

[www.wrap.org.uk/recycleatwork](http://www.wrap.org.uk/recycleatwork)

# Resource Efficiency

## Your profits, your environment

Wasted resources cost businesses across the UK £billions every year. Using fewer resources efficiently is not just an environmental initiative, it's simply good commercial sense.

This business guide provides some simple tips to get you going and suggestions on where to get more detailed information and advice.

# What is resource efficiency? How will it help me?

Resource efficiency is exactly what it says on the tin – a more efficient use of resources. With prices of energy and resources rising in a competitive market place, resource efficiency makes sense, as it leads to lower costs and better profit opportunities.

## **By effectively managing your resources and preventing and reducing waste you can:**

- » Save your business money
- » Reduce energy consumption
- » Enhance environmental performance
- » Reduce operating costs
- » Comply with legal obligations
- » Improve the image of your business
- » Even a simple review of your business waste can produce some quick wins.

Why not get going today by following some of the simple steps outlined in this guide.

**It is estimated that waste typically costs companies 4% of turnover. Evidence shows even low or no cost actions, such as increasing the amount you recycle, can reduce waste by at least 10% and produce quick returns.**

**During small business recycling trials, over a third of businesses said recycling had improved their reputation within the local community.**



# The Waste Hierarchy

Minimising waste is a key part of resource efficiency. The waste hierarchy sets out the order in which options for waste management should be considered based on cost and environmental impact. All waste costs money. In fact you are paying for it twice; once when you buy the materials/resources and again when you dispose of them as waste.

Making smart procurement choices and carefully managing your resources reduces your need to handle, treat and dispose of waste. So, while more businesses than ever before are recycling, actually eliminating and reducing consumption and re-using materials where possible, will reduce costs further and increase profit.



## What do I need to do? Where can I start?

A systematic approach will help you find the right solution for your business. Here you will find some simple steps to help point you in the right direction.

### Make organisational commitment

It is important that any commitment starts at the top of the organisation so everybody knows it is something to be taken seriously. Make all staff aware of your commitment and what you are trying to achieve so that they can play their part. At this stage, it may be appropriate to develop a small waste reduction team to put the commitment into action.

### Top tips

- » If you want this to be taken seriously, give it the appropriate level of attention and resources
- » Form a waste reduction team with clear responsibilities drawn from all parts of the business
- » Involve enthusiastic people, good communicators and motivators.

# Review your waste

Reviewing the amount and type of waste that your organisation produces will help you to develop an action plan with your priorities and targets for reducing, re-using and recycling waste.

A waste review can be conducted at a high level, for example reviewing all waste for a building, or at a more detailed level, for example reviewing waste per department or process area. Clearly the more detailed the review, the better informed you will be for identifying where the majority of waste occurs and where actions may be prioritised.

## Top tips

- » Review materials in the recycling bins as well as those in the rubbish – could it have been reduced or re-used before being recycled?
- » Examine the costs of the waste. Not just the disposal, but how much it cost you to buy, transport and use the materials
- » Look wider than waste e.g. water. Are taps left running when not being used? Are you paying for leaks?

**Waste Audit Guide** 

### You will need

- » Containers for waste
- » Weighing equipment
- » A chart to record your findings

Ensure that all concerned are properly briefed on all aspects, including Health and Safety.

### 1. Assemble

Assemble waste to be audited. Don't forget to include all the things you throw away including your recyclables and kitchen waste. Remember you need to collect your waste for a set period e.g. per week, this allows you to easily calculate your annual output.

### 2. Separate waste out into different types



### 3. Weigh

Weigh each type of waste remembering to deduct the weight of the container to arrive at the net weight.

### 4. Calculate

Add all the separately recorded net weights together to give you the total weight of waste produced e.g. for the time period you initially selected.

### 5. Total

Calculate your annual waste production by multiplying by 52 if you have measured by the week.

