Eco-efficient Food!

$AVE MONEY WHILE $AVING THE ENVIRONMENT








A self assessment guide for restaurants, cafes, hotels, clubs and fast food outlets

This guide will assist people in the food service industry to save money by becoming more 'Eco-efficient'. Use the checklists and case-studies to identify savings for your business while also helping the environment.

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Eco-efficiency – doing more with less

For your business this means providing an efficient service to your customers while using less energy, less water and producing less waste.

Just by reducing the impacts your business has on the environment you can **save money and increase your bottom line!!**

How can my business become more Eco-efficient and $ave?

This step-by-step self assessment and action guide will clearly show you how your business can save money by reducing consumption of water and energy and minimising the amount of waste it produces.

Step One: Read why saving water, saving energy and producing less solid and liquid waste is important for your business and the environment.

Step Two: Look at your bills to see how much your business spends on water, energy and waste disposal each year. Then look at the simple calculated examples to see what savings can be achieved.

Step Three: Complete the checklists for energy, water, solid and liquid waste to identify and quantify savings for your business. You can often make substantial savings just by implementing better house-keeping practices for zero or minimal costs.

Step Four: For further proof of what savings can be achieved read the case-studies of food service businesses throughout south east Queensland that have benefited from implementing **Eco-efficiency** practices.

Step Five: Check the back of this manual to see the list of useful resources & contacts. Seek as much advice as possible and conduct careful cost appraisals. You'll be surprised by what you find!

Water is precious – our No.1 resource

Water and your food service business

Food service businesses need water for drinking, cleaning, food preparation, amenities, washing and irrigation.

How will saving water help your business?

Conserving water will reduce your business water charges, trade waste charges and energy costs for heating water.

Why is clean water so valuable to us?

Water is vital to all life. It preserves our environment and is essential for public health, quality of life and for industry.

However, water is not an inexhaustible resource. We must use it in a sustainable way to prevent degradation of the environment, our health and general well being.

Australia is one of the world's driest continents and a growing population is putting increasing pressure on our water supplies.

That is why it is important that inefficient appliances and equipment and consumer behaviour do not waste this valuable resource.

What does water really cost?

Reducing your water consumption will not just reduce the purchase costs for water. Saving water also reduces heating costs and wastewater charges.

While the costs of purchasing 1000 L (1kL) of water for a Brisbane food service business may be around 1.13 $/kL, the true cost of purchase, use and disposal may be a lot more.

Water Supply Cost	$1.13/kL
Heating Water to 60°C Costs (electric)	$8.37/kL (*)
Trade Waste Disposal Costs	$0.83/kL

This means that each 1kL of water you purchase, heat and dispose of could cost you **$10.33!**

Look at Step 3 to work out what your hot water is costing you!

(*) Based on Tariff 20 ($0.135 per kWh).

Check with your Energy supplier to determine what Tariff you are on.

Did you know that a medium size food service business uses 2200 kL of water annually at a cost of $2,300?

Wasted water is money down the drain!

Water Tips

- Repair all leaking or dripping taps quickly.
- Rinse fruit and vegetables in still water rather than under running water.
- Consider water efficient dishwashers and glasswashers for new purchases.
- Thaw frozen food in the refrigerator rather than under running water.
- Install flow restrictors on water outlets and older model dishwashers.
- Run dishwashers and glasswashers only when they are fully loaded.
- Use dry clean practices such as brooms, mops and squeegees instead of hosing.

Did You Know?

A dripping tap can waste up to 31,000 litres each year – more than half the volume of a backyard swimming pool!

That's $35 in water consumption and $26 in trade waste charges. If it is a hot tap it could cost you an additional $259!

Just ten minutes replacing a tap washer could save you $320!

That's money in your pocket not money down the drain!

How much can you save by installing a AAA rated water flow restrictor?

