

WEEE: THE FACTS

As abandoned electrical items mount up in the UK, Lynley Dram asks if the EU's WEEE Directive can tackle the problem – and how it will affect you

You may never have heard of WEEE before, but it affects every one of us, and we are now being asked to do something about it – thanks to new regulations imposed by the European Union (EU). It is one initiative even the eurosceptics should agree with. The EU has reacted with a timely solution to a growing problem that will have serious environmental consequences if left unchecked. It plans to get electrical waste recycled instead of thrown away. That's the theory, at least. But in practice, things aren't quite so straightforward.

Here, we consider the real implications of the WEEE Directive, in order to help you understand what will happen to discarded electrical equipment in future, and who is likely to foot the bill.

HERE WEEE GO

Two million tonnes of electrical waste is thrown away in the UK every year, according to the Environment Agency (EA). That's a lot of computers, TVs, fridges and mobile phones heading for local landfills. All these items

contain toxic chemicals. Old computer equipment leaches poisonous materials such as lead, mercury and cadmium into the ground, as well as toxic chemicals such as brominated flame retardants and the hard-to-destroy polychlorinated biphenyls.

The increasingly disposable nature of electronic items is a cause for concern. In July, a directive came into force governing the way we deal with electronic and electrical items. The Waste Electrical and Electronic Equipment (WEEE) Directive covers any product that uses electricity for its main function. So a gas cooker that uses electricity only for a small clock isn't covered, because its main function is cooking and for that it doesn't use electricity.

Products covered by the directive must carry a WEEE symbol. This symbol is a drawing of a wheelie-bin covered over by a cross, shown in the image opposite. You'll also find it on the packaging, instructions or warranty for all new electrical and electronic equipment. It may also be on a few products you've already owned for some time, as some manufacturers started using the symbol early.

The WEEE Directive actually came into force in most other European countries some years ago, yet Britain has been slow to enforce it. Indeed, the EU had to threaten legal action against the UK (and a few other countries such as Malta, France, Greece and Italy) before the government finally swung into action.

TAKING RESPONSIBILITY

The WEEE Directive aims for electrical goods to be reused and recycled, as far as possible, rather than dumped. The directive places the responsibility for recycling on the manufacturers of the equipment.

As the consumer, you are not required to do anything. You could dump most electrical products right in your bin – that is, as long as the product isn't hazardous waste. An old CRT monitor, for example, is classed as hazardous waste. You do have a 'duty of care' obligation to make sure it is disposed of appropriately. An LCD monitor is not classed as hazardous waste, as the toxic materials used in these types of displays aren't present in large enough volumes to constitute a hazard. That would change if you



The WEEE man: the total electrical waste the average UK citizen throws away

dumped large numbers of LCDs, though. However, there's no legal reason why you couldn't throw one or two in your bin.

This would not be responsible behaviour, though, and Brussels is certainly hoping you won't do that. Simply dumping electrical waste makes it more difficult (and expensive) for the council to sort out the recyclables from your rubbish, if they can at all. This is bad news for the environment, as the amount of WEEE an individual generates increases every year. To see how much the average UK citizen gets through in a lifetime, you should read the 'Weight of responsibility' box on page 144.

Originally, the directive was also going to place some of the burden on business users as well as the manufacturers. Business users would have been required to monitor their waste electrical and electronic items. However, it was decided that this would be unmanageable, so in fact there are no special requirements placed on business users regarding the dumping of WEEE.

MEET THE PRODUCERS

As we have established, the burden for funding the collection and recycling of WEEE lies with the manufacturers of the electric equipment you use. The directive refers to the manufacturer as

At a glance How WEEE Directive is enforced

How can you be sure an electronic product is being recycled? Sadly, there is no way of tracking items individually from factory to rubbish tip, particularly if users chuck them in the bin. However, the trail of evidence monitored by the Environment Agency ensures that everyone does their fair share of recycling. Here's a summary of how it works:

- Producers of electrical/electronic equipment must join producer compliance scheme (PCS).
- New products must carry the WEEE symbol.
- Producers are responsible for the funding of WEEE collection and treatment.
- The funding of WEEE collection and treatment from B2B users, if buying like

for like or if the product went on the market after 13th August 2005, falls on producers.

- The Environment Agency works out the market share for a producer based on the reported weight of products sold. This information comes from its PCS.
- The share of the cost of collection and treatment of WEEE is allocated to manufacturers according to their market share, regardless of who made the products.
- The PCS arranges for the WEEE to be taken to an authorised treatment facility, which reports on what happens to each part of the product. This report is procured by the PCS and used as evidence that the producer has discharged its obligation.

the producer. 'Producer', however, is a broad term. You could find your business classed as a producer if you send out promotional electronic gifts stamped with your company name. A retailer or supermarket that sells own-brand products, such as laptops, is also considered a producer.

HP's environmental takeback compliance manager Kirstie McIntyre explained their position: "HP is definitely a producer. Everything we make is in the scope of the WEEE Directive. We are also a retailer, through our online HP store. As a producer, we've had to mark products with the WEEE wheelie-bin symbol. That wasn't a problem in the UK, as we've been doing it in Europe for two years."

THE APPLIANCE OF COMPLIANCE

The EA decides the level of responsibility that a producer has for recycling and recovering WEEE. It does this based on the amount of product the producer has placed on the market. As part of the WEEE Directive, the producer is required to join a producer compliance scheme (PCS). These schemes are organisations that are approved by the EA. For example, the PCS to which HP belongs is the European Recycling Platform (ERP, www.erp-recycling.org). ERP is a compliance scheme founded in 2002 by a number of big-brand electronics companies, including HP.

