

## **J&B Waste Audit and Resource Efficiency Guide**



Many organisations underestimate how much waste costs them; it could be as high as 4% of turnover. The true cost of waste isn't limited to the charges for disposal. It also includes wasted raw materials, energy and labour, which can be between 5 and 20 times more than the cost of disposal. It could cost more to throw resource away than to purchase it in the first place.

Waste is not just limited to the physical stuff thrown away, it can also constitute:

- Overproduction - producing unordered materials and products.
- Material Transportation - handling materials more than once, delays in moving materials, unnecessary moving or handling.
- Inventory – holding unnecessary raw materials in stores, work in process (WIP), & finished stocks.
- Talent – not using all the skills of your employees effectively
- People Motion - movement of equipment or people that add no value.
- Rework or Defects - producing or reworking scrap.
- Inappropriate processes - unnecessary processing or procedures i.e. work carried out that adds no value.
- Delays - waiting hanging around, idle time
- Energy – wasting energy, such as lights on in unoccupied areas

The above is known as the “9 wastes” which allows the categorisation of problems and focuses attention in the identified areas. There are many tools and techniques which can be applied in order to tackle any one of these wastes. For more information for counteracting the above in a manufacturing environment a useful source is the Manufacturing Advisory Service (MAS).

There are many benefits associated with preventing waste and improving resource efficiency. These benefits that will appeal to any organisation, whatever its size and sector

- Cost savings from reduced raw material and waste disposal costs, typically over 1% of turnover can be saved.
- Improved process performance.
- Improved environmental performance.
- Compliance with legislation and reduced risk of environmental incidents.
- Commercial and strategic advantages, it can make your organisation more competitive and improve its standing with customers who seek assurance that their suppliers are operating on a sound environmental basis.

There are also specific benefits to employees which include:

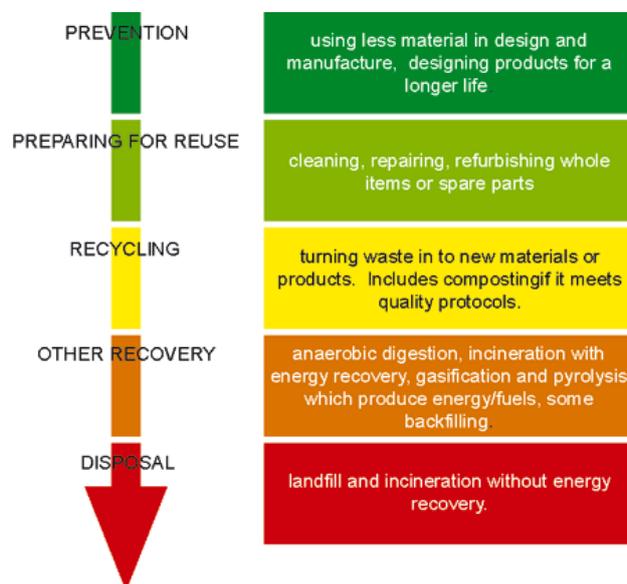
- Improved working conditions.
- Cost savings (typically £1,000 per employee), releasing money that can be spent on other things such as training, motivation and team working.
- 'Feel-good factor' in the organisation.
- Improved recruitment and retention of staff.

Consider how much product you have to sell or service you have to deliver to make a profit of £1,000 and that cutting out waste is pure profit.

Our suggestion for making savings in waste is to spend a short time carrying out a systematic review of your organisation's waste production. Waste takes precious time and resources to generate and so the key to cutting waste costs is to try to prevent it in the first place. Imagine that you are seeing your operations for the first time and challenge the way you do things!

An ideal starting point is to follow the waste hierarchy. Try and prevent waste in the first place, if that's not possible, try to reuse the waste. Recycling is next best after which you could look at recovering other value from the waste (e.g. energy recovery). Disposal should be your last resort.

#### The Waste Hierarchy and J&B's "Zero Waste to Landfill" Commitment



The waste hierarchy aim is to reduce the amount of waste produced, and to recover maximum value from wastes that are produced.

After recycling options have been exhausted J&B can provide a Zero Waste to Landfill as all residual non-recyclable waste is recovered as energy (the only exception being some hazardous wastes such as Asbestos, which has no other viable disposal solution).

Any Landfills that J&B use have been audited by us and are selected because they capture the Landfill Gas to produce electricity which is used on site and sold to the National Grid.

Next you should walk around your own site looking for waste and asking the following questions.

#### Administration

- Do you monitor the paper use and waste from printers and photocopiers?
- Do you encourage people to 'think before you print'?
- Is the paper waste created because there are no clear instructions?
- Have employees been properly trained in using the IT equipment or are they learning as they go?
- Do you log your printer and copier problems, and look for common causes?