An average tap without a flow restrictor uses around 12 – 15 L/min

A tap which is AAA rated uses about half the volume or around 6 L/min

Calculations

If the tap runs for 30 minutes per day, a flow restrictor will save 66 kL per year.
(12L/min – 6L/min) x 30 min/day x 365 days/yr

The cost of water in Brisbane is $1.13 per kilolitre.
So each year you can save 66 kL x 1.13 $/kL

That's a saving of **$74** per year

And that is for just one tap!

Water checklist

Water cost for your business per year $ ..... (found on your Council rates bill)

Water Use	Opportunity for reducing costs	Yes	No	N/A	Action
Cooking/ Appliances	Are leaking or dripping taps reported and repaired quickly?				
	Are AAA rated taps used where possible?				
	Are fruit and vegetables rinsed in still rather than running water?				
	Is cooking equipment cleaned prior to cool down?				
	Are dish and glass washing machines only run when they are full?				
	Are frozen foods thawed in the refrigerator not under running water?				
	Have water efficient dish and glass washers been investigated?				
	Are food scraps scraped from cutlery and crockery before washing?				
	Have garbage grinders been removed?				
Bathrooms/ Amenities/ Guest rooms	Are sensor operated urinals used rather than continual flush?				
	Are dual flush toilets used?				
	Are AAA rated showerheads and bathroom taps used?				
General	Are signs and posters displayed to encourage customers and employees to conserve water?				
	Are dry clean up practices used instead of hosing down? Eg. Use squeegees, brushes and brooms instead.				

4 easy steps to measure your tap flow rates

What you need.

- A container of known size (such as an ice-cream container).
- A watch with a second hand.

Step 1 Turn your tap on to an average rate of water flow

Step 2 Place the container under the tap until it fills, measuring the time that this takes.

Step 3 Calculate the flow rate. eg if it takes 20 seconds to fill a 4 litre ice cream container then your taps flow rate would be 12 litres/ minute.

Step 4 Repeat steps for both hot and cold water across your business.

How much does your hot water cost you?

Hot Water Temperature *	kWh #
50°C	46
60°C	62
70°C	78
80°C	93

* This is the temperature that water is being heated to. Assumes initial water intake temperature is 20 degrees Celsius.

\# This is the number of kilowatthours of energy required to heat 1000L (1 kL) of water. These figures are based on an electric hot water system with 75% efficiency.

To work out what your water heating costs are:

Step 1 Find out what temperature you are heating water to

Step 2 Look at the table above and see how many kWh this requires

Step 3 Multiply this figure by your electricity cost to get the cost to heat 1kL of water

Energy – a burning issue!

Energy and your food service business

Food service businesses need energy for heating, air-conditioning and ventilation, cooking, refrigeration and lighting.

Where does energy come from?

Energy comes mainly from fossil fuels such as coal, gas and oil that are either burnt directly or used to generate electricity. Fossil fuels are a non-renewable source and will not be available forever. This is why the search for sustainable renewable energy sources such as solar and wind power is so important.

Does using fossil fuel harm the environment?

Burning fossil fuels produces greenhouse gases believed to cause global warming, which could affect climate change around the world and may increase the frequency of storms and floods. Some gases released to the atmosphere cause air pollution and acid rain.

How will saving energy help your business?

Reducing your business' energy consumption will reduce your operating costs. It will also help to save valuable natural resources for generations to come and protect the environment from harmful greenhouse gases.

Australia is one of the highest producers of greenhouse gas emissions per capita!

It is estimated that 20% of the energy used in Australia is wasted – that's around $7 billion worth!

Environmentally Friendly and Cost Efficient!

Changing to fluorescent lights can reduce your lighting bill dramatically.

They also generate only one-fifth as much greenhouse gas as incandescent globes while producing the same amount of light.

Because they produce far less heat, you will also save on cooling costs.

A typical small to medium size food service business uses an average of 234MWh of electricity per year – about the same as 36 Queensland households. This costs each of the operators an average of $26,000 per year.

Bright ideas for $aving energy!

