- Use a clothes line instead of an electric dryer.
- Check your fridge thermostat (it should be set at 3–5°C).
- Ensure all appliances are working efficiently, e.g. repair damaged seals on ovens and fridges.

Lighting

- Turn off your lights when you leave the room.
- Make good use of natural light, particularly from north-facing windows.
- Switch to energy-efficient compact fluorescent lamps and replace down-lights with energy-efficient light emitting diode lamps (LEDs).
- Use the lowest wattage needed to adequately light an area.
- Use timers or motion sensors to control outdoor and security lighting.
- Use solar-powered lights for outdoor garden lighting.
- Avoid using multiple globe fittings and down lights where possible.

Heating/cooling

- In winter put a jumper on instead of the heater and dress to suit the conditions, rather than changing the temperature to suit your clothes.
- Place a throw rug on the couch to snuggle under in winter.
- Install a timer or programmable thermostat to turn your heater/air conditioner on and off automatically before rising in the morning or getting home in the evening instead of leaving your heater/air conditioner running on low overnight or while you are out during the day.
- On hot days, close blinds or curtains to keep the heat out.
- In summer, open your windows to get a cross flow of cool air once the temperature has dropped outside.

- Keep winter room temperatures at 18-20 degrees and summer room temperatures at 24-26 degrees. Each degree you increase or decrease the thermostat can increase running costs by up to 15%.
- Service and repair heating and cooling equipment. Repair damaged ducting, check the accuracy of thermostats, clean filters and repair air conditioner components, such as compressors.

Insulation

- Install draught-stoppers and seal cracks and gaps in floorboards, walls and around doors and windows to avoid draughts.

Hot water

- Service and repair hot water systems regularly to ensure continued efficient operation. Check the pressure-relief valve for excessive overflow and make sure the thermostat is working correctly.
- Repair leaking or damaged water fixtures. This can save up to 100kg of greenhouse gases per year.
- Install insulation on hot water pipes. Insulation needs to be at least 10mm thick.

Long-term actions to reduce energy use

Electric appliances

- Look for a 4 or 5 star energy rating label when you buy a new appliance. The more stars, the more energy-efficient the appliance and the less it will cost to run. The energy rating web site www.energyrating.gov.au provides energy efficiency and star ratings for a range of electrical appliances.

Lighting

- Use light-coloured paint inside your home. Dark wall colours absorb light, increasing the amount of lighting needed.

Heating/cooling

- Install an energy-efficient heating system instead of inefficient portable electric heating devices that also present a greater fire hazard.
- Install an energy-efficient cooling system. Many older wall-mounted air conditioners use much more energy than current models with high star energy ratings. Evaporative coolers are more energy-efficient than refrigerative coolers, but might not be suitable for humid climates.
- Install ceiling fans for cooling in summer and heat redistribution in winter.

- Create heating and cooling zones by installing doors to allow heat retention in winter and ventilation in summer.
- Install external blinds and awnings.
- Erect pergolas or similar external shading devices.

Insulation

- Install insulation. Insulation in the roof cavity alone can reduce energy requirements greatly.
- Insulate under the floor and inside walls if possible.
- Insulate any heating ducts to ensure that heat is directed to the area you want heated and is not lost in delivery.
- Install double glazing to provide additional benefits of sound proofing as well as temperature regulation.

Hot water and solar power

- Replace your hot water system with a more energy-efficient variety. For example, replace an electric-storage system with gas-storage or gas-instantaneous system, or install a solar hot water system. Put the new system closer to the points of use to prevent heat loss. Solar hot water offers savings of up to 60% on annual energy bills.
- Install solar panels to provide all or a percentage of your power needs.

