

LAKE  
MACQUARIE  
CITY

# SUSTAINABLE LIVING GUIDE



# SUSTAINABLE LIVING GUIDE



*Let's live sustainably.*

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# INTRODUCTION

This guide has been prepared to provide practical information on actions that will decrease energy and water consumption and reduce waste. Some of these actions you may already do, others may be new to you. Implementation of at least some of these actions will benefit the environment and also result in financial savings.

Sustainable living refers to a way of life that conserves natural resources and reduces waste; enabling actions to be repeated indefinitely. The lifestyle that many of us lead is not sustainable as we use resources at a level that exceeds the rate at which they are replenished by the planet.

## ECOLOGICAL FOOTPRINT

In today's society we use resources through the supply of food, transport, clothing and electricity to name a few. We also generate waste like sewage, rubbish and air pollution. Our resource use and waste absorption require large areas of land and atmosphere, called an ecological footprint.

### Countries With The Highest Ecological Footprints 2017

Rank	Country	Ecological Footprint In Global Hectares Per Capita
1	United Arab Emirates	10.68
2	Qatar	10.51
3	Bahrain	10.04
4	Denmark	8.26
5	Belgium	8.00
6	United States	8.00
7	Estonia	7.88
8	Canada	7.01
9	Australia	6.84
10	Iceland	6.50

Source - [worldatlas.com/articles/countries-with-the-largest-ecological-footprints.html](http://worldatlas.com/articles/countries-with-the-largest-ecological-footprints.html)

Ecological footprint calculations are used to assess how sustainable population groups are when comparing resource use between groups. It calculates the land area required to sustain an individual or group.

If the entire global population had the same sized footprint we would need about four Earths to support everyone. We need to better manage what we have. By using less resources, we tread more lightly, enabling resources to be shared in a more equitable manner.

Visit [footprintcalculator.org](http://footprintcalculator.org) to calculate the footprint created by your lifestyle.

# CONDUCT YOUR OWN HOME AUDIT

*Walk around your home and think of ways you can reduce your household's environmental impact and write down actions you can do.*

For example:

Are low wattage and compact fluorescent or LED light bulbs in use, and are old bulbs disposed of properly?

Are the ceiling, walls and floors insulated?

Does the fridge have good seals?

Do I use more water than necessary?

Do I recycle all suitable paper, metal, glass, and plastic?

Do I compost food waste, and or place in my green bin with garden waste?

Do I buy goods with minimal packaging?

Do I plant local native species in the garden?

Do I grow some of my own vegetables?

Is my hot water heater set to 50°?

Am I buying or generating renewable energy?

Do I buy local products?

Revisit this page while reading the guide and add to it.

In six weeks, tick off actions you have commenced and add to the list.

Things I can do

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

# WATER

## FACTS

- 💧 An average home in the Lower Hunter uses about 173,000 litres of water a year.
- 💧 A house fitted with water efficient appliances can reduce consumption by 25%.
- 💧 One leaking tap can waste more than 2,000 litres a month.

Source: Hunter Water Compliance Report 2017



## TIPS FOR WATER EFFICIENCY

- 💧 Check and repair leaking taps and pipes to reduce water bills and wastage.
- 💧 To check for a slow leak in the toilet, place some food dye in the cistern and check after 15 minutes without flushing for colour in the bowl.
- 💧 Install a low flow water saving showerhead - it uses less than half the water of standard showerheads.
- 💧 Take shorter showers.
- 💧 Put a bucket under the shower while waiting for water to get hot and use it to water pot plants.
- 💧 Turn off the tap while cleaning your teeth and shaving.
- 💧 Put a plug in the sink when washing your hands if they are very dirty.
- 💧 Aerated taps are cheap to buy and will reduce water flow by 50%.

- 💧 Leaving taps running while rinsing dishes can use up to 6 litres/minute. Instead, fill the sink with water that would normally go down the drain before hot water arrives, and rinse in that.
- 💧 Rinse vegetables in a plugged sink, not under a running tap.
- 💧 Microwave, steam, or use a pressure cooker to cook vegetables instead of boiling.
- 💧 Have a full load before using the washing machine or adjust the load setting eg. small, medium, large to suit.
- 💧 Install a rainwater tank – the water can be used in the garden, toilet, and washing machine.
- 💧 Install a new dual flush toilet or a flush regulator, rebates may be available for some water saving products, visit [hunterwater.com.au](http://hunterwater.com.au).

# EFFICIENCY LABELLING

Water efficiency labelling can help you:

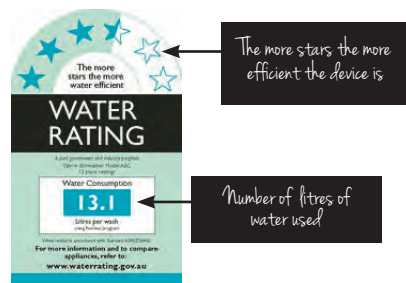
- 💧 Lower water use and wastewater volume.
- 💧 Reduce your power bill from reduced hot water use.

The WELS scheme is a national mandatory water efficiency labelling and minimum performance rating system.

The scheme covers showerheads washing machines, dishwashers, toilets, urinals and certain types of taps.

It aims to increase the efficiency of fixtures and appliances. It follows the success of the energy efficiency rating scheme, which saw an improvement in efficiency of 50% over 13 years.

Visit [waterrating.gov.au](http://waterrating.gov.au).



Source: [yourhome.gov.au/water/reducing-water-demand](http://yourhome.gov.au/water/reducing-water-demand)

# GREYWATER

Greywater is the wastewater from a hand basin, shower, bath, spa bath, and laundry. Greywater does not include toilet or kitchen water.

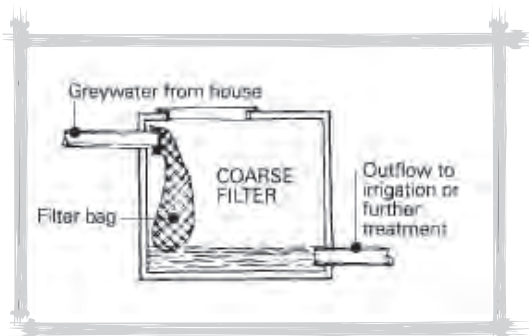
## *Why should you install a greywater system?*

With water becoming more scarce and a precious resource, the installation of a greywater system can help you become self-sufficient with your water supply. There are two types of systems available, these are greywater diversion devices and greywater treatment systems.

Greywater systems can only be used in sewered areas.

All forms of household wastewater contain pollutants and can pose a potential risk to human health and the environment. It is important to remember that salts and chemicals from cleaning products in greywater can also cause permanent damage to the soil structure in your lawn or garden.

For more information on accredited greywater treatment systems visit [health.nsw.gov.au](http://health.nsw.gov.au).





# RAINWATER TANKS

Rainwater tanks are great in helping to save water, and reducing stormwater run-off. Tanks are becoming increasingly popular, with a wide range of designs, materials, colours, and sizes to suit all types of residential and commercial buildings.


It is important to remember that rainwater tanks are low maintenance not 'NO' maintenance systems and need to be checked regularly to ensure high water quality, efficiency, and the longevity of your rainwater tank.

**Remember:** Do not alter your system in any way without an inspection by a licensed plumber.

In Lake Macquarie City, most rainwater tanks do not need approval, however, there are limits on size and placement.


For more information on rainwater tanks and how to give your tank a regular check up visit [lakemac.com.au](http://lakemac.com.au) or phone Council on **4921 0333**.

# FURTHER INFORMATION

 Contact Hunter Water on **1300 657 657** or visit [hunterwater.com.au](http://hunterwater.com.au).

*On greywater systems:*







 NSW Department of Health phone **02 9391 9000** or visit [health.nsw.gov.au](http://health.nsw.gov.au)

 DPI Water phone **1800 353 104** or visit [water.nsw.gov.au](http://water.nsw.gov.au)

# ENERGY



Lake Macquarie's energy usage as at June 2018 for 84,570 households.