Energy Tips

- Consider energy efficient fridges, freezers and ovens for new purchases.
- Set your air-conditioner on a wide dead band eg. 21°C-24°C to reduce running costs.
- Don't waste energy by leaving oven and freezer doors open when not required.
- Install energy efficient fluorescent lights and save up to 80% of energy costs.
- Ensure freezer door seals & oven gaskets are in good repair.
- Make use of natural light and use light colours on walls & ceilings to improve reflected light.
- Turn off appliances & lights when not in use.
- Clean & service your installed equipment motors (e.g. air-conditioning, refrigerators)

How can you save on lighting costs?

Example		Your Business	
No. of lights:	10 lights	No. of lights:	---------
Light Wattage:	75 watt or 0.075 kW	Light Wattage:	---------
Electricity cost:	0.135 $/kWh*	Electricity Cost:	---------
Hours of use per day:	12 hours	Hours of use per day:	---------
Days of use per year:	365 days	Days of use per year:	---------

Calculate your annual lighting cost:

Example:

10 lights x 0.075 kW x 0.135 $/kWh x 12 hrs x 365 days = $443.47 /yr

Your Business

__ lights x ____ kW x _____ $/kWh x ____ hrs x _____ days = $_____/yr

How much could you save by using energy efficient lights?

A 15 watt fluorescent bulb emits the same light as a 75 watt incandescent bulb.

If you replace the 75 watt bulbs with 15 watt bulbs the operating cost would be:

10 lights x 0.015 kW x 0.135 $/kWh x 12 hrs x 365 days = $88.69/yr

That's a saving of **$354.78** per year AND the bulbs last up to ten times longer!!

(An energy efficient fluorescent bulb costs around $10-15 more than an incandescent)

**The energy charge is based on Tariff 20 $0.135/ kWh*

Energy checklist

Energy cost for your business per year is $ ..... (found on your electricity bill)

Energy Use	Opportunity for reducing costs	Yes	No	N/A	Action
Lighting	Is lighting switched off when not required?				
	Can lighting be zoned i.e. more controls installed?				
	Is energy efficient lighting used?				
	Can fewer lights meet required lighting?				
	Do lights have good reflectors to ensure maximum output?				
	Are automatic controls such as timers and sensors used?				
	Are light switches labelled to encourage switching off?				
	Are light fittings cleaned regularly to ensure maximum output?				
Cooking/ Appliances	Are kitchen staff aware of minimum heat up times for cooking equipment?				
	Can auto-switching be installed?				
	Is equipment set at a lower temperature or turned off when not needed?				
	Are dishwashers run on full load only and turned off when not needed?				
	Are oven door gaskets in good repair?				
Refrigeration	Are doors to freezer and cold rooms kept closed at all times?				
	Are refrigerators and freezers placed away from sources of heat?				
	Are refrigerator door seals in good repair?				
	Are refrigerator condensers and fans maintained regularly?				
Air Conditioning/ Heating	Is the air conditioner turned off or set at lower setting when not required?				
	Is there a wide 'dead band' set on the a/c? Eg. 21°C-24°C				
	Does air-conditioning have an economy cycle to use outside air?				
	Can a timer or management system be used to operate the air-conditioning?				
	Are the filters and fans cleaned and maintained regularly?				
Ventilation	Do extraction fans operate only during periods of appliance use?				
	Are fans suitably sized?				
	Is the size and design of kitchen hoods suitable?				
	Is the use of natural ventilation optimised?				
Hot Water	Are hot water storage tanks and pipes fully insulated?				
	Have gas or solar hot water heating options been investigated?				
General	Can processing of foods be scheduled to minimise equipment use?				
	Are lids kept on pans where possible and appropriate sized cookware used?				
	Are energy efficient appliances considered for new purchases?				

Waste not - want not?

Waste and your food service business

Food service businesses generate a large volume of packaging and food waste.

How does reducing your waste help your business?

By reducing waste, businesses can save money on raw materials, supply costs and disposal costs and it may even provide another source of revenue. Waste reduction also helps to ensure a cleaner environment and a more sustainable economy for the future.

How does waste impact on the environment?

Waste impacts on the environment in two ways. It takes resources such as energy and raw materials to produce the product, which later becomes waste. It then takes more resources to dispose of waste and its disposal often contributes to further pollution problems.