My action plan – energy

Action	How will you complete this action?	Who will be involved in this action?	Approx costing	Action complete date	Action done
Short term action 1	Step 1 Step 2			(In 3 mths)	
Short term action 2	Step 1 Step 2			(In 3 mths)	
Short term action 3	Step 1 Step 2			(In 3 mths)	
Long term action 1	Step 1 Step 2			(6mths – 1yr)	
Long term action 2	Step 1 Step 2			(6mths – 1yr)	
Long term action 3	Step 1 Step 2			(6mths – 1yr)	

Action planning tips – water

Simple tips: Short-term actions to reduce water use

In the kitchen

- Keep a jug of drinking water in the refrigerator, rather than running the tap until the water is cool enough to drink.
- Use only enough water when boiling vegetables to cover them, and keep the lid on the saucepan. Your vegetables will boil quicker and it will save you water, power and preserve precious vitamins in the food.
- Use a 10L basin with handles for capturing ‘warm-up’ water for use on plants, rinsing dishes, washing the car, other cleaning tasks or put straight into the washing machine for the next load.
- Use a 10L basin with handles for capturing vegetable washing water rather than leaving the tap running.
- Install tap aerators or flow restrictors to reduce water flow without losing pressure.
- Fix leaking taps by replacing the washer or other components as required.
- Use washing up liquid sparingly as this will reduce the amount of rinsing required when washing dishes by hand.
- Stack washed dishes in a dish rack and rinse them with a pan of hot water to avoid running the tap continuously. Alternatively, if you have two sinks, half fill the second one with rinsing water.
- Put suitable food scraps into a composter or worm farm rather than down kitchen sink garbage-disposal units. These use about 6 litres of water per day.
- Use the dishwasher (if you have one) only when it has full load, and use the economy cycle if available.

In the bathroom and toilet

- Regularly check your plugs for leaks and replace as necessary.
- Turn the tap off while cleaning your teeth. Use a glass of water to rinse instead.
- Only fill the bath tub with as much water as needed, and use less for kids and pets. Check the temperature as you fill, adding extra water to get the correct temperature after the bath is at the right level is wasteful.
- Bucket used bath water onto the garden or use it to wash your car. Check that soaps and detergents in the water won’t harm garden plants.

- Install water-saving (AAA rated) shower heads. They use 7-9 litres per minute compared with traditional showerheads that use 15-20 litres per minute. You'll save on water and energy bills.
- Use a shower timer to keep your shower to 4 minutes or less.
- Capture 'warm-up' water in a bucket in the shower for use on plants, washing the car, cleaning tasks or put into the washing machine for the next load.
- Put a water bottle or water bag in the cistern of an older style single flush toilet to reduce the volume used with each flush.
- Fix a leaking toilet. Check for leaks by putting a few drops of food dye in the cistern. If the dye seeps into the toilet bowl then you have a leak.

In the laundry

- Wait until you have a full load of clothes before running the washing machine, and use the economy cycle.
- Adjust the water level to suit the size of the wash load. Some new water-efficient models will do this automatically.
- Use the sud-saver option (if your old machine has one) when you have several loads to wash.

In the garden

- Use the 'old' nitrogen and phosphorous-rich water from when you clean your fish tank on your plants.
- Mulch your garden to reduce evaporation by as much as 70% and feed the soil as it breaks down. A layer about 5-10cm thick will do the job.
- Include mulch in your pot plants as well. Remember to keep the mulch clear of the plant stem to avoid possible fungal problems.
- Use trigger nozzles for all garden hoses.
- Use a water spike to see if your plants actually need watering and if they do, water at night or early morning (between 8pm and 10am) to reduce evaporation loss.
- Target the root area of plants – where they need it – for maximum efficiency.
- Encourage plants to extend their roots deeper by watering less often, but more thoroughly. This will make them hardier and less thirsty.
- Fit timers on taps to make sure you don't overwater. A forgotten watering system can waste over 1000 litres of water an hour.
- Set mowers to leave grass at a length of 1 to 1.5cm to reduce evaporation loss and the watering needs of your lawn.

Pools, spas, vehicles and outdoor areas

- Use a pool/spa cover or blanket, prevent wind exposure, and increase shade with shade cloth/sail to reduce evaporation by up to 95%.
- Use a broom, brush or rake to sweep and clean outdoor paths and paving instead of hosing them down with water.
- Use captured 'warm-up' water from inside the home or treated grey water to wash vehicles.
- Wash your car, boat or other vehicles with a bucket and sponge or water-efficient, high-pressure hose (if water restrictions permit) rather than a running hose. Alternatively, use a waterless car wash product; a number of these products are available.
- Use a commercial car wash that recycles its wash water.