 <b>525.36</b>	Total residential consumption MWh as at 2017-18
 <b>6,205</b>	kWh per year per household
 <b>17.0</b>	kWh per day per household
 <b>\$1,800</b>	Cost per year @ 29c / kWh
 <b>12,324</b>	Houses with Solar PV systems installed as at June 30 2018
 <b>29,014</b>	MWh exported to the grid 2017/18 from Solar PV Systems

Source: Ausgrid local council community electricity report 2016-2017

## GREENPOWER

GreenPower is a product households and businesses can buy on top of their usual electricity bill. The reason people do this is because it means they are choosing to purchase renewable electricity as part of their power bill rather than the usual electricity produced through burning coal. This choice means that there is less carbon pollution represented by your bill and the money goes towards further developing the renewable energy supply in Australia. Some electricity companies provide a GreenPower product at no extra cost. Some providers offer a no cost 'opt-in' program for Carbon Offsets. this program works by companies purchasing carbon offset units from climate action projects to offset your emissions.

Visit [greenpower.gov.au](http://greenpower.gov.au) for more information.

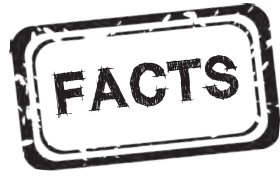


# RENOVATORS GUIDE TO THE 17 THINGS

The Centre for Liveability Real Estate is owned and supported by CSIRO, The Commonwealth Scientific and Industrial Research Organisation.

Visit [liveability.com.au/liveabilityguides](https://liveability.com.au/liveabilityguides) for information on creating and finding healthy, efficient and comfortable homes.

For more information on Energy savings for households and business including rebates visit [energysaver.nsw.gov.au](https://energysaver.nsw.gov.au)



- 💡 Electrical appliances account for around 30% of energy use in the home.
- 💡 A well insulated home is up to **10°C** warmer in winter and **7°C** cooler in summer.



# INSULATION TIPS

Insulating your home saves you money on your power bill and makes your home more comfortable. It also helps the environment by reducing the amount of energy required to heat and cool your home, and reduce the amount of carbon pollution which is released into the atmosphere.

The Your Home Technical Manual identified Lake Macquarie as a warm temperate climate and recommends minimum R-values (quality of resistance to heat flow) for walls and ceiling. The minimum R-value recommended for your ceiling is 4.1 and for walls 2.8.

The motto for comfortable and efficient homes is: build tight, ventilate right!

- 💡 Avoid gaps in the insulation. If only 5% of an area is left uninsulated, up to 50% of the potential benefits may be lost.
- 💡 Do not install insulation within 90mm of hot flues or exhaust fans or 25mm of recessed light fittings.
- 💡 Use a reputable company to install your insulation.

- 💡 Avoid loose-fill insulation if your roof space is excessively draughty, unless a sealant can be added to bond its top surface.
- 💡 If installing a new bath, insulate around it to keep the water hot for longer.
- 💡 Reduce heat loss by installing close fitting curtains or blinds.
- 💡 Exclude cold air in winter and hot air in summer by screening glass windows and doors on the south and west sides of the home using vegetation or physical barriers such as shutters.
- 💡 Seal draughts with draught excluders. A simple fabric door 'snake' can be very effective.



# APPLIANCE LABELLING

Energy rating labels will help you save energy and water. By law refrigerators, freezers, clothes washers, clothes dryers and air conditioners (single phase) must now have an energy rating label.



Source: [energyrating.gov.au](http://energyrating.gov.au)

- 💡 The average kilowatt hours (kWh) used per year can be obtained from the energy rating label on the product.
- 💡 Multiply the kWh per year given on the energy rating label by your average electricity rate to work out how much the appliance will cost you to run. For example, 500kWh x \$0.29 per kWh = \$145 per year.
- 💡 Appliances with high energy efficient ratings are rewarded, visit [energyrating.gov.au](http://energyrating.gov.au) to compare appliances.



Energy Star is an international standard for energy efficient office equipment including computers, printers and photocopiers, and home electronics such as TVs, audio products and DVD players. Visit [energystar.gov](http://energystar.gov) for more information.

To calculate the running cost of small appliances visit [ausgrid.com.au](http://ausgrid.com.au) and search for running costs of appliances.

## Typical electricity use and the cost of household appliances

Appliance	Cost/hour
Electric stove hotplate	56c
Microwave	36c
Light bulb 60 watts x 4	8c
Kettle	63c
Toaster 4 slicer	29c
Refrigerator 300-400 litre	7c
Clothes dryer	50c
Swimming pool filter and pump 1kw	28c
Air Conditioner	46c
Large TV - plasma	11c
Personal computer	5c

Source: [ergon.com.au/retail/residential/home-energy-tips/calculators/appliance-running-cost-calculator](http://ergon.com.au/retail/residential/home-energy-tips/calculators/appliance-running-cost-calculator)

# WINTER HEATING

- 💡 Close doors to separate heated areas from unheated areas of your home and minimise the area you are heating.
- 💡 Heat living areas to less than 21°C and, when in use, bedroom areas to less than 18°C.
- 💡 Turn off heating overnight and when you are out during the day.
- 💡 Use a space or portable heater instead of the central heater if only one room needs heating.
- 💡 Choose heaters with thermostat controls and timers and high star energy ratings.
- 💡 Keep heaters clean and regularly serviced.
- 💡 Close windows and doors and shut curtains and blinds when you are heating.
- 💡 Open curtains and blinds on sunny winter days to let sunlight heat in.



*Use heating & cooling wisely*

Every 1°C you move away from the actual temperature, adds 10% to heating and cooling costs

# SUMMER COOLING

- 💡 Close doors to separate airconditioned areas from unairconditioned areas of your home and minimise the area you are cooling
- 💡 For gas heaters, turn off pilot lights during warmer months.
- 💡 Ensure windows are well shaded from summer sun by external blinds or awnings.
- 💡 Open windows and ventilate the house when outside temperature is lower than inside temperature.
- 💡 On a hot day, with no breeze, close all blinds, curtains, windows and doors to keep the heat out.
- 💡 Open opposing windows to cross ventilate the home and allow summer breezes to flush out internal heat.
- 💡 Open windows (or run fans on still nights) to flush out hot air overnight.
- 💡 Put off jobs such as cooking, washing or ironing for a cooler time of the day.
- 💡 Wear natural fibres and lightweight clothing so that air can pass across your skin and evaporate moisture.
- 💡 Keep lights to a minimum on hot summer nights.
- 💡 Use fans to cool down, they are cheap to run. Fans evaporate moisture from the skin and create a cooling effect.

- 💡 Cool bedroom and living areas to no less than **24°C**.
- 💡 If purchasing an air conditioner look for one with a high star energy rating.
- 💡 Locate the air conditioner on the shaded side of the home, away from direct sunlight.
- 💡 Regularly clean the air conditioner and cooler, keeping coils and fans free of dust.
- 💡 Keep the area you are cooling to a minimum.
- 💡 Turn off the air conditioner overnight and when you are out of the house.
- 💡 Ventilate your roof space with vents under the eaves and whirly birds on your roof. Alternatively, use operable insulated roof windows to release hot air from your home all day long.
- 💡 If you need to replace your roof, do so with a light or neutral colour. This will reflect solar heat much better than dark coloured roofs and reduces the heat load on your home substantially.

## HOT WATER SYSTEMS

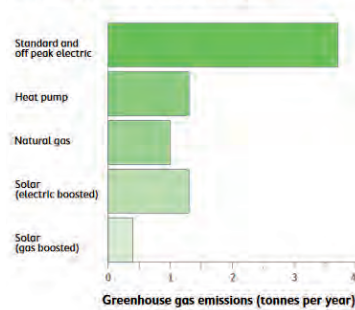
Buying a solar or heat pump water heater will save you money and be less harmful for the environment.

Estimated cost of 3 types of hot water heaters.