How can your business minimise its waste?

Effective waste minimisation involves preventing the creation of waste in the first place.

Follow the tips on the next page to make waste disposal your last option.

Are you recycling your bottles?

Recycled glass is used to make new glass containers.

Up to 35% less energy is needed to melt recycled glass.

Fewer ingredients, such as soda ash and limestone, are required and emissions from furnace stacks are reduced when recycled glass is used.

Glass is readily recycled in Queensland through commercial or community recyclers.

Don't waste a cent

How much could you save by returning 2 wheelie bins full of polystyrene boxes to the supplier each week?

Volume of 1 wheelie bin is 0.24m^3

Volume of boxes sent to landfill each year is 25m^3 (2 x 0.24m^3 X 52 weeks)

A typical cost for sending 1m^3 of solid waste to land fill is $10.00

A saving of $250 per year in solid waste disposal costs!
(10 $/$m^3$ X 25m^3)

Purchasing Tips

- Ensure your supplier delivers goods in reusable, returnable or recyclable packaging.
- Purchase products where possible in concentrated form or in bulk.
- Avoid excessive and environmentally harmful packaging.
- Only purchase in line with demand

Service Tips

- Use refillable sugar and condiment dispensers.
- Use reusable cutlery and tableware where possible.

Recyclable Waste

- Recycle cardboard, paper, corks, glass, plastics, oil, steel and aluminium cans.
- Remove lids & rinse before recycling containers.
- Check with your local government on which plastics can be recycled.

Organic Waste

- Investigate delivery to a worm farm.
- Investigate on-site or off-site composting.

Non-recyclable Waste

- Place only dry, solid wastes in your bin.

Solid waste checklist

Solid waste disposal cost for your business per year is $ ..... (found on your waste disposal bill)

Waste Issues	Opportunity for reducing costs	Yes	No	N/A	Action
Waste Reduction					
Purchasing	Do you buy supplies in returnable packaging or packaging with recycled content?				
	Do you buy in bulk to avoid excess packaging?				
	Do you purchase products in concentrated form?				
	Do you purchase products with minimal packaging?				
	Do you reuse your packaging?				
	Do you avoid environmentally harmful materials?				
	Do you choose recyclable packaging where possible?				
	Is your purchasing in line with demand?				
	Do you portion control your servings?				
Service	Do you use refillable condiment dispensers?				
	Do you use refillable spoon proof sugar dispensers?				
	Do you use reusable cutlery and tableware whenever possible?				
Waste Recovery					
Waste segregation	Do you separate items to be returned to the supplier?				
	Do you separate items that can be reused?				
Waste Reuse	Do you use leftover food for stocks and sauces?				
Waste Recycling					
Solid Waste	Do you recycle paper, cardboard, glass, plastics, steel cans, and aluminium cans?				
Organic Waste	Do you recycle your oil?				
	Do you compost your food on-site or off-site?				
	Do you send your food waste to a worm farm?				
Waste Disposal	Do you place only dry, solid non-toxic wastes in your bin?				

Wastewater - a draining issue

Trade waste and your business

Food service outlets generate liquid waste from cooking, washing and air-conditioning.

What is trade waste?

Trade waste is any liquid waste produced by your business that is approved for disposal to the sewer. It does not include domestic sewage.

How will reducing trade waste help your business?

Reducing the volume and strength of wastewater being discharged from your business will help to reduce trade waste disposal costs and minimise the disposal of valuable raw materials, such as water and oil, to the sewer.

How will reducing your trade waste help the environment?

Trade waste from food service outlets frequently contains food particles, oils, grease, fats and cleaning chemicals. It is important that these pollutants do not find their way into our waterways.

What happens to your business' trade waste?

Trade waste drains to an approved grease/silt trap to remove solids and fat and to cool the wastewater. This pre-treated waste passes into the sewer and will undergo further treatment at a sewage treatment plant.

How is your business charged for its trade waste?