## Consider

- » What you might start to recycle?
- » Overall, what is the largest proportion of your waste and what actions might be taken to reduce it?
- » How can you encourage people to recycle more and use the correct bins?
- » How will you share the results?

# Develop an action plan

A written plan is a good way to let everybody know what you want to achieve, how it will be done, by when and who is responsible for each part of the plan. It also acts as a reference point to review progress and judge success. Once you have agreed priorities you can agree the actions and assign responsibilities.

## Top tips

- » Set SMART targets: Specific, Measurable, Agreed, Reasonable and Time bound e.g. each department to reduce document printing by 25% within the next 3 months
- » Aim for quick wins that can be used to encourage everybody to keep up their efforts
- » Develop a system to monitor progress so that you can see where improvements have been made
- » List key materials being used and then brainstorm ideas to reduce, re-use and recycle each material
- » Work out which materials could be recycled and find a service provider to recycle them
- » Don't be afraid to change the plan if necessary – better to have a live document rather than something that just gets filed away

## Need a recycling provider?

[www.recycleatwork.org.uk](http://www.recycleatwork.org.uk) or  
[www.wastedirectory.org.uk](http://www.wastedirectory.org.uk)

## Environmental Management Systems

A more advanced step from a waste action plan is to develop an Environmental Management System (EMS). An EMS is similar to other management systems, such as those that manage quality or safety. It assesses your business' strengths and weaknesses, helps you identify and manage significant impacts, saves you money by increasing efficiency, ensures you comply with environmental legislation and provides benchmarks for improvements. Some organisations have adopted the framework specified in national or international standards such as ISO 14000 or BS8555. For more information go to [www.businesslink.gov.uk](http://www.businesslink.gov.uk) and search for EMS.



# Involve and communicate

Ideally you want to create a culture where resource efficiency becomes an everyday part of people's thoughts and actions.

## Top tips

- » Give responsibility to the waste reduction team for identifying priorities and delivering key messages
- » Make sure you ask your staff for their ideas. They are the ones working closest to the problem so they are likely to have the best suggestions
- » People are normally keen to be involved but will appreciate support and guidance
- » People may need to be given the key messages several times to get them into the right mindset
- » You may find that people lose forget or lose motivation after a while so plan to repeat the key messages on a regular basis and think about getting them across in different ways in order to keep their attention
- » Get teams to share their own hints and tips for preventing and reducing waste
- » Create friendly competition between teams



# Review progress and celebrate success

Reviewing progress is essential for finding out how things are going compared to the original plan. It is a good time to reflect on what is working well (and what isn't) as well as reprioritising activities as necessary.

People from shop-floor employees to senior management are all motivated by feedback that tells them how well they are doing. Celebrating success is a sure way of reinforcing people's belief in the businesses' commitment.

## Top tips

- » Publish the results from your monitoring. If things aren't going as you thought they would, don't be afraid to ask the wider workforce for reasons why this might be so
- » Create an 'individual achievement' award for those individuals responsible for the biggest savings
- » If targets are achieved very easily, acknowledge the success and then set more challenging goals

**In this section you will find tips for reducing, re-using and recycling waste that is specific to your business sector and waste types.**

## Office waste

- » Set up printers and photocopiers to print on both sides of the paper. This can halve your costs when you reorder stationery
- » Review processes that involve printed documents to see if this can be avoided
- » Encourage staff not to print documents unless absolutely necessary
- » Cancel junk mail and unwanted publications – remember that you are paying for them to be disposed of/ recycled
- » Review what might be recycled that currently isn't and make arrangements for collecting it
- » Remove plastic cups from your water cooler or drinks machine – ask staff to use glasses or mugs instead
- » Remove individual desk bins and replace them with central waste and recycling points – this makes people think before they throw and may even encourage people to change their behaviour to produce less waste
- » Place reminder signs and posters in strategic places to remind people how to reduce, re-use and recycle
- » Ensure cleaning staff are aware of what can/can't be recycled
- » See Recycle at Work at [www.wrap.org.uk](http://www.wrap.org.uk) for more ideas and case studies



## CASE STUDY

When James Johnson became Office Manager at Morris Hargreaves McIntyre, a Manchester-based market research consultancy, his company was already recycling paper, sorted by staff into specially designated bins for fortnightly collection by a local not-for-profit company. But James, a keen recycler at home, realised that more could be done to reduce office clutter and protect the environment at the same time:

“I see no point in just sending things to the tip. Recycling at work is easy if you are committed to the idea. With me, it's just part of my general ethos, and it's good to give something back.”