- 💡 electric hot water heater - **\$1442** per year.
  - 💡 gas boosted solar hot water - **\$228** per year (natural gas).
- Source: rheem.com.au/runningcostcalculator.
- 💡 heat pump system - **\$674** per year.

### Environmental Impact

Buying a gas, solar or heat pump water heater will be less harmful for the environment than an electric hot water system. This chart compares the amount of greenhouse gases generated to heat the same amount of water for different hot water systems.



Note: See comparison table for assumptions used.

Source: 'Ausgrids Hot Water Guide'

The following chart compares the amount of greenhouse gases generated to heat the same amount of water for different hot water systems.

### Getting the most savings from your system

- 💡 Ensure hot water solar collectors are not shaded by trees or nearby buildings, particularly in winter when the sun is low in the sky.
- 💡 Make sure the booster control is in an accessible location and has an indicator light you can see from inside to remind you to turn it off when not required (for example, when going on holiday or during summer).

- 💡 Carry out jobs that need hot water early in the day so that the water left in the tank will be reheated by the sun, ready for use at night.
- 💡 Regularly clean solar panels to remove dust. You can use a broom with some detergent to give them a scrub.
- 💡 Insulate external hot water pipes - plastic pipes are better insulators than copper but still lose a lot of heat.
- 💡 Ensure hot water taps are in good repair – no leaks or drips.
- 💡 Check that your hot water heater's temperature pressure relief valve is not leaking excessively.
- 💡 Keep your systems thermostat between 50 and 55°C. 50°C is the required limit to avoid scalding so if you are heating water at 60°C it means more cold water will be mixed in and you are using more electricity than you need to.
- 💡 Locate the hot water service close to the kitchen as this area uses small amounts of hot water frequently.
- 💡 Turn off your water heater when you go on holiday for more than a week.
- 💡 If buying a gas water heater, consider a unit with a high star energy rating.
- 💡 Use a cold rinse for your clothes washing and dishwashing.

# SOLAR PHOTOVOLTAIC

## (PV) systems

Over 1 million Australian households have solar PV. Cost reduction in technology means it is a cost efficient way to save.

Solar photovoltaic (PV) systems are usually mounted on your roof to convert energy from sunlight into direct current (DC) energy.


The system comes with an inverter that changes the DC energy into alternating current (AC) electricity. AC electricity is used to power your household appliances. A grid-connected system can feed excess energy into the electricity network (grid), while a stand alone system needs a battery to store excess energy.

**Renewable Energy Certificates or Small-scale Technology Certificates (STC's)** are available for installation of solar pv systems and solar hot water. STC's are a marketable commodity that can be used to get a further discount on renewable energy systems. Visit [cleanenergyregulator.gov.au](http://cleanenergyregulator.gov.au) for more information.

Solar PV electricity generation will vary between any two individual installations depending on various factors including:

- 💡 Cell and panel efficiency;
- 💡 Inverter efficiency;
- 💡 System size;




 Angle and aspect of installation.


In addition, electricity generated by two otherwise identical solar PV installations may vary from one place to another due to variation in factors like:  
daylight hours; cloud cover; altitude; and the seasonal angle of sunlight incidence.


The National Clean Energy Council gives tips on buying solar, visit [solaraccreditation.com.au/consumers](http://solaraccreditation.com.au/consumers)


Visit the Australian Government's website [energy.gov.au](http://energy.gov.au) for details about grants and rebates currently available.


## REFRIGERATORS


 Defrost and clean the inside of your refrigerator and freezer at least every six months.


 Clean the coils behind your refrigerator annually.

 To measure fridge temperature accurately place a thermometer in a glass of water in the back of the fridge for at least 24 hours before reading.


 Keep the temperature in your refrigerator between 3°C and 5°C.


 Keep the temperature in your freezer between -18°C and -15°C.

 Check that the door seals on the refrigerator and freezer are tight fitting. The seals should hold a \$5 note in place when the door is closed.


 Ensure good air circulation around


the outside and behind the unit.


 Place the unit in a shaded and cool location.


 When replacing a refrigerator purchase a unit with a high star energy rating.


## WASHING MACHINES & DRYERS


 Front loading washing machine, are usually more water and energy efficient.

 Wash clothes in cold water.

 Run the clothes washer or clothes dryer only with full loads.

 Use only the required amount of detergent - the manufacture of 100g of detergent generates 1.3kg of greenhouse gas.

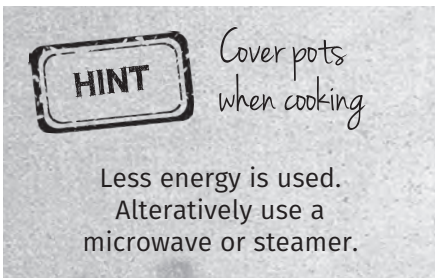
 Dry clothes outside rather than using the clothes dryer - this provides ultraviolet sterilisation and generates no greenhouse gases.

 Try to keep the dryer use to a minimum and locate it in a warm space.

- 💡 Ensure clothes are well spun before they are put in the dryer.
- 💡 Clean the lint from your clothes dryer after each use.
- 💡 Use the cool down cycle on the dryer, especially if items are just damp.

## DISHWASHERS

- 💡 Run the dishwasher only when full on an 'economy' or short cycle.
- 💡 Stop the dishwasher before the drying cycle, open the door to let the dishes air dry.



## COOKING

- 💡 Use a microwave oven instead of a conventional oven.
- 💡 Keep surfaces and reflectors clean and well-maintained.
- 💡 Use the right sized hotplate for the pot size.
- 💡 Turn the oven off a few minutes before your food is ready.
- 💡 Keep the inside of the microwave oven clean.
- 💡 Use smaller appliances such as toaster ovens instead of the conventional oven or grill for smaller portions.
- 💡 Use an induction cooktop.
- 💡 Use a pressure cooker instead of conventional pots and pans.
- 💡 Cook several dishes at a time in the oven.
- 💡 Ensure seals on your oven are in good condition.
- 💡 Avoid opening the oven door unnecessarily during cooking.
- 💡 Thaw frozen food before cooking.
- 💡 In a microwave oven, arrange unevenly shaped items with the thickest portion to the outside.
- 💡 In a microwave oven, regularly stir or turn the food over to speed up cooking time.

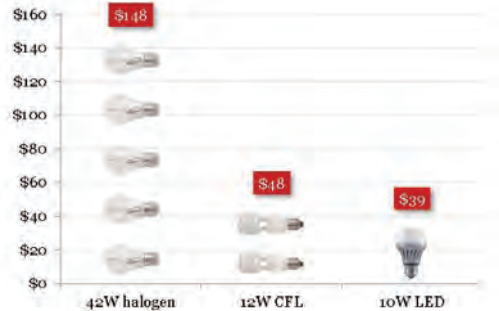
# LIGHTING

- Turn off lights when you leave a room.
- Upgrade blown lights with light-emitting diodes (LEDs).
- Use programmable timers, daylight sensors, or motion sensors to control outdoor and security lighting.
- Regularly clean light fittings, reflectors and lampshades.
- Use the lowest wattage globes to adequately light the area you require.
- Maximise natural light through windows and skylights (operable ones can also be used for summer ventilation). Use soft or pale coloured interiors and furnishings to reflect light better inside.
- When going on holidays use timers to switch lights and appliances on and off, rather than leaving them on all the time.
- Please remember to dispose responsibly of Compact Fluorescent Lights (CFLs) to avoid mercury contamination. CFL bulbs contain highly poisonous mercury and it is worth asking the manufacturer for any available take-back program. Lake Macquarie City Council has collection sites for light globes visit [lakemac.com.au](http://lakemac.com.au)

Things to consider when replacing existing light globes with LED's

- the colour light output (measured by temperature)
- check your fitting type
- lumen output – higher the lumen the brighter the output
- warranty

Consider lifetime cost. Choose the light bulb that will cost you the least in the long run.