All trade waste from business and industry must be treated before it can be released back into the environment. Councils charge businesses for their trade waste to recover some of these costs. Because most councils adopt a user pays system there is a strong financial incentive for you to minimise or prevent waste generation from your business.

Trade waste charges are based on the quantity (volume of trade waste your business generates) and in some cases the strength (the amount of organic matter such as food scraps, oil and grease) of your trade waste. The smaller the volume of trade waste and the less pollutants the less you will be charged.

When your business applies for a trade waste approval the council will assess the quantity and quality of trade waste your business is likely to produce and will then place your business within a category. The lower the category the lower the charges. The lowest category will often only pay a set annual fee while higher categories are usually charged an amount per kilolitre based on both the quantity and quality of trade waste.

An average small to medium size food service business generates 1500 kL of trade waste each year at a cost of $2,400 across south-east Queensland.

Trade (waste) secrets

Trade Waste Tips

- Have a licensed transporter pump out and clean your grease trap regularly. Contact your council for advice on cleaning frequency.
- Use screens or strainers in drains to prevent food scraps entering the grease trap.
- DO NOT PUT OIL DOWN THE DRAIN!
- Put used oil, fats and grease in collection containers for recycling.
- Consider using quick break detergents that emulsify grease and oil during cleaning and allow their quick release once in grease/silt traps.
- Keep cleaning chemicals in a designated area and handle carefully to avoid spills.
- Scrape or wipe oil and grease from kitchen utensils and equipment prior to washing with water.
- Remove or disconnect garbage grinders and save thousands of dollars in fees.
- Dry clean floors with brooms and squeegees before wet cleaning.

Are you throwing money down the drain?

Rinsing fruit and vegetables under a running tap instead of in a sink of water can cost you plenty!

In Brisbane, a running tap for 30 minutes every day uses
131 kL costing $148 annually.

6 X 15L sinks of water every day for one year uses only 33kL costing $37 annually.

This means a saving in water supply costs of $111 per year

The same running tap will generate 131 kL of trade waste annually costing $109.

6 X 15L still water baths will generate only 33 kL of trade waste costing $27 annually.

Your saving in trade waste charges would be $82 per year

This is a total saving of $193 annually in water and trade waste charges!

Be sure you know your business' Trade Waste Category. Ask your local council trade waste officer how your business can reduce the quantity and improve the quality of trade waste and SAVE!

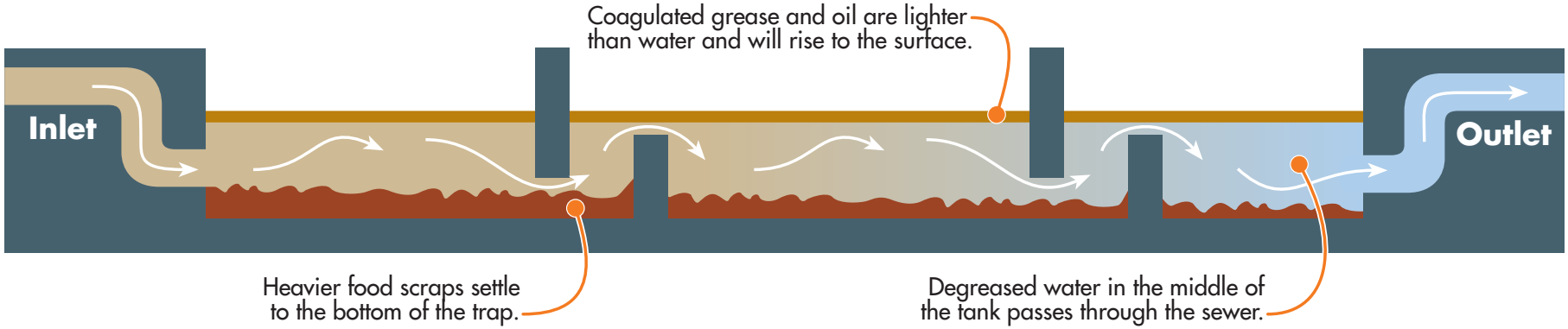
Liquid waste checklist

Trade Waste disposal cost for your business per year is $ ..... (found on your Council rates bill)