But he also understood that lack of an effective recycling policy could stand in the way of his company winning new business, especially since more and more prospective clients were insisting on sound green credentials being part of a successful bidding process.

Now his company's plastic drinks bottles are also being collected by the same recycling company and its printer cartridges are sent to another charity for recycling. What's more, redundant electronic office equipment, such as scanners, are being donated to new users via a charity internet site: “We just send an email to a group of those interested in the old equipment and arrange a time for them to collect the items,” he explains. “Many of us recycle at home, and that just transfers easily to the workplace.”

# Hospitality sector waste

- » Ensure that cleaning staff are aware of and support your recycling scheme
- » Use refillable tamper-proof soap/shampoo dispensers to reduce waste packaging and product
- » Use refillable spray containers for cleaning equipment and buy in bulk
- » Choose minimally packaged products or ask your suppliers to supply products in less packaging
- » Install water saving devices in showers and toilets as appropriate
- » Have a towel re-use policy where only towels left on the floor are washed
- » Give your chef freedom to put specials on that use up leftover ingredients
- » Portion control – check to see how much people are leaving on their plate. Offer free top-ups (within reason) rather than overloading plates.
- » Start composting and recycling food waste
- » Use washable cloths rather than paper towelling
- » Review kitchen practices to ensure that energy and water are not wasted
- » Provide a separate bin for guests to segregate their waste for recycling
- » Close the loop and buy material with recycled content

## CASE STUDY

Strattons Hotel, a small hotel in Norfolk saved over £10,000 per year through introducing a range of resource efficiency measures.

All waste produced in the hotel is segregated, weighed and recorded. Where possible, the waste is taken to the 'recycling room' for storage prior to re-use or recycling. Their actions include composting organic food waste, using newspapers as fuel for the open fires as well as innovative re-use of materials such as donating wine bottle corks to a local art co-operative. Refillable soap dispensers were fitted in bedrooms and bulk purchasing has been made where possible to reduce packaging.

New oak tables were purchased to save the need for table cloths and their laundering. This resulted in a reduction of £1,944 per year in laundry costs. Surface rainwater is harvested to reduce costs of garden watering with a dual benefit of helping to reduce flood risks. Water saving devices have been fitted to cisterns and around 2,000 litres of water per week are recovered from the restaurant and kitchens to feed water-hungry plants.

Resource efficiency is discussed at weekly staff meetings to maintain awareness and motivation. Regular training has encouraged staff to think about their daily activities and how they consume resources.

Proprietor Vanessa Scott said "our ethics make fantastic business sense."





# Manufacturing waste

- » Control the process to control the waste. Once the cause of the waste has been identified, improving control of the process will often reduce it
- » Accuracy = lower waste and higher quality. The wastebusting approach requires accuracy, control, communication and attention to detail
- » Encourage people to tell you about waste problems and act on them. A good manager will never criticise if waste is brought to his attention
- » Provide people with the right tools for the job. Poor tool design or having to 'make do' can lead to waste and reduced motivation
- » Train people. 'If you think trained is expensive, just try ignorant!' (Drucker)
- » A first-in-first-out (FIFO) system allows the product to be dealt with in age order to minimise out-of-life stock
- » Carry out supplier quality audits as getting suppliers to reduce and eliminate rejects is better, easier and cheaper than having to inspect and test all purchases
- » Ask suppliers to reduce excess packaging– you're paying for its disposal!
- » Partner with other businesses to share service costs
- » One person's waste is another person's treasure - find out if another company can use your waste. Log on to [www.nisp.org.uk](http://www.nisp.org.uk)
- » See 'Finding Hidden Profit - 200 tips for reducing waste' on [www.wrap.org.uk](http://www.wrap.org.uk)



## CASE STUDY

Crisps manufacturer Burts Potato Chips saved a significant amount through a range of resource efficiency measures following an environmental audit.