Long-term actions to reduce water use

In the kitchen

- When looking for a new dishwasher, look for models that have a National Water Conservation or WELS (Water Efficiency Labelling and Standards) label. WELS is a star rating scheme that allows consumers to compare the water efficiency of different products. The best water rating achieved by dishwashers is 5 stars.

In the bathroom and toilet

- Check the manufacturer's water-efficiency label or WELS label before buying a new bathroom appliance. Look for a product that has a high star rating. The more stars, the more water-efficient the product.
- Install a dual flush toilet. Some new 4 star rated models use just 4.5 litres for a full flush and 3 litres for a half flush.

In the laundry

- When buying a new washing machine, look for one that has a WELS 4 star rating or higher.
- Consider buying a water-efficient front-loading washing machine.

In the garden

- Install a rainwater tank for outdoor use and connect to your toilet for flushing and laundry for clothes washing.
- Use a grey water diverter funnel or hose, or install a grey water system to divert water for use in your garden.

- Group plants with similar sun, shade and watering needs when planning your garden.
- Install a drip irrigation system for your garden. Using a porous hose is also effective.

My action plan – water

Action	How will you complete this action?	Who will be involved in this action?	Approx costing	Action complete date	Action done
Short term action 1	Step 1 Step 2			(In 3 mths)	
Short term action 2	Step 1 Step 2			(In 3 mths)	
Short term action 3	Step 1 Step 2			(In 3 mths)	
Long term action 1	Step 1 Step 2			(6mths – 1yr)	
Long term action 2	Step 1 Step 2			(6mths – 1yr)	
Long term action 3	Step 1 Step 2			(6mths – 1yr)	

Action planning tips – waste

Simple tips: Short-term actions to reduce waste

Responsible shopping practices

- Before you go shopping, write a list and stick to it!
- Ask yourself: “Do I really need it?” Buy only what you need and re-think the items you buy habitually.
- Avoid purchasing items with excess and unnecessary packaging.
- Always check packaging for recyclable codes before buying.
- Reuse your own shopping bags instead of accepting plastic. Remember to take reusable bags to the supermarket and shopping centre, and to use them!
- Use reusable veggie bags as alternatives to plastic fresh produce bags.
- Look for items that are durable and reusable rather than disposable. For example, choose cloths instead of paper towels, crockery instead of disposable plates, and cloth nappies and washers rather than disposable nappies and wipes.
- Buy products with recycled content, such as toilet paper, tissues, paper towel and office paper.
- Buy locally produced goods to reduce energy required for transport. Buy from local shops and farmers markets.
- Buy Australian-made. Alternatively, support fair-trade and community-trade products.
- Look for credible eco-labeling on products to ensure that they are produced sustainably, are environmentally sound, and are made to last.
- Consider buying second-hand to extend the useful life of products.
- Take your own cup when buying a take away coffee or drink.
- Support businesses that provide food and beverages in crockery rather than disposable containers and packaging.
- Buy rechargeable batteries and a charger that charges AA and AAA batteries or, better still, avoid buying products that require batteries.
- Other product purchase considerations include: Is the product designed to be easy and cost-effective to repair? Is the product designed to be easily dismantled for component reuse and recycling? Does the retailer or manufacturer offer a take-back scheme for reuse and recycling at the end of the product’s useful life?

Cleaning & personal hygiene

- Choose micro-fibre cleaning products which can be used with just water.
- Try learning to make and use natural cleaning products, using ingredients such as baking soda, vinegar, borax and essential oils in place of conventional ones.
- If you do buy cleaning products, buy those that have been manufactured to significantly reduce chemical and nutrient loads on the natural environment.
- Switch to natural personal care products manufactured from non-synthetic, non-toxic ingredients and fragranced with essential oils to reduce the amount of synthetic chemicals that you and the environment are exposed to.