## Stores

How much damaged stock is there and what can you do to prevent damage in the future?  
Do you suffer from never having enough storage space and if so why?  
Have you talked to your supplier about using reusable or returnable packaging?  
How can you prevent stock becoming out of date?  
Why is there so much stock, is there a 'first-in, first-out' system and is it working?  
Are 'goods in', 'work in progress' and 'finished material' all stored together?  
How much time is spent looking for stock?  
Do you store and handle oils, chemicals and other risky materials?  
Are storage containers fit for purpose, regularly inspected and maintained?  
Are storage areas and containers sited away from watercourses, drains and unsurfaced areas?  
Do storage containers have secondary containment, such as a bund, to contain any leaks or spills?  
Do you have procedures and training for safe delivery and handling of materials?

## Production

Is the production area used as a store?  
What is on the floor?  
Why is material in the waste bin?  
Why are there off cuts and what happens to the leftovers?  
How much raw material and goods is still left in containers, drums and bags?  
Are your employees aware of how much materials and consumables cost the organisation?  
How much is cleaning up costing you in water, detergent and solvents?  
You bought this much and you sold that much, is there a significant difference and where did the rest go?  
When did you last check your estimates against what really happens?  
Do measure and manage your waste?

## Packing and dispatch



Are you sure your customer requires all the packaging you are using?  
Are you reusing your suppliers' packaging for your own packaging?  
Could you use shredded confidential waste papers from the offices etc. as packaging?  
How much do you spend on packaging per year?

## Garage and Maintenance

Are workshop doors left open to increase light and improve ventilation?  
If so can a fume extraction system and portable lighting be used instead?  
Do you check for and repair compressed air leaks, which can produce cost savings of 30%?  
Is the compressor set to the right pressure, reducing wear and maintenance costs?  
Are you using excessive paint or solvents?  
Do you plan painting jobs to make sure that those using the same colour follow on from each other?

## Canteen

Are you producing excessive waste in the canteen?  
Do you provide reusable cutlery and crockery?

Does the vending machine etc. allow the use of china mugs rather than plastic disposable cups?  
Do you use disposable catering products e.g. individual milk containers, sugar sachets and paper plates which create more waste?

### Water Usage



Is your supply metered and is the size of your correct for your business?

Do you check your bills, are there any unexplained discrepancies (leaks under the floor or yard could be costing you thousands £)?

Do you read your meter before and after the site is closed, is water being used outside of normal working hours, for example using outside tap to wash cars?

Are there any dripping taps, especially hot water taps, as one dripping tap will waste at least 5,500 litres of water a year?

Are your washing processes efficient? Consider fitting trigger action spray guns to hoses and use grey (recycled) or rain water.

### Energy Usage

Are you using lighting (accounts for 20% of all electricity) efficiently?

Do you encourage a switch off culture for unnecessary lighting?

Are your refrigerators running efficiently, are they being maintained and are the units not running at a temperature lower than necessary, as this could reduce consumption by up to 15%?

Are windows and doors left open when the heating or air conditioning is on?

Is your premise adequately insulated, especially roof spaces as 25% of the buildings heat can escape through the roof?

Is the temperature on your boiler too high, reducing this by 1°C can save a small fortune?

Are windows clean and not obscured, making best use of natural light?

Have you replaced tungsten filament light bulbs with modern energy saving bulbs as they use 25% less energy?

### Outside your premises

Is your storage and handling of waste safe and does it comply with the law?

Do you know where your waste goes and are you sure it's disposed of correctly?

Are you reducing and recycling your waste?

Are being charged for the right number of waste pick-ups?

Are all your rented skips and bins are still on site?

What is hiding in the skip or wheelie bin?

Are you paying to empty bins full of air?

If you have more than one bin have you numbered them and fill them in strict rotation to make best use of their capacity?

Do you really need an extra skips or bin as waste creation grows to fill the space available?

Are the contents of the bin compacted by hand, do you flatten boxes, bags and plastic bottles?

Do you segregate recyclable waste and make sure to keep the waste clean to maximise its value?

Do you have an up to date drainage plan of your site and is your site drained correctly?

Does only clean water, such as roof drainage go to surface water drains and all contaminated water, such as sewage and trade effluent go to foul drains.

Do you have a plan, equipment and training to deal with pollution emergencies?

Remember the success of any measures you undertake to cut costs and reduce your environmental impact will depend greatly on the commitment of those involved.

Ways to motivate staff include:

- Develop reward schemes to encourage improved resource efficiency and waste reduction.
- Appoint a resource efficiency champion to co-ordinate your cost-saving efforts.
- Train all staff in good practice by including relevant issues in induction briefings and carry out refresher training every year.

The greatest savings can only be achieved with the full commitment of staff throughout the organisation. By ensuring that your employees are able to participate and feel some degree of ownership for cost-saving initiatives, you will maximise the effectiveness of the programme.

Always convert waste to a 12-month figure as wasting £1 a day doesn't seem much whereas wasting £365 does! You will find that as soon as you put a figure on things, you start asking the right questions to save money!

Other useful sources of information can be found at

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

[www.tees.ac.uk/sections/business](http://www.tees.ac.uk/sections/business)

[www.mymas.org](http://www.mymas.org)



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