Source: [energyrating.gov.au/document/factsheet-light-bulb-buyers-guide](http://energyrating.gov.au/document/factsheet-light-bulb-buyers-guide)

# HOME ENTERTAINMENT & COMPUTERS

- 💡 Turn off appliances at the power point when not in use. There are special power boards and switches that make turning off standby power easier.
- 💡 Screensavers do not reduce power consumption of a monitor unless they actually turn the monitor off.
- 💡 Activate the 'power save' function on your computer monitor.
- 💡 When purchasing home entertainment equipment and computers, choose a high star energy rating.
- 💡 Laptop computers, ipads and tablets use less energy than personal computers.
- 💡 Ensure game consoles such as X Box and Play Stations are switched off when not in use, as they use power on standby mode.










green

# TRANSPORT







In Australia, the transport sector accounts for over 18% of our total net greenhouse gas emissions. However, change is on the way. All levels of government are increasingly recognising the need to invest more in public transport and active transport options.





## MORE EFFICIENT VEHICLE USE

-  Minimise car use. Plan to do a number of errands in one trip to save both time and fuel. Where possible walk, cycle, car pool and/or catch public transport.
-  When stopped or idling for an extended period of time, switch off the engine.
-  Cars, bikes and other vehicles should be kept well tuned with tyres correctly inflated – this saves up to 5% in energy consumption. It also extends tyre life and improves handling.
-  Remove roof racks when not in use – saves up to 10% of energy consumption.
-  Drive conservatively and look out for cyclists and pedestrians - this saves up to 10% in fuel costs and makes it safer for everyone.
-  Driving at 90 km/h rather than 110 km/h can save up to 25% in fuel costs.
-  Air conditioning in cars can use an extra 10% fuel. However, when travelling faster than 80 km/h air conditioning uses less fuel than opening windows.
-  Remove unnecessary weight from the car – this saves up to 5% of fuel costs.
-  Air travel – long-haul flights can generate more emissions than a whole year of driving. This doesn't mean you shouldn't go on holiday! Consider holidaying closer to home and spending longer at places when you do travel far. Using a car, train or even bike to reach your destination will also make for an interesting journey.

# PUBLIC TRANSPORT

-  For your next trip phone **131 500** or go to [transportnsw.info](http://transportnsw.info) for the quickest way to your destination.
-  Timetables, maps and your chance to give feedback are also available through this website.
-  Bicycles are allowed on trains, so take advantage and combine a train trip with cycling to get you to your destination faster.
-  Develop a green travel plan for your workplace with the help of a range of tools available on the Internet – just google ‘workplace green travel plan’.

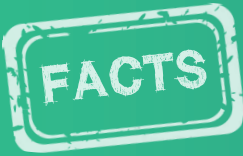
# GREENER VEHICLE BUYING

-  A bicycle is the most efficient form of transport with no fuel consumption and no emissions. More households around Australia are replacing their second (or only) car with bikes. Motorbikes and scooters are also more efficient than cars.
-  Hybrids and electric cars are emerging as viable alternatives to reduce fuel consumption and greenhouse gas emissions.
-  If you need to buy a car, check the green vehicle guide to compare the local air pollution and greenhouse emissions of vehicles at [greenvehicleguide.gov.au](http://greenvehicleguide.gov.au).
-  Smaller cars are more efficient and convenient for parking and manoeuvring.

The Carbon Neutral Program plants thousands of native trees to absorb or ‘sequester’ carbon emissions. Your total emissions can be calculated at [carbonneutral.com.au](http://carbonneutral.com.au). Carbon Neutral is a not-for-profit organisation that has planted about 39 million trees in the past 30 years.

Source: [www.transportnsw.info](http://www.transportnsw.info)

# SUSTAINABLE BUSINESS



Whether it's a home business or a big business, making your operations more resource efficient means identifying areas where you can make energy and water savings and reduce waste. Simple actions will assist your business to:

- save money;
- reduce energy, water use and waste;
- attract environmentally conscious consumers.

**Contact Council on 4921 0333 or visit [lakemac.com.au](http://lakemac.com.au) if your business would like assistance with becoming more efficient and sustainable.**

## ENERGY SAVINGS

- \$ Reduce consumption by switching off lights, computers, and photocopiers when not in use and make use of natural lighting.
- \$ Manage heating and cooling by insulating, sealing drafts, and shading. Every degree an air conditioner's set point is moved away from the actual temperature, adds 10% to heating and cooling costs.

- \$ Reduce air-conditioning demands by locating thermostats away from heat sources such as urns, photocopiers, sunlight, or space heaters.
- \$ Buy an accredited GreenPower product from your electricity provider and you will be buying renewable energy as part of your bill.

There are many efficient and low maintenance lighting options available today that have come down in price and can significantly reduce your operating costs. Some lighting upgrades can have payback periods as low as 1.3 years. Ask a number of electricians to give you quotes on different options and estimated paybacks. Make sure they provide you with all relevant information on quality of the lights, such as Australian Standards.

Consider optimising your next lighting retrofit to reduce the lux level of general lighting and therefore lamp wattage and couple this with dimmable efficient desk lamps for task lighting. Install occupancy and daylight sensors to maximise efficiency.

Install a solar hot water system and solar panels.

Install a timer on your zip boiler and water cooler. The type of timers that plug in between the power point and the appliance are cheap to buy, can be programmed by staff and save a huge amount on electricity.

Install a timer on your hot water system.

Sustainability Advantage is a NSW Government program. The program offers tools and one-on-one consultant advice on how to improve operational efficiency and integrate sustainability into standard business practices. Visit [environment.nsw.gov.au/sustainabilityadvantage](http://environment.nsw.gov.au/sustainabilityadvantage) for more information.

## WATER SAVINGS

Dual flush toilets use 3 litres on half flush (6 litres for the full option), which is up to 67% less water than older single flush toilets.

Install a flush regulator, which allows you to flush only for as long as you press the button

Install a rainwater tank.

## RECYCLING

Council provides a fortnightly commercial recycling service for: paper, cardboard, aluminium and steel cans, hard plastics, and glass.

Visit [lakemac.com.au/waste/commercial](http://lakemac.com.au/waste/commercial) for a range of bin sizes and prices.

A weekly food + green waste service is available for an annual fee of **\$150**.

Recycle toner and printer cartridges, and mobile phones.

For a comprehensive directory on all the different things your business can recycle visit [businessrecycling.com.au](http://businessrecycling.com.au)



- \$ Reduce paper consumption - change printers to duplex (double sided) or use the blank side of unwanted printouts for note taking.
- \$ Use e-business systems to increase efficiencies in business, promote a paperless office, and avoid paper consumption.
- \$ If your business produces or ends up with a lot of reusable food that is wasted, contact OzHarvest on [ozharvest.org/newcastle](http://ozharvest.org/newcastle) who will pick it up and take it to local charities serving those in need.
- \$ Use a compost bin or worm farm for food scraps.
- \$ Only print emails and other documents if a hard copy is required. Add a line to your email recipient to reduce waste.  
For example:  
*John Smith*  
*Krypton Industries, 123 Pacific St, Bristol*  
*Please consider the environment before printing this email.*

## SUSTAINABLE PURCHASING

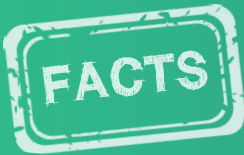
- \$ Here are just a few sites to find out more sustainable purchasing information.
  - Good Environmental Choice Australia [geca.org.au](http://geca.org.au).
  - Ecospecifier Global [ecospecifier.com.au](http://ecospecifier.com.au).
- \$ When replacing electrical equipment, look for products with a high star energy rating.

- \$ When renovating, building, or selecting new premises, aim for a GreenStar certified building. Green Building Council of Australia visit [new.gbca.org.au](http://new.gbca.org.au).

