Prints harming

Like monitors, printers have a significant effect on their immediate environment. They're noisy, emit electrical and magnetic radiation as well as ozone, while disposal of them causes further headaches. Duncan Peberdy looks at new guidelines designed to change all that

When buying a new office printer, as with any other product, the main criteria for users is performance and quality. But there's another factor that ought to be considered: whether it's going to be a healthy addition to the department.

Inside their sterile casings, laser printers can contain a potentially harmful combination of plastics, rubber, foam, brass, copper and aluminium – hardly the sort of by-products conducive to a happy, healthy workforce. And, once it's ready to be retired, chances are your old printer will end up in a landfill site, adding further to today's environmental problems.

But most of us have an ingrained assumption that greener products cost more and don't perform as well, so how are we to be persuaded otherwise?

All public and corporate bodies have environmental policies that clearly state how they're going to take more care of the world's resources and reduce the amount of waste they create. And, as we have written about many times, European-wide legislation in the form of the WEEE (Waste Electrical and Electronic Equipment) Directive is not far from being implemented. (See *What's WEEE all about?*)

But the WEEE Directive does nothing about the damage caused by the chemical emissions from office printers during their actual lifecycle. Another set of sensible guidelines has been drawn up to look at this particular issue.

Read the label

Environmental labelling of computer products started less than 10 years ago when PC-based working practices became the norm. As a greater number of employees found themselves spending most of their working hours sitting in front of a PC screen, there was also an exponential rise in intangible illnesses such as headaches, neck strains and injuries caused by repetitive actions.

The TCO (www.tcodevelopment. com) in Sweden, which is roughly the equivalent of the UK's Trades Union Congress, decided that it was about time the health of its members was put above the profits of manufacturers. It introduced a standard labelling for products which quickly became an international benchmark for monitors.

Given these new breeds of injury and illness in today's increasingly litigious culture, you would have thought that every monitor manufacturer would strive to have compliant models. This isn't the case – only 50 percent of computer monitors wear a TCO badge. In the majority of cases, this is down to cost as there is no legal requirement to buy a more expensive TCO monitor. And unless we are fully informed of the significance of TCO compliance, most of us are unlikely to have it at the top of our agendas.

Germany introduced the first environmental labelling scheme, Blue Angel (www.blauer-engel.de), as far back as 1978 for products as diverse as kitchen rolls and carrier bags. Anyone who has lived in Germany will know that recycling bottles, batteries, oil and paper has been a part of German culture for almost 20 years. Today, the Blue Angel award covers over 4,000 products, of which 85 percent are produced domestically.

It took the rest of the world until 1994 to establish an international not-for-profit organisation to standardise environmental labelling worldwide. The GEN (Global Ecolabelling Network, www.gen.gr.jp) has 26 members based on every continent but still hasn't produced a uniform high-visibility standard for the whole world to embrace.

What's WEEE all about?

The WEEE (Waste Electrical and Electronic Equipment) Directive aims to reduce waste and increase the lifecycle of equipment. It requires manufacturers, distributors and resellers to take responsibility for financing the collection, treatment, recovery and disposal of electronic and electrical goods from users other than private householders. This applies to products sold to them after 13 August 05. For products sold before August 05, the end user may be required to contribute towards the recycling costs.

Electric avenue

Electronic equipment produces electric and magnetic fields that can cause interference from one product to another. With more and more electronic devices in our working and home environments, the need to reduce these emissions is increasing. The true effect of this continual radiation exposure has been hotly debated for years, but until it is proven that these emissions are harmless the sensible approach is to reduce the risk now.

TCO compliance isn't compulsory but, if you're purchasing one of the following devices, search for a product that comes with the TCO badge: CRT and TFT displays; mobile phones; laptop computers; keyboards; mice; laser printers; and, coming soon, office furniture.

Seeking approval

In the public sector, health and safety considerations promoted by TCO awareness have a much higher profile than in the general business sector. Compared to Germany's Blue Angel, the family of TCO-approved equipment remains relatively small, covering computers, laptops, keyboards, mice and mobile phones.

