



Waste minimisation case study - Carley's of Cornwall Ltd

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Organisation: Carley's of Cornwall Ltd

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Size of business: The organisation runs both a shop and reprocessing factory, with 11 full-time employees including three working directors. The company turnover is just over £500,000.

Short history: The business started in 1974 as a whole food shop with a small bakery. In the 1980s the shop was extended and the first floor was used for storage, processing and packaging. Word spread and we started providing wholesale to other local businesses. We became certified for organic production in 1992. To expand and to make the business sustainable we needed a factory to develop our reprocessing business.

Choice of type of business activities undertaken: We run a shop and a reprocessing factory. We supply 2,5000 organic products from the shop, and around 30 organic products from the factory to a range of wholesalers including Marigold, Infinity, Suma, Essential, Goodness, Rainbow, Queenswood, Green City, and Juniper.

What waste minimisation techniques were included in the building design of the

factory?

The builders were required to build with the Best Practicable Environmental Option in mind (BPEO). We wanted to include measures such as low energy lighting, no air-conditioning, and three-phase electricity so we are able to run more efficient motors. The fans that drive air circulation and the compressor motors on the fridges are selected for their high economic and environmental performance. Our cold stores are designed to have minimum running costs by adding maximum insulation and external remote compressors to ensure that the hot air produced is not released near the cold stores.

Our fluorescent tubes are high impedance lights so they do not flicker. They consume very little electricity with a low heat output. Where it was impossible to fit these we put in compact fluorescent lights. Our scales all run on rechargeable batteries so there are no trailing cables, which particularly impressed the local Environmental Health Officer (EHO). It also removed the problem of disposing of the batteries. Although they cost slightly more than conventional scales they offer long term savings by reducing disposal costs.

Do you use environmentally friendly appliances? How and why did you choose to use them?

As the cold stores are such an important part of the business their design was really important. We took advice from our local Energy Advice Centre that is partly funded by the local authority. They confirmed our view that we should 'over-insulate' the cold stores and use external compressors. Our local EHO explained that the only disadvantage with external compressors is the noise goes out of the building. However, we house them in acoustic hoods and they are sited so as not to affect the neighbours.



Once the EHO had approved the design we checked that the refrigeration engineers we were able to build to BPEO. The cold store floors, walls, ceilings and doors are at least 100mm thick, using fire retardant foam, non ozone-depleting foam and refrigerant. While slightly more expensive to install, this design minimises electricity bills.

We wanted to heat the water using the waste heat from the fridges but they were so well insulated that they would not output enough heat to achieve this. If we expanded in the future and had more fridges we would definitely consider heat extraction. We also have a super efficient full condensing gas hot water boiler. All water pipes in the factory are insulated above building regulation standards. This is also true of the staff room and office.

We buy green electricity and consequently we do not have to pay the climate change levy. We are very strict on limiting lighting use. We tried using sensitive detectors for a while

but they were too sensitive so we ended up reverting to ordinary light switches. Waste minimisation is all about working out what measures will suit your own organisation.

What techniques do you use for minimising waste?

Many of our products are produced with fresh ingredients and without the addition of preservatives. Consequently it is very important that we have strict stock management regimes.

Products are precisely date coded and sold in strict rotation with known minimum date codes.

A date code sheet for goods supplied goes with each invoice. Working in this way helps ensure

that our wholesalers and retailers receive a more than adequate date code on our goods, thus

minimising waste for our customers. We encourage our wholesalers to buy little and often for

perishable products. We have tried to design out the problems of fresh short life produce.

We also prevent waste by careful microbiological testing and by working in a clean and orderly way. We have developed these techniques to a high standard, particularly as we do not use preservatives in the factory. Products are packed in sterile glass to maintain their life span and increase the keeping quality.

Does the organisation use composting, reuse or recycling techniques?

Currently none of the products made in the factory contain any meat or dairy products. As everything is uncooked all vegetable by-products, onion peelings, apple cores and so on are taken daily to our own on-farm composting site. As the amounts are relatively small we are currently exempt from waste disposal legislation in the view of our local authority and the Environment Agency.

The compost is used on our vegetable patch at home and for mulching around trees. Clean, wet, used paper hand towels go into the compost bins, adding carbon, as do floor sweepings, coffee grounds, teabags and so on. Yard sweepings are treated separately in a leaf mould bin. We keep the waste disposal authority informed about our activities.

We use two local manufacturers for our cardboard boxes. These are specifically designed to be staple-free, which makes them convenient for recycling or return for re-use. Both cartons can be unfolded quickly and easily, and are designed to be free from extra loose inserts. The cartons are made from recycled board. The cartons are labelled 'please fold flat and return'. Some customers are very good at returning their cartons and save them up for regular collections. About 30 per cent are returned and reused.



Five of our wholesalers collect from the factory and we deliver to the remainder. We share a

local chilled haulier with a group of other local quality food producers to minimise cost and vehicle miles. The lorry collects chilled goods from London and other places on the return journey to minimise running empty.

We pack in glass with the intention that the jars are recycled. There is a message on the jars to encourage this. The jars are purchased from Beatson Clark and Rockware. Both companies use flint cullet in their manufacture so the jars are partly made from recycled materials.

Operating a forklift at the factory has enabled us to buy in pallet loads, which minimises cardboard waste, transport costs, and staff time in unpacking. Glassware pallets are returned against a £10 deposit.

We have been able to buy certain commodities in bulk, such as vinegar, saving on packaging. The vinegar containers are returnable but have also been re-used as rainwater butts.

Do you work with other organisations to minimise waste? If so, how did you establish a relationship with them? How does this work?

We work very closely with Rag and Bone 2000 and the Cornwall Paper Company (CPC). CPC collect our card and paper waste every week. They are very active in Cornwall, operating two Material Recycling Facilities (MRFs) and working closely with the waste collection authorities. They also recycle a wide variety of plastic containers, metals, and glass.

Rag and Bone 2000 are based in Falmouth and collect a wide range of materials weekly, such as glass waste, metals, and plastics. This is a paid for 'gate-fee' service. We also supply them with biodegradable cleaning materials.

The County Council has a really active recycling officer, Richard Bower, as do the six district authorities. One of our directors is a member of 'ReZolve', a network of all the local authorities, waste and recycling companies, community groups, the Environment Agency, environmental groups, such as CPRE, Friends of the Earth, and Surfers Against Sewage, as well as landfill operators. Cornwall is going for Zero Waste.

What are the benefits of waste minimisation to your organisation?

Living what you believe is the right thing to do. If you can do it you should. Many of our customers appreciate this as they also share our strong environmental beliefs. We let our customers know about what we are doing and this gives them added assurance that the company is ethically minded, as well as selling great tasting food. It happens that our products are attractive to sustainably minded companies. It is very important to think about waste issues, as they are fundamental to our aims.

Pros and cons?

It is one more thing to think about source separation, and so on. But I believe that source separating does ultimately reduce your costs. It is amazing how much you can recycle without too much effort.

What advice do you have for those considering implementing waste minimisation measures or techniques?

Get on and do it. Doing anything is better than doing nothing. Don't get seduced by the idea that it will just cost you money. It will almost certainly save you money. The opportunities

for waste minimisation are greater now than even five years ago. Emerging legislation will penalise poor environmental performers, so get ahead of the game now.

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