## SUSTAINABLE TRANSPORT

- \$ Install bike racks, showers and lockers at your workplace to make it more convenient for cycling or walking.
- \$ Identify opportunities for public transport use, for commuting and for business trips.
- \$ Ensure the office car is fuel-efficient and of appropriate size for the task required. Check the green vehicle guide at [greenvehicleguide.gov.au](http://greenvehicleguide.gov.au) to compare local air pollution and greenhouse gas emissions from different models.
- \$ Minimise flights and other travel by investigating video conferencing and teleconferencing options.
- \$ Plan ahead to complete multiple tasks in one trip.

# WASTE & RECYCLING



By actively avoiding, reusing, and recycling waste:

- the amount of waste going to landfill can be reduced by up to 75%;
- less natural resources are used to produce goods;
- less land is required for landfill;
- less greenhouse gases are produced.

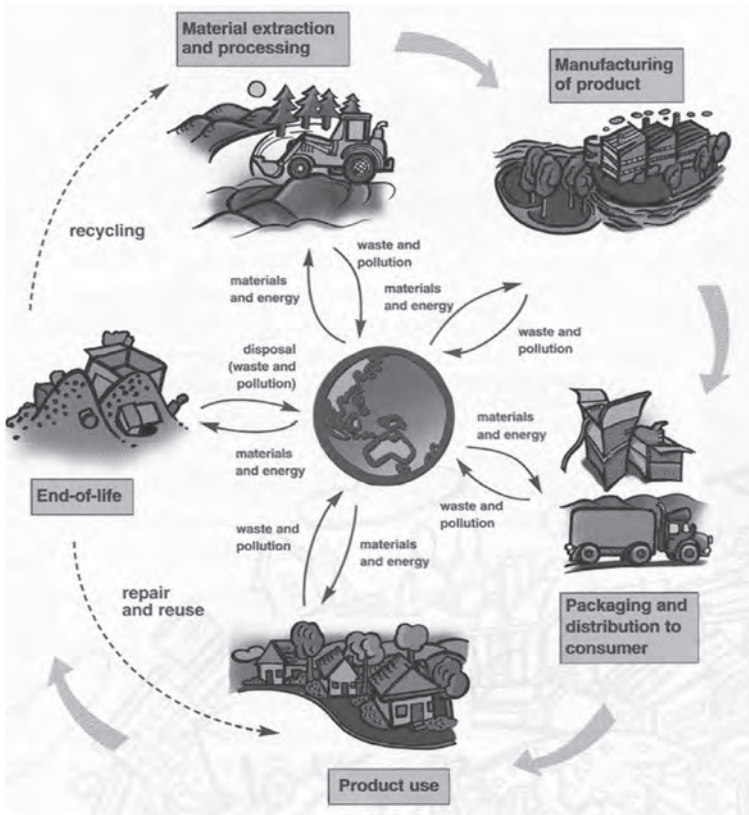


Methane gas, produced when organic matter breaks down without oxygen (such as in landfill), is 21 times more potent as a greenhouse gas than carbon dioxide.

## PRODUCT LIFECYCLE

Every product goes through a series of stages from the raw material, through manufacturing, packaging, distribution, product use, and disposal. At each stage, materials and energy are used and waste and pollution are generated.

Consumers can make a difference by choosing resource efficient products and disposing of products correctly.



Source: Environment Australia (2001)

# RETHINK & REDUCE

*(better buying)*

- ♻️ Say 'NO' to plastic bags!
- ♻️ Look for products with high environmental standards eg. no chemicals, recycled, and minimal packaging.

- ♻️ Packaging increases waste and as a consumer you pay for the packaging in the price of the goods.
- ♻️ Purchase products made from renewable or recycled materials - this helps create markets for materials collected in recycling programs.
- ♻️ Buy in bulk to reduce the number of packages and save money at the same time.
- ♻️ Buy fruit and vegetables loose instead of prepacked in plastic.



Grow your own herbs and vegetables - no waste and tastes better.

Use a bin liner made from plant based materials eg. a couple of sheets of newspaper or starch based materials.

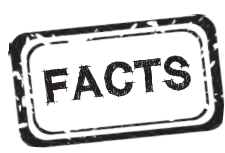
Switch from processed foods to fresh fruit and vegetables.

Choose re-useable, repairable, and refillable items rather than single use items.

Support your local growers markets.

Keep reusable calico, string, or green bags in the car so they are handy when shopping.

Use natural cleaning products rather than toxic chemicals.



Plastic bags are made from non-renewable resources, crude oil, gas, and coal.

An estimated 100,000 marine animals are killed annually by being entrapped in plastic bag debris.

Source: [oceancrusaders.org](http://oceancrusaders.org)

## REUSE

Reuse plastic or bread bags as bin liners or to scoop poop when walking your dog.

When purchasing new items look for products with a long guarantee.

Buy secondhand items.

Visit second hand shops for clothes and furniture.

Have faulty goods repaired rather than throwing them out.

Sell unwanted items on websites, or through the classifieds and commercial auctions.

Donate clothing and furniture to family, friends, or charity organisations.

♻️ Have a garage sale. Council can help three households or more hold a street wide garage sale with Councils Super Street Sale. Visit [lakemac.com.au/super-street-sale](http://lakemac.com.au/super-street-sale) or phone **4921 0333** for more information.

♻️ Borrow items you only use occasionally from friends and family.

♻️ Lease or hire rather than buy (eg power tools).

♻️ Find creative ways to use up food.

## CHOOSE THE RIGHT BIN TO PUT IT IN



## RECYCLE

♻️ **Household recycling** - make sure all your used rigid plastics, glass, steel, aluminium, paper and cardboard go in your recycling bin (yellow lid). Visit [recycleright.com.au](http://recycleright.com.au) or phone **1800 838 884** for more information. **Please keep recycling loose** - not in plasticbags.

♻️ **Upsizing your recycling bin** - Lake Macquarie residents can swap their existing 240 litre recycling bin for a larger 360 litre bin for a one-off fee of \$25. For more information and the application form go to [lakemac.com.au/waste/recycling](http://lakemac.com.au/waste/recycling) or phone Council on **4921 0333**.

♻️ **No plastic bags in the recycling bin.**

♻️ Most soft plastics can be recycled at your supermarket. Visit [redcycle.net.au/what-to-redcycle/](http://redcycle.net.au/what-to-redcycle/) for more information including a list of soft plastics accepted.

♻️ **Return and Earn** - NSW Government program aimed at reducing litter. Each eligible bottle, can or carton is worth 10c. For more information visit [returnandearn.org.au](http://returnandearn.org.au)

# GREEN



**ENSURE BIN LID CLOSSES**  
**COMPOSTED TO**  
**AUSTRALIAN STANDARDS**

## WEEKLY COLLECTION

### *Meat, bones, poultry and seafood*

(except shells from pippies, mussels, oysters, clams and scallops)

### *Grains, bread, rice, pasta and cereal*

### *Egg shells, cheese, yoghurt and dairy*

### *Fruit and vegetable peelings and scraps*

including fruit stones and corn cobs

### *Cooked food and leftover scraps*

### *Coffee grounds, tea leaves and tea bags*

### *Dog faeces*

### *Garden waste*

### **Book a tour!**

Visit the Organics Resource Recovery Facility. See how your food and organics are processed and turned into Australian Standard Compost.

Visit [lakemac.com.au/waste](http://lakemac.com.au/waste) or call 4921 0333

## Compostable bags

Certified compostable bags are the only type of bag that can go into the green bin.

### **Compostable bags are different to biodegradable or degradable bags.**

Bags are available to residents from selected Council facilities. Visit [lakemac.com.au/food-garden-green](http://lakemac.com.au/food-garden-green) for a full list of bag stockists.



# RECYCLING

## FORTNIGHTLY COLLECTION

Plastic bottles and containers

Steel and aluminium tins

Long life and milk containers

Glass bottles and jars

Magazines and newspapers

Cardboard, cereal packets and boxes

Maximum  
80kg



Place recyclables loose into the bin  
**NO PLASTIC BAGS**

For more information, call the Recycling Hotline, 1800 838 884 or check out the 'A to Z Guide' at [hrr.com.au](http://hrr.com.au)

**ENSURE BIN LID CLOSES**

**RECYCLED INTO  
NEW PRODUCTS**

## Is your recycling bin always full?

- ▶ Take eligible drink containers to a return and earn location for a 10 cent refund
- ▶ Crush boxes and cans
- ▶ Check out our online guide to reducing waste
- ▶ Upsize your recycling bin for 50 per cent more space.