For these products the TCO standards were drawn up by scientists and made available to manufacturers. However, in the case of the latest addition to the TCO fold, it was office equipment manufacturer Brother (www.brother.co.uk) that approached TCO. An error on a government tender specified that the laser printer must be TCO-approved. Such a product didn't then exist but a forward-thinking salesman predicted a massive opportunity if one could be produced and the seed within Brother was sown.

For Brother, cutting down ozone emissions was only the start of it. Just like the photocopier, many workgroup laser printers emit that musty can't-quite-put-my-finger-on-it smell when they are working at capacity,

However, Brother soon discovered that embracing TCO had far-reaching implications beyond the end-users' office experience. The four Es – that is, emissions, energy, ecology, and ergonomics – are crucial for the awarding of every TCO badge and are rigorously imposed.

• Emissions Minimal electrical and magnetic emissions are a must.
• Energy Specifying a product with the lowest possible power consumption, including a built-in powersave when not in use, reduces energy and prolongs the life expectancy of the product.
• Ecology Requirements cover two areas. First, all the printer's components must be labelled for recycling purposes. Second, the manufacturing process itself must be free of ozone depletors and not include any harmful substances where an alternative is available.
• Ergonomics And finally, the highest ergonomic specifications ensure that products minimise physical and physiological stress for the user.

Think of the planet

Over the past two years, Brother has been researching and developing its first environmental-labelled printer. A brand-new production line was scrutinised throughout its construction to ensure all the TCO manufacturing targets were achieved. Brother may be the first printer manufacturer to take the initiative over emissions, but it doesn't have the largest slice of the network printer market.

If TCO-compliant laser printing is to improve the office environment, it will either have to make serious inroads into a market currently dominated by HP or the TCO cause will have to be taken up by other interested parties.

For this to occur we need to start looking at the bigger picture. On the face of it Brother has produced a fully featured 28ppm (pages per minute) laser printer capable of outputting 1,200x1,200dpi (dots per inch) documents. It's only natural that the HL-7050's expensive price tag looms first in our minds – even though the initial outlay is minor compared to the cost of running a printer and keeping it fed with toner and paper.

In comparison to the HP LaserJet 4200, the Brother HL-7050 is only marginally more expensive. However, A4 pages cost less than 0.8p each to print, meaning the Brother's running costs are substantially less than the HP's.

But what value do you put on halved printer emissions, lower energy costs, quieter operation and recyclability? Benefits such as having a printer that makes less of a racket as it hurtles through an urgent job are clearly desirable, but it's easy to see why they become sidelined by other, more immediate criteria.

Green badge of courage?

So has Brother invested in a pup or come up with a revolutionary approach to workgroup printer design? As legislation stands there is no obligation for the public sector or corporate businesses to insist on TCO-approved printers. If they did then Brother is currently the only manufacturer in the world that can supply.

Remember Germany's Blue Angel? HP, Canon, Epson, Brother, Lexmark and Kyocera all have laser printers that have been awarded the Blue Angel badge. In essence, the criteria are very similar to those necessary for TCO accreditation, but Blue Angel has scant visibility outside Germany. And if you delve down into the websites of all these manufacturers, you will find enough reports and company directives on environmental policy to fill a landfill site of their own.

While TCO may be a new concept when applied to network printers, it has the advantage over Blue Angel of being a widely recognised international standard for other IT equipment, notably monitors.

Clearly Brother's agenda wasn't just to produce a printer that's better for the environment; it wants a greater slice of the workgroup printer market. But if the upshot is that the public sector begins to recognise the importance of TCO-badged equipment then other makers are likely to follow Brother's lead. Epson, HP, Lexmark and Kyocera were unwilling to go on record about TCO at this stage, but acknowledge it's something they're working on.

And with legislation such as WEEE keeping environmental issues related to IT equipment in the news, it's the ideal time for employees to start making a noise about cleaner, greener, quieter printers. ■