Waste Issues	Opportunity for reducing costs	Yes	No	N/A	Action
Grease/Silt Trap Maintenance	Are solid particles, oil and grease scraped from kitchenware prior to washing?				
	Does a licensed transporter pump out the grease trap regularly?				
	Is the grease trap cleaned regularly?				
	Are garbage grinders removed or disconnected?				
Cleaning	Are dry cleaning methods used before final wet cleaning?				
	Are quick break detergents used?				
	Are strainers used to prevent food scraps entering the grease trap?				
	Is oil always prevented from entering the drain?				
Non-sewerable Liquid waste	Are oils, fats and grease sent to a recycling company?				
	Are cleaning chemicals kept in a designated area?				

How do grease/silt traps work?

A grease/silt trap prevents some of the pollutants in wastewater entering the sewer system. Hot greasy water flows through a tank of cold water and the grease and oil coagulate as it cools. Solids fall to the bottom of the trap.



Excess oil, grease and food scraps should not be disposed of down sinks or drains as this will cause problems with your grease trap. Excess oils and grease not caught in your grease trap can cause blockages in pipes downstream and sewer overflows. Careful work practices and regular servicing of your grease trap are essential. Did you know it is cheaper to get your grease/silt trap cleaned if you have in place a long term service contract with a licensed waste contractor?

How we improved our bottom line and helped the environment!

Weis Restaurant – Toowoomba

Business Type

Weis Restaurant is open 7 days a week and employs 40 staff. The restaurant opened in 1968 and is well known for its seafood smorgasbord and wide selection of other foods (175 seats).

Eco-efficient initiatives currently being implemented

- Wax-coated boxes are returned to the supplier and styrene boxes are re-used for storing ice.
- Use of energy efficient evaporative coolers for air-conditioning.
- Ice machine feed water is pre-cooled by piping through the cold room.
- Installation of water saving devices such as sensor operated urinals and an automatically operated sprinkler system.

Some further eco-efficiency opportunities identified

- Introduction of a co-mingled waste disposal service to save $1856 in disposal costs annually. The new service would involve staff separating recyclable waste items such as cardboard, glass, plastic, aluminium and steel cans from non-recyclable waste.
- Installation of flow restrictors on hand washbasins and the seafood wash sink would reduce water and trade waste costs by $76 annually.
- Replace incandescent globes with compact fluorescent globes and save $752 annually. The initial outlay would be around $670 dollars however the energy efficient globes last up to 6 times and use 80% less energy.
- Replace 50W dichroic globes with 20W dichroic globes and save $145 annually.
- Install a flow meter on the trade waste outlet to confirm trade waste volume and potentially reduce charges by around $200 or more annually.
- Investigate the viability of separating fruit and vegetable scraps for on site composting.

Total potential annual savings identified ..... over $3,000

Gold Coast International Hotel – Surfers Paradise

Business Type

The Gold Coast International is a 5 star hotel with 296 guest rooms. The hotel employs 230 staff and has 3 food and beverage outlets and 24-hour room service.

Eco-efficient initiatives currently being implemented

- Water saving devices such as flow restrictors on hand basins and shower roses, sensor operated urinals and dual flush toilets to be installed.
- Recycling of cardboard, paper and glass.
- Some energy efficient lighting. An outside 8.5 kW neon light operating time was reduced by 6 hours and the hotel saved $1303 annually.
- Computerised Building Management System to minimise energy consumption.

Some further eco-efficiency opportunities identified

- Install flow restrictors on the four dishwashers to save $1000 annually in water costs.
- Use energy efficient triphosphor lights in the kitchen and save up to $880 annually.
- Optimise the operation of the air-conditioning system. A 5% improvement equates to savings in the order of $9600 annually.
- Turn off a bank of dichroic lights in the reception area during the day and save $490 annually.
- Optimise the operating cycle of the laundry washing machines to potentially save over $2000 annually.
- Return wax-coated and styrene boxes to the supplier and save.
- Investigate bulk recycling service and waste minimisation service offered by Gold Coast City Council.
- Investigate the use of motor controllers to save costs on fixed speed motors used for air-conditioning and refrigeration.