**RECYCLE RIGHT**  
AND CONTRIBUTE TO A CLEANER TOMORROW

For more information or to apply, go to [lakemac.com.au/waste/recycling](http://lakemac.com.au/waste/recycling)

# HOUSEHOLD PROBLEM WASTE

Most libraries and Council's Customer Service Centre, Belmont, Cardiff, Swansea, Charlestown, Morisset and Toronto libraries will accept the following; (household quantities only.)

 **Mobile phones, batteries, and accessories**

 **Smoke detectors, fluorescent light globes**

 **Household batteries**



## CD's/DVD's



The EPA provides free Chemical CleanOut drop off days across the region. For details contact the CleanOut Hotline on **131 555** or visit [cleanout.com.au](http://cleanout.com.au).

## FREE DROP OFF

**Waste matters**  
Drop off your household problem waste for recycling

**FREE SERVICE**

 **Community Recycling Centres**

**You can drop off:**

 Paint	 Gas bottles and fire extinguishers	 Electronic waste	 Fluoro globes and tubes
 Household and car batteries	 Polystyrene	 Motor and other oils	 Smoke detectors

Your local Community Recycling Centre is located at:  
**Awaba Waste Management Facility, 367 Wilton Road, Awaba**  
Hours: 8am–4pm every day (except Christmas Day)

For more information call the Environment Line on **131 555**, contact Council on **4921 0333** or visit [www.epa.nsw.gov.au/recyclingcentres](http://www.epa.nsw.gov.au/recyclingcentres)






This is a NSW EPA Waste Less, Recycle More initiative funded from the Waste Levy. Visit [www.epa.nsw.gov.au](http://www.epa.nsw.gov.au)



# E-WASTE

Lake Macquarie City Council provides a **free** permanent E-waste drop-off service at the **Awaba Waste Management Facility**, 367 Wilton Road, Awaba. Residents can also recycle their unwanted electrical items through the **bulk waste pick up** service. The following items will be accepted:

-  All hand held electronic items (power tools/kitchen appliances).
-  Microwave ovens.
-  Televisions, DVD players, stereos.
-  Mobile phones.
-  Computers, printers, fax machines (monitors and cables).

Visit [hrr.com.au](http://hrr.com.au) or phone Hunter Resource Recovery **1800 838 884** for a full list of accepted items that can be dropped off.

## **Terracycle Program**

Terracycle Program Collects various items for example oral care and make up for recycling some free some at a cost. Visit [terracycle.com](http://terracycle.com) for more information.

# ECO PRODUCT LABELLING

Eco labels assist consumers to judge the environmental or social consequences of producing or using a product.

## **The Good Environmental Choice Label**



The Good Environmental Choice Label awards a mark of recognition for products and services that meet voluntary standards for environment, quality, and social performance, throughout the whole product life cycle.

## **Forest Stewardship Council**

### **(FSC)**



FSC is a certification system that provides internationally recognised standard-setting, trademark assurance and accreditation services to promote responsible forestry. FSC is managed by a not-for-profit association and is recognised in over 50 countries.



## **Fairtrade**

The Fairtrade logo certifies that a product is protecting producers, farmers and workers in developing countries.

## **Post Consumer Recycled Content**

Post consumer recycled content is any material that was used by a consumer and then recycled for use in a new product.

## **Pre Consumer Recycled Content**













Pre consumer waste is the reintroduction of manufacturing scrap back into the manufacturing process.

# COMPOST

Use your green bin or compost your food rather than sending it to landfill.

Anything that was once a plant can be composted.

*This includes:*

-  vegetable scraps
-  weeds
-  prunings
-  soiled paper
-  natural fibres
-  fruit scraps
-  sawdust (not treated pine)
-  vacuum dust
-  tea bags and coffee grinds
-  leaves
-  newspaper
-  shredded paper

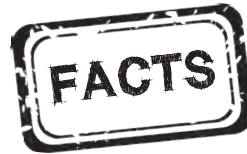
If compost has an odour, insufficient air is available for decomposition and greenhouse gases are being produced. This is remedied by simply turning the compost.

-  Easy guides on composting, worm farming, recycling, mulching and green cleaning are available through [lakemac.com.au](http://lakemac.com.au) or phone **4921 0333**.
-  Compost organic food waste and green waste and use the end product to fertilise and mulch the garden.



# LAKE MACQUARIE'S ORGANIC RESOURCE RECOVERY FACILITY

- Look out for free compost giveaway events
- What happens to the contents of the green bin? Book in a group for a tour of the ORRF.

Visit [lakemac.com.au](http://lakemac.com.au) for more information.



*Why compost*

-  In a landfill there is limited oxygen. When food and garden waste break down they form a mix of gases including methane, which is 21 times more harmful as a greenhouse gas than carbon dioxide.
-  When there is plenty of oxygen compost does not generate methane and the compost enhances plant growth which will remove carbon dioxide from the atmosphere.

# LAKE MACQUARIE RECYCLING DIRECTORY

Council offers a range of recycling services for various products, we also provide competitive commercial services.

Material	Where	Phone	Notes and website
Aerosol cans	Household yellow lidded recycling bin	1800 838 884	<a href="http://hrr.com.au">hrr.com.au</a>
	Awaba Waste Management Facility	4921 0333	Free recycling bin
Aluminium cans	Household yellow lidded recycling bin	1800 838 884	<a href="http://hrr.com.au">hrr.com.au</a>
	Awaba Waste Management Facility	4921 0333	Free recycling bin
Batteries (all types)	Newcastle Batteries, Warners Bay	4954 4466	<a href="http://newcastlebatteries.net.au">newcastlebatteries.net.au</a>
	Battery World, Toronto	4950 5133	<a href="http://batteryworld.com.au">batteryworld.com.au</a>
	Community Recycling Centre*	4021 0333	<a href="http://lakemac.com.au">lakemac.com.au</a>
Batteries (small household)	Community Recycling Centre *	4921 0333	Check with your local library
	Community Recycling Stations**		
	Battery retailers		Various
Batteries (motor)	Aldi and Officeworks		
	Community Recycling Centre *	4921 0333	<a href="http://lakemac.com.au">lakemac.com.au</a>
	Chemical Clean Out	131 555	<a href="http://cleanout.com.au">cleanout.com.au</a>
Bicycles	Car battery retailers or Scrap metal recyclers		Various
	Newcastle Bike Ecology Centre, Islington	4961 6582	
	Scrap metal recyclers		Various
CDs and DVDs (without cases)	Second hand dealers		Various
	Community Recycling Centre*	4921 0333	Cases can be placed in the recycling bin
	Community Recycling Stations**		
Carpets	Biannual bulk waste collection (in e-waste pile)		
Chemicals	Affordable Recycled Carpets, Redhead	4942 6090	<a href="http://affordablecarpets.com.au">affordablecarpets.com.au</a>
Clothing	Chemical Clean Out	131 555	<a href="http://cleanout.com.au">cleanout.com.au</a>
Coffee Pods	Charities, second hand retailers		Various
Construction and demolition waste	Expressi pods (Aldi) and L'OR pods shipped via Australia Post		<a href="http://terracycle.com.au">terracycle.com.au</a>
	Nescafe Dolce Gusto and Nespresso pods via drop off		
	AMS Recycling, Lake Munmorah	4972 5999	<a href="http://concrush.com.au">concrush.com.au</a>
Cooking oil	Concrush, Teralba	4958 3777	<a href="http://scerecycleit.com">scerecycleit.com</a>
	SCE Recyclers, Cardiff	4949 2800	
	Use absorbent material e.g. paper towel, to soak up oil and place in your garbage bin		
Cooking oil	Awaba Waste Management Facility	4921 0333	20 L maximum container size
	Chemical CleanOut	131 555	<a href="http://cleanout.com.au">cleanout.com.au</a>