According to the Industry Council for Electronic Equipment Recycling (ICER), there are 3,200 producers registered with a PCS. But many manufacturers have not yet registered. The EA has started a cold-calling programme to make these producers aware of their obligation to join a compliance scheme. It is the compliance scheme that handles the audit trail that ensures producers follow the directive.

Electric and electronic products fall into two categories. There are the products bought by individuals for household use, also known as business-to-consumer (B2C). Then there are those products bought by non-household users, usually referred to as business-to-business (B2B). The producer's obligations will differ depending on whether their product is B2C or B2B.

Producers of B2C WEEE are entirely responsible for its treatment and collection. Producers of B2B WEEE also have to foot the bill for collection and treatment, but only if the products were put on sale after 13th August 2005 or if the business user is buying like for

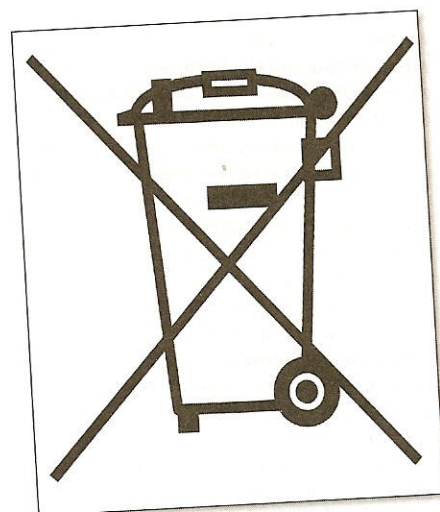
like. If the business user isn't buying like for like and the products are 'historic' WEEE (that is, put on the market before 13th August 2005), the business user has to arrange and pay for the collection of the discarded items, as they did before the directive came into force.

Through its compliance scheme, the producer reports to the EA exactly how much product has been sold, in weight. A fictional IT company may have sold 20 tonnes of computer equipment in the year, for example. The EA then takes all the other reports it has received for each category and adds it up to get the total weight. There are 10 categories in total, and there are 37 compliance schemes in operation.

Keeping track of the producer's market share is important. Producers pay for the treatment of the percentage of WEEE that relates to their market share within a particular category. If 100 tonnes of product has been sold in the IT category, our fictional IT company is said to have a 20 per cent market share. So our company would have to pay for the recycling or recovery of 20 per cent of IT returned, regardless of who the original manufacturer was.

FOLLOWING THE AUDIT TRAIL

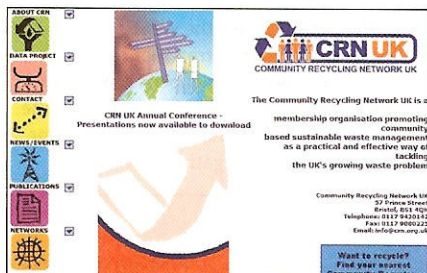
To prove products are being recycled, the audit trail also needs to be signed by the authorised treatment facility (ATF) and the company that ends up using the recycled materials.



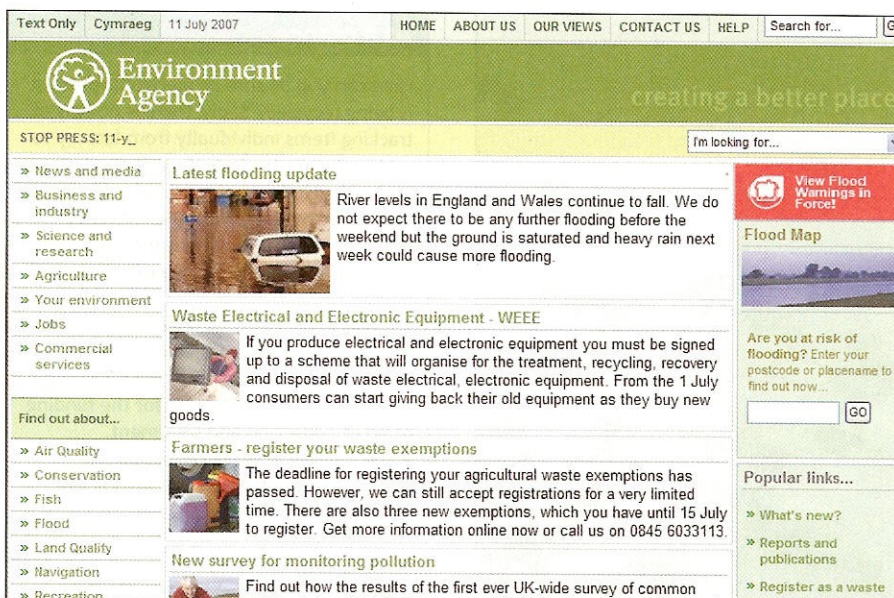
▲ All electronic products that were made after 1st April 2007 must carry this symbol



▲ You can donate working PCs to charity



▲ CRN UK promotes community-based recycling



▲ The Environment Agency (EA) is responsible for enforcing the WEEE Directive in England and Wales

Local authorities are obliged to provide collection points for householders to dispose of their waste electrical products, free of charge. Councils are also required to collect WEEE if asked, but they may charge for this service.

The collection point, once known simply as 'the rubbish tip', has undergone a few name changes. First, local authorities started referring to these points as civic amenity sites. Then they became household waste recycling centres, or HWRCs. Now they may be referred to as designated collection