Total potential annual savings identified ..... around $14,000

How we improved our bottom line and helped the environment!

Port Office Hotel – Brisbane

Business Type

The Port Office Hotel accommodates a food and wine bar, nightclub and lounge bar. The hotel is open 7 days a week and serves modern style cuisine, with seating for around 180 patrons. The hotel employs about 60 staff.

Eco-efficient initiatives currently being implemented

- Water saving devices such as flow restrictors on water outlets, dual flush toilets and sensor operated urinals
- Documented closing procedures to ensure equipment and lighting is not left on when not required and therefore reduce energy costs
- Use of some energy efficient fluorescent lighting
- A timing system to switch off external lights during closing hours
- Recycling of cardboard packaging

Some further eco-efficiency opportunities identified

- Trial setting air-conditioning thermostat to 25-27˚ C during warmer months to potentially save $3,690/yr compared to a 23˚ C setting
- Change 50 watt dichroic lights to 20 watt dichroic lights to save $1,970 /yr
- Introduce a co-mingled waste disposal service to save up to $1,000/yr in disposal costs with an immediate payback
- Return wax-coated boxes to the supplier to reduce solid waste volume and save an estimated $548 /yr
- Investigate the use of energy and water efficient appliances for future purchases

Total potential annual savings identified ..... over $7,000

Two Small Rooms – Toowong

Business Type

Two Small Rooms is a BYO restaurant that serves Mediterranean style meals (80 seats). The restaurant is open 7 days a week and employs 13 staff.

Eco-efficient initiatives currently being implemented

- Food items are purchased in bulk where possible to reduce packaging waste.
- Polystyrene boxes are returned to the supplier for reuse to reduce solid waste volume.

Some further eco-efficiency opportunities identified

- Introduction of a co-mingled waste disposal service to save $1390 in disposal costs annually. The new service would involve staff separating recyclable waste items such as cardboard, glass, plastic, aluminium and steel cans from non-recyclable waste.
- Replace incandescent globes with compact fluorescent globes and save $209 in electricity costs annually.
- Separate organic waste for delivery to a worm farm and potentially save $267 annually.
- Trial setting air-conditioning thermostat at 25-27˚C during warmer months and 20˚C in winter months to save around $288 annually.
- Replace 50W dichroic globes with 20W dichroic globes and save $136 annually.
- Return wax-coated boxes to the supplier and save around $212 annually.
- Consider installing flow restrictors on hand washbasins to save $57 annually with a payback period of 2.5 years.

Total potential annual savings identified ..... over $2,500

How we improved our bottom line and helped the environment!

Greenbank RSL – Browns Plains

Business Type

The Greenbank Returned Services Leagues Club is open 7 days a week and employs 150 staff. The club offers bistro and a la Carte dining (800 seats) and serves predominantly Chinese and European style dishes.

Eco-efficient initiatives currently being implemented

- Installation of water saving devices such as aerators on water outlets, dual flush toilets and sensor operated urinals
- Some energy efficient lighting installed.
- Recycling of cardboard, aluminium cans and glass.
- Replacement of garbage grinders with specially designed sink traps saving $3,000 /yr in fees and reducing trade waste by 60%
- Energy management system efficiently controls air conditioning.

Some further eco-efficiency opportunities identified

- Replace the 350 50W dichroic globes with 20W dichroic globes and save $5500 annually.
- Replace remaining continuous flush urinal with sensor-operated system to save $2000 annually in water and trade waste costs.
- Replace incandescent globes with compact fluorescent globes to save over $500 annually. The initial cost of the globes is higher however the globes last up to six times longer and use 80% less energy.
- Install a flow restrictor on the main dishwasher to save around $130 annually in water costs.
- Optimise the operation of the air-conditioning system. A 5% improvement equates to savings in the order of $4700 annually.
- Return wax-coated and polystyrene boxes to supplier to reduce solid waste volume and save.