Material	Where	Phone	Notes and website
Computers, laptops, printers, monitors, keyboards etc	Community Recycling Centre* Domayne, Harvey Norman and Officeworks	4921 0333	<a href="http://lakemac.com.au">lakemac.com.au</a>
E-waste (electronic waste)	Community Recycling Centre* Biannual bulk waste collection (stack in separate pile) Matthews Metal Management Collections	4921 0333 or 1800 838 884	For full details of accepted products, visit <a href="http://hrr.com.au">hrr.com.au</a> Free pick ups
Fire Extinguishers	Wormwolds, Warabrook	133 166	
	Community Recycling Centre *	4921 0333	
	Chemical Clean Out	131 555	<a href="http://cleanout.com.au">cleanout.com.au</a>
Fridges	Biannual bulk waste collection	4921 0333	<a href="http://my.lakemac.com.au">my.lakemac.com.au</a>
	Scrap metal recyclers or Second hand whitegoods dealers	Various 4921 0333	free collections
	Matthews Metal Management		
Furniture	Second hand dealers and charities		Various
Gas cylinders	Gas cylinder exchange and refilling depot		Check local service stations
	Chemical Clean Out	131 555	<a href="http://cleanout.com.au">cleanout.com.au</a>
	Community Recycling Centre*	4921 0333	
Glass bottles and jars	Household yellow lidded recycling bin	1800 838 884	<a href="http://hrr.com.au">hrr.com.au</a> Free recycling bin
	Awaba Waste Management Facility	4921 0333	
Garden waste/Green waste	Household green lidded bin	4921 0333	<a href="http://my.lakemac.com.au">my.lakemac.com.au</a>
	Concrush, Teraiba	4958 3777	<a href="http://concrush.com.au">concrush.com.au</a>
	Awaba Waste Management Facility	4921 0333	
	Biannual bulk waste collection (separate pile)	4921 0333	
Light globes/ fluorescent tubes	LMCC Customer Service Centre, various libraries and Community Recycling Centre *	4921 0333	Unbroken light globes only <a href="http://lakemac.com.au">lakemac.com.au</a> Check local library
	Chemical Clean Out	131 555	<a href="http://cleanout.com.au">cleanout.com.au</a>
Mattresses	Biannual bulk waste collection	4921 0333	
	Awaba Waste Management Facility	4921 0333	mattress handling fee applies
Medicines	Return unwanted medicines to pharmacies	1300 650 835	<a href="http://returnmed.com.au">returnmed.com.au</a>
Milk crates	Pick up by Dairy Farmers	1800 883 534	<a href="mailto:milkcrates@dairyfarmers.com.au">milkcrates@dairyfarmers.com.au</a>
Mobile phones and accessories	Community Recycling Centre* Community Recycling Stations**	4921 0333	<a href="http://lakemac.com.au">lakemac.com.au</a> <a href="http://mobilemuster.com.au">mobilemuster.com.au</a>
	Phone retailers		
	Officeworks		
	MobileMuster (reply paid satchels available from Aust Post)		
Motor oil	Supercheap Auto stores at Bennetts Green and Kotara		<a href="http://www.supercheapauto.com.au">www.supercheapauto.com.au</a>
	Community Recycling Centre *	4921 0333	<a href="http://lakemac.com.au">lakemac.com.au</a>
	Chemical Clean Out	131 555	<a href="http://cleanout.com.au">cleanout.com.au</a>
Paint	Garbage collection after first being dried out (by using kitty litter or pouring on newspaper)		Dry, empty paint tins can be disposed of in your yellow recycling bin. <a href="http://cleanout.com.au">cleanout.com.au</a>
	Chemical Clean Out	131 555	
	Community Recycling Centre*	4921 0333	

Material	Where	Phone	Notes and website
Paper and cardboard	Household yellow lidded recycling bin	1800 838 884	<a href="http://hrr.com.au">hrr.com.au</a>
	Awaba Waste Management Facility	4921 0333	Free recycling bin
Polystyrene	Community Recycling Centre* Hunter Pods, Thornton	4921 0333 4966 3959	Free drop off of clean (no tape or residue) at Hunter Pods
Plastic bottles and containers	Household yellow lidded recycling bin	1800 838 884	<a href="http://hrr.com.au">hrr.com.au</a>
	Awaba Waste Management Facility	4921 0333	Free for excess household recyclables
Printers	Community Recycling Centre* Officeworks Harvey Norman, Bennetts Green		<a href="http://officeworks.com.au">officeworks.com.au</a>
Printer Cartridges	Cartridges 4 Planet Ark	1800 242 473 4921 0333	<a href="http://cartridges.planetark.org">cartridges.planetark.org</a> <a href="http://officeworks.com.au">officeworks.com.au</a>
	Officeworks		
	Lake Mac libraries (Cardiff, Charlestown, Swansea, Toronto and Morisset)		
Plastic bags and soft plastics	Check with your local supermarket		Check local supermarket and <a href="http://redcycle.net.au">redcycle.net.au</a>
Reading glasses	Lions Recycle for Sight Australia Some Optometry retailers		<a href="http://lionsclubs.org.au">lionsclubs.org.au</a>
	Toronto library		
Sharps	Check with your local Pharmacy		
Smoke alarms	Community Recycling Centre * Community Recycling Stations**	4921 0333	<a href="http://lakemac.com.au">lakemac.com.au</a>
Televisions	Community Recycling Centre * Biannual bulk waste collection Some electrical retailers	4921 0333	<a href="http://lakemac.com.au">lakemac.com.au</a>
Timber	Concrush, Teralba	4958 3777	<a href="http://concrush.com.au">concrush.com.au</a>
	Secondhand building suppliers		Various
Tyres	C & R Tyre Recycling, Cameron Park	4902 6777	Charges apply from \$2
X Rays	PRP Imaging (Charlestown only) Radiology Department, Mater Hospital	1300 247 266	<a href="mailto:info@quantumtechnicalservices.com.au">info@quantumtechnicalservices.com.au</a> <a href="http://quantumtechnicalservices.com.au">quantumtechnicalservices.com.au</a>

**Note:**

Visit [Returnandearn.org.au](http://Returnandearn.org.au) for eligible drink containers – 10C refund

Websites such as Gumtree can be used to buy and sell goods for free

The following recycling services are free of charge:

- \*Community Recycling Centre is located at the Awaba Waste Management Facility [lakemac.com.au](http://lakemac.com.au)
- \*\* Community Recycling Stations are located in 6 Lake Mac libraries (Belmont, Cardiff, Charlestown, Morisset, Swansea, Toronto) at Council's Customer Service Centre, Speers Point, and at Council works depot.
- Chemical CleanOut – this is a free biannual service open to all Hunter residents. See [cleanout.com.au](http://cleanout.com.au) for more details

# IN YOUR BACKYARD



- 🌿 Each year, usually in September, Lake Macquarie City Council has a native plant giveaway entitling residents to two free native plants.
- 🌿 The average food item on the supermarket shelf has travelled over 2,000km from farm to kitchen. Get it local and fresh.
- 🌿 Gardens can provide us with fruit, vegetables, and herbs with a minimum amount of effort. This is convenient, cheaper and healthier; both for the individual and the environment.
- 🌿 Organic matter (humus) is the key to healthy soil. Humus increases the life in the soil and makes water and nutrients more available for plants. The best way to add humus to your garden is to make and use compost.
- 🌿 Up to 60% of household water is used outdoors, with lawns consuming 90%. Mulch in garden beds prevents evaporation and reduces run off.
- 🌿 One blue tongue lizard will remove most slugs and snails from an average backyard.