At home

- Say no to junk mail. Place a 'no advertising material' sign on the letterbox.
- Stop addressed junk mail using the Direct Marketing Association's Do Not Contact Service. Register at www.adma.com.au.
- Identify ways of carrying out a task or function without using materials that generate waste i.e. use crockery, reusable bags, a hanky etc.
- Use reusable, recyclable plastic food storage containers instead of gladwrap and aluminium foil for leftovers. Use a lunchbox for sandwiches.
- Reuse containers, building materials and clothing.
- Consider buying second-hand to extend the useful life of products.
- Repair broken appliances rather than throwing out or just buying a new one.
- Keep paper used only on one side for children to draw on, shopping lists, phone notes, printing drafts etc.
- Sign up for e-bills and e-statements rather than posted bills on paper.
- Use recycled office paper for the printer and copier (at home and at work) and print double-sided as much as possible.
- Use online e-cards or buy charity greeting cards, and recycle those received that you do not wish to keep.
- Grow your own food to reduce transport miles and packaging waste.

Recycling

- Put containers for recyclables and food waste in the kitchen to separate waste.
- Buy things embossed with the recycling triangle and the numbers 1, 2, 3, 4, 5, 6, 7 inside it. These products are likely to be recycled by your council.

- You can also recycle the following items through your kerbside collection service: paper, cardboard, glass, aluminium, steel and other items, e.g. non - styrofoam coffee cups and their lids, yoghurt and plastic take-away containers, cardboard food packaging and plastic biscuit trays.
- Use your home recycling correctly and find drop-off locations for items that can't be recycled at home.
- Recycle your kitchen scraps and garden waste into compost.
- Recycle printer cartridges with Planet Ark to keep these resources out of landfill.
- Recycle mobile phones through Australia Post outlets.
- Donate useful household items, toys and clothing that you no longer need to charity.

Waste disposal

- Conduct a waste audit. Record all waste that your household produces for a week.
- Protect creeks and waterways by ensuring that no chemicals, detergents, soil or organic matter enters stormwater drains. Use the Detox your Home service to get rid of harmful products and substances. Details at www.sustainability.vic.gov.au.
- Only put the bins out for collection when they are full.
- Find ways to reduce the amount of food waste thrown into the garbage bin.
- Aim to put one less bag each week in the garbage bin.

Long-term actions to reduce waste

At home

- Make your next party eco-friendly to conserve resources and promote sustainability to friends and family.
- Hold a garage sale or donate unwanted goods and clothing to a local charity.
- Use 'Freecycle' to find new homes for perfectly good, but no longer needed 'stuff'. Freecycle is an internet based trash and treasure network. There is one cardinal rule: everything must be free, legal and appropriate for all ages. Visit www.freecycle.org
- Search www.recyclingnearyou.com.au to find ways of recycling or donating unwanted electrical goods, such as mobile phones, computers and white goods to prevent them from going to landfill.

Recycling

- Set up a composting system or worm farm to compost food and garden waste.
- Set up a separate worm farm to compost pet droppings. Only use the worm castings at the base of ornamental plants or fruit trees – not on your vegetables.

My action plan – waste

Action	How will you complete this action?	Who will be involved in this action?	Approx costing	Action complete date	Action done
Short term action 1	Step 1 Step 2			(In 3 mths)	
Short term action 2	Step 1 Step 2			(In 3 mths)	
Short term action 3	Step 1 Step 2			(In 3 mths)	
Long term action 1	Step 1 Step 2			(6mths – 1yr)	
Long term action 2	Step 1 Step 2			(6mths – 1yr)	
Long term action 3	Step 1 Step 2			(6mths – 1yr)	

Further information

References for action planning tips

The suggested actions to improve your household sustainability have come from a number of web sites and brochures including:

[Sustainable Bass Coast: Sustainable Living Guide Brochure](#) Bass Coast Shire Council and the Phillip Island Landcare

[GreenHome](#) Australian Conservation Foundation

[Sustainable Homes & Communities Program](#) Banyule and Darebin Councils

[Green Resolutions web information service](#) Planet Ark

[Supporters of Sustainability Challenge](#) Blacktown City council, NSW

savewater.com.au

Other useful sustainable living web sites

Practical

Sustainable living:

- www.livinggreener.gov.au
- www.makeyourhomegreen.vic.gov.au
- www.resourcesmart.vic.gov.au

Sustainable gardening: www.sgaonline.org.au/

National recycling hotline: www.recyclingnearyou.com.au

Appliance energy ratings: www.energyrating.gov.au

Chemicals in the home: www.saferolutions.org.au

Discussion / Informative

Ecological footprint calculator: www.epa.vic.gov.au/ecologicalfootprint/

Department of Sustainability: www.environment.gov.au

Clean energy: www.cleanenergyfuture.gov.au

Section 4: Tracking progress

When to record data & comparing future bills to baseline data

Before you begin implementing your action plan, gather any bills or information on your energy (electricity and/or gas) and water use for the past year.

You can enter this into the billing information tables in this section to give you a baseline picture of your use of resources before you make any changes in your household.

Once you begin implementing your action plans, you can record information as each new bill arrives, allowing you to track how much energy, water, waste and money you are saving.

Billing information record tables

- Energy/electricity – Bills are quarterly, usually on set billing periods unless by prior arrangement with electricity supplier.
- Energy/gas – Record information as you pay bills for your gas/or as cylinders are changed or refilled.
- Water – Bills are usually quarterly on set billing periods unless by prior arrangement with your water supplier.

Project targets record tables

To see how close you are to reaching the project targets, fill in the project targets table as each new bill arrives and compare it with your baseline figure.

We recommend that you aim to reduce your current energy use, water use and waste production by the following percentages over the course of one year:

- Energy or greenhouse emissions by 15%
- Water use by 30%
- Waste going to landfill by 50%

Billing information record – energy (electricity)

What type of electricity plan or tariff are you on? (E.g. domestic, green power, 100% green power. This should be listed on your bill.)

Please include the costs for kWh used only, not service charges.

Billing period	Usage kWh	Average per day kWh	Total cost \$	Average cost per day \$	Notes on usage e.g. changes to people in household, actions implemented etc.
Average for last year					
Average for this year					

Billing information record – energy (gas)

For gas used last year and the current year.

Dates gas cylinder used Start – End	Days total per cylinder	Cost per cylinder	Volume per cylinder kg

Billing information record – water

This table is for litres of mains water used (not service charges).

Billing period	Usage lt. 1 KI=1000 lt	Average per day lt.	Total cost \$	Average cost per day \$	Notes on usage e.g. changes to people in household, actions implemented etc.
Average for last year					
Average for this year					

Project targets – energy (electricity)

Billing period	Usage kWh	15% of usage	Usage -15% = Target
Average for last year			
Billing period	Usage kWh	Target figures from above right column	kWh above or below target
Average for this year			

Project targets – energy (gas)

Time	Kg total	15% of Usage	Usage -15% = Target
Last year			
Cylinder st – finish & days	Usage Kg	Target figures from above right column	Kg above or below target
This year			

Project targets – water

Billing period	Usage lt. 1 Kl=1 000lt	30% of usage	Usage -30% = Target
Average for last year			
Billing Period	Usage lt. 1 Kl=1 000lt	Target figures from above right column	lt. above or below target
Average for this year			

Project targets – waste

Do not include items put in your recycling bin – only waste to landfill.

To estimate the volume of your waste to landfill, first work out the size of your bin. If in doubt, ask your council.

Then estimate how full your bin is each time you put it out.

Then multiply this by how often you put it out per year (e.g. weekly x 52 / fortnightly x 26).

This should give you an estimated volume of waste to landfill for the past year.

You can reassess your waste to landfill again each time your electricity bill comes in by the same method. Just multiply the bin volume by the number of weeks in the billing period.

Billing period	Waste lt.	50% of Waste	Waste lt. - 50% = Target
Average for last year			
Billing Period	Usage lt. 1 KI=1000lt	Target figures from above right column	lt. above or below target
Average for this year			

Sustainable Living

Household Information Kit

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