Total potential annual savings identified ..... around $13,000

The Gardener's Café Northside – Albany Creek

Business Type

The Gardener's Café Northside is situated within a Garden Centre and serves light meals and beverages 7 days a week (96 seats). The café also has a private function room (80 seats). The café employs 8 staff.

Eco-efficient initiatives currently being implemented

- Food cooked in bulk and stored in vacuum-sealed airtight single serves portions to reduce wastage.
- Some energy efficient lighting.
- Recycling of cardboard boxes and the return of polystyrene boxes to supplier to reduce solid waste volume and save.

Some further eco-efficiency opportunities identified

- Use reusable food storage containers instead of disposable containers and save $277 annually.
- Return wax-coated boxes to supplier or find a reusable alternative and save $82 annually.
- Rinse fruit and vegetables in still water baths instead of under running water and save $61 annually.
- Send food waste to a worm farm in conjunction with introducing a co-mingled waste disposal service and save $148 annually in waste disposal costs. Alternatively compost food waste on site in conjunction with introducing a co-mingled waste disposal service and save $278 annually.
- Replace incandescent globes in the reception area and save $172 annually with a payback of 4 months.
- Install a flow meter on the trade waste outlet to confirm trade waste volume and potentially reduce charges by around $273 per year.

Total potential annual savings identified ..... over $1,000

Useful resources and contacts

Government Services

Environmental Protection Agency – Sustainable Industries Division
Ph: 1300 369 388
www.epa.qld.gov.au/sustainable industries

or

Contact your local government for information on your water & trade waste charges.

Contact your energy supplier to find which energy tariff you are on and if this is the most appropriate relevant for your operations.

Industry Support

Queensland Hotels Association

3/160 Edward St
Brisbane 4000
Ph: 3221 6999
www.queenslandhotels.com.au

Restaurant & Catering Queensland

Suite 6 'The Courtyard'
67 O'Connell Terrace
Bowen Hills 4006
Ph: 3252 8880 or
Ph: 1800 655 344
www.restaurantcater.asn.au/qld.asp/

Master Plumbers Association of Queensland

84 Abottsford Rd
Bowen Hills 4006
Ph: 3252 1266

Will be able to provide the names of plumbers who have undertaken "WaterWise" training.

Energy Development Association Australia Inc

165 Moggill Rd
Taringa 4068
Ph: 3217 7533

Peak industry body for the energy and associated industries in Queensland. Can provide specialist contacts in lighting, heating & airconditioning

www.eda.org.au

Yellow Pages

For more contacts look under

- Waste reduction & disposal services;
- Recycling services;
- Energy Management Consultants

in your local directory

Useful Websites

WATER

Water Conservation

www.savewater.com.au

ENERGY

QLD Sustainable Energy Allies

www.sustainableenergyqld.com

Energy Smart Case Studies

www.energysmart.com.au

Sustainable Energy Authority Victoria

www.seav.vic.gov.au

Sustainable Energy Development Authority NSW

www.seda.nsw.gov.au

Australian Greenhouse Office

www.greenhouse.gov.au

WASTE

Wipe Out Waste

Gold Coast City Council

www.goldcoast.qld.gov.au

NSW Waste Board Case Studies - Waste Makes No Cents

www.wasteboards.nsw.gov.au

Food for Thought Waste Reduction for Food Outlets

www.ecorecycle.vic.gov.au

Solutions to Pollution Case Studies

www.epa.nsw.gov.au/small_business/retailfood.htm

UNEP Working Group for Cleaner Production in the Food Industry

www.geosp.uq.edu.au/emc/cp/

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Coles Supermarket – Broadbeach

Curry Connection – St Lucia

Port Office Hotel - Brisbane

Criterion Hotel – Woombye

Greenbank RSL – Browns Plains

Weis Restaurant – Toowoomba

Gold Coast International Hotel – Surfers Paradise

Gardeners Café Northside – Albany Creek

Two Small Rooms – Toowong

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