## WATER

- 🌿 Plant drought tolerant Australian natives - they require less water and attract native wildlife.
- 🌿 Plant hardy, deep-rooted plants to help break up poor soils, allowing water to penetrate.
- 🌿 Install a rainwater tank to water your garden.

- ☞ Water your garden early morning or late afternoon - more evaporation takes place in the middle of the day. Water for longer and less often to encourage deep roots.
- ☞ Use your household greywater to water your garden.
- ☞ Wash your car on the lawn and use a bucket - saves water and waters the lawn at the same time.
- ☞ A pool cover reduces evaporation and cuts down on water 'top ups'. Without a cover, more than half the water in your pool can evaporate over a year. It will also save time spent cleaning.

## ENERGY

- ☞ Install solar lighting along garden paths and driveways.
- ☞ Use a solar pool heater to heat the swimming pool and/or spa pool.
- ☞ Use a timer to turn the filter pump on and off - a pool pump filter can generate 1kg of greenhouse gases every 1-3 hours.
- ☞ Keep swimming pool water temperature less than 27°C.
- ☞ Eat less meat - fruit, legumes, and vegetable production require far less water and energy than meat production.

## BIODIVERSITY

- ☞ Plant local native species in your garden to provide natural food sources for native bees, birds, and butterflies. Council has a list of appropriate indigenous species.
- ☞ Provide fresh water for visiting birds.
- ☞ Install a nest box - there are specific boxes for microbats, birds, and possums.
- ☞ Use mulch on your garden. It's great for worms, birds, and bugs.
- ☞ Provide leaf litter, stick piles, hollow logs, and rocks in gardens for shelter.
- ☞ Avoid pesticides to protect frogs, butterflies, lizards, and children.
- ☞ Control your dog and cat day and night to protect our native animals.
- ☞ Build a frog pond.
- ☞ Develop a corridor of shrubs for small birds to travel safely.
- ☞ Prune gradually to allow native animals to adjust to new conditions.
- ☞ Plant dense, bushy native shrubs, especially if they are a little prickly, to protect small birds eg Blue Wrens.
- ☞ Don't dump garden waste in bushland as it changes the ecology and encourages weeds.
- ☞ Report any illegal dumping by phoning **131 555**.

- Join the backyard habitat for wildlife program visit [lakemac.com.au](http://lakemac.com.au).

## SUSTAINABLE GARDENING

- Herb spirals/vertical gardens take up a small amount of room - plant species according to their water needs.
- Use a reel cylinder lawnmower or try a rechargeable electric lawnmower.
- Soils in urban environments may contain contaminants. A best practice recommendation is for produce to be grown in containers or in raised beds, built from non-chemically treated wood or other safe materials, and built directly on landscape fabric (a water permeable fabric, available from hardware stores) to allow water to infiltrate and to provide a barrier between the underlying soil and the new clean fill (WHO 1999).

Source: World Health Organisation (1999) Contaminated Soil in Gardens: How to avoid the harmful effects.

- Visit [lakemac.com.au](http://lakemac.com.au) or phone **4921 0333** for a copy of fact sheets, available titles are
  - Beginners guide to creating a vegetable and herb garden
  - Creating a native garden
  - Seasonal planting guide

- Companion planting (intercropping) refers to the planting of certain species alongside others. The aim is to increase production by reducing pest numbers, due to the variety of species present, and in many cases can maximise yield.

- Visit [lakemac.com.au](http://lakemac.com.au) for further information on sustainable gardening.

- Get involved with your local community gardens visit [lakemac.com.au](http://lakemac.com.au)



*Conserve water*

- Water longer and less often to encourage deeper root systems
- Plant water-hungry plants together
- Mulch your garden well



*Avoid chemicals*

- Combat pests by companion planting
- Encourage predators like dragon flies and frogs with a garden pond
- Feed your soil with home-made compost or worm castings
- Healthy soil = healthy plants



# FURTHER INFORMATION

- 👁 Landcare Resource Centre, Toronto Road, Teralba. Phone **4921 0392**
- 👁 Birds in backyard birds visit [birdsinyourbackyard.net](http://birdsinyourbackyard.net)
- 👁 Hunter Wildlife Rescue Service - 24 hour emergency hotline phone **0418 628 483**  
[hunterwildlife.org.au](http://hunterwildlife.org.au)
- 👁 Australian Plant Society, Hunter Wetlands Centre, Shortland
- 👁 Flora for Fauna and Community Biodiversity Network visit [floraforfauna.com.au](http://floraforfauna.com.au)
- 👁 Encouraging native wildlife: National Parks and Wildlife Centre  
phone **1300 361 967** or visit [nationalparks.nsw.gov.au](http://nationalparks.nsw.gov.au)
- 👁 Hunter Bird Observers Inc [hbo.org.au](http://hbo.org.au)
- 👁 Lake Macquarie Frog and Reptile Observers Group phone **4975 3374**



# SUSTAINABLE FOOD

We can make smarter more sustainable food choices. The way food is produced, packaged and disposed of can impact the environment. NSW householders throw away \$10 billion of leftovers per year.<sup>1</sup>

Five Principles to consider that will help you make more sustainable food for you, your family, your community, and the environment.

## 1. Eat local

A typical shopping basket from an Australian supermarket has travelled more than 70,000km to get to you.<sup>2</sup> By buying food that is produced locally we can greatly reduce food miles and your fruit and vegetables will be fresher.

## 2. Eat in season

Foods that are in season, are fresher, better for you, and are cheaper. It also reduces intensified farming practices and the demand on transport.

## 3. Love food hate waste

NSW households send an average of 800,000 tonnes of food a year to landfill.<sup>3</sup>

Reducing our food waste by only buying what we need, eating leftovers and reducing the amount of overpackaged products that are purchased all help in living sustainably.

Source for 1, 2 and 3: [www.lovefoodhatewaste.nsw.gov.au](http://www.lovefoodhatewaste.nsw.gov.au)

## 4. Eat organic

Organic food is produced without synthetic chemicals such as pesticides, herbicides and fertilisers. This means it usually has had a smaller impact on the environment and it doesn't contain any chemical residues.

## 5. Consider your meat intake

The production of meat can be very land- and energy intensive. Free-range organic meats and eggs are more humanely produced.


There are a number of protein alternatives available in supermarkets and health food shops.



Eat sustainable seafood

To assist in making sustainable choices about seafood consumption visit [sustainableseafood.org.au](http://sustainableseafood.org.au)

## Further information

 Visit [lovefoodhatewaste.nsw.gov.au](http://lovefoodhatewaste.nsw.gov.au) for information on how to reduce your food waste.

# Eco advocate Newsletter

The **Ecoadvocate** is a free quarterly newsletter dedicated to the latest news on the Lake Macquarie City environment.

Find out about events, competitions, giveaways, sustainable living workshops, grants and much more.

The Eco Advocate - What's On is published fortnightly and is dedicated to the latest environmental events and opportunities in Lake Macquarie.

To join for a free subscription to the Ecoadvocate, please contact Council on **4921 0333** or email

[lakemac.com.au/newsletters/ecoadvocate](mailto:info@lakemac.com.au)



# Sustainable Neighbourhoods

Get involved in a local project, meet your neighbours and learn new skills. The Sustainable Neighbourhoods program empowers community members to act on local environmental, sustainability and community initiatives. Create your own community project, take up a short term volunteer role, or just stay in touch with what's happening in your neighbourhood. [sustainableneighbourhoods.org.au](http://sustainableneighbourhoods.org.au)

# Sustainable Schools

Council offers a range of activities to schools in Lake Macquarie to encourage students and educators to live sustainably, look after their environment, and be resilient to environmental threats. Council also promotes and rewards sound environmental behaviour and practices through the annual Schools Environmental Awards Program. [lakemac.com.au](http://lakemac.com.au)





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## **YOUR FEEDBACK**

We value our readers comments and suggestions on this guide. Please email [council@lakemac.nsw.gov.au](mailto:council@lakemac.nsw.gov.au) or phone 4921 0333 if you have any comments you would like to make.

*Let's live sustainably*