It was identified that through the previous manual sorting process, around 500 kgs/week of reject waste was being generated and that many of the crisps that were removed as reject were suitable for sale. This finding prompted the company to invest in an optical sorter which would cost around £100,000 but would result in cost savings of over £175,000/year through reduced wastage and increased production efficiency. It was also identified that a lack of guards on conveyors resulted in potatoes and crisps falling to the floor and becoming waste.

Other actions included improving packaging to increase the density of boxes on a pallet and light-weighting boxes to save procurement cost as well as reducing packaging waste for their customers.

The review identified that the majority of the site's waste was waste crisps. As well as the waste preventative measures that were taken, a partnership was developed with a local farmer to use wasted potatoes as animal feed in order to reduce waste disposal costs and half waste to landfill.

Inefficient use of raw materials can cost as much as 10% of turnover.

# Water waste

- » Fit a water displacement device to toilet cisterns to reduce the amount of water used in each flush
- » Fix any dripping taps
- » If your business has a garden or landscaped area, consider water butts to collect water
- » Fit an automatic flush controller on urinal systems to ensure the cistern only flushes during office hours or after use rather than continuously
- » Measure and monitor the amount of water you use. Compare water use each year so you can identify any unusual patterns
- » Consider alternative water sources, e.g. rainwater use and grey water re-use
- » Spray taps can reduce water use by 60 - 70% compared with conventional taps
- » Make sure staff are fully aware of the importance of water minimisation
- » Appoint a water monitor within your organisation to undertake periodic site walk-overs to identify water minimisation opportunities.

# Legislation

All waste generated by your business is regulated by law. This applies to all businesses no matter how small. You have a Duty of Care which includes ensuring that your waste is disposed of by a licensed waste carrier. The Pre treatment regulations require waste to go through some form of process to reduce its environmental impact before being disposed of to landfill.

## CASE STUDY

A fish merchants in Hull has implemented a low-cost programme of water minimisation. Involving and motivating all staff was key to the programme's success. Staff were informed of the benefits of water efficiency and encouraged to offer ways to reduce water and effluent costs.

A 44% reduction in water consumption and cost savings of over £31 000/year were achieved.



A simple way to do this is to separate items for recycling. You also need to be particularly careful in the way you dispose of Waste Electrical and Electronic Equipment (covered by The WEEE regulations) and Hazardous Waste (covered by The Hazardous Waste Regulations).

More information on waste regulations can be found at [www.netregs.gov.uk](http://www.netregs.gov.uk)

# Download free posters to promote resource efficiency & recycling messages.



Go to [www.wrap.org.uk/recycleatwork](http://www.wrap.org.uk/recycleatwork) for more resources and posters for recycling points

## Further information and advice

The Waste & Resources Action Programme (WRAP) website contains case studies, in-depth guides and online tools to help you on your path to resource efficiency. Visit [www.wrap.org.uk](http://www.wrap.org.uk) In addition WRAP operates a free business resource efficiency helpline which offers bespoke resource efficiency guidance and support – call **0808 100 2040**.

You can learn more about saving energy at [www.carbontrust.co.uk](http://www.carbontrust.co.uk)

Business Link provides practical advice and guidance for all aspects of business improvement including environment and efficiency as well as being able to tell you what local support may be available. Visit [www.businesslink.co.uk](http://www.businesslink.co.uk) or call **0845 600 9 006**.





help your business, help the environment

WRAP works with businesses and individuals to help them reap the benefits of reducing waste, develop sustainable products and use resources in an efficient way.



**Material change for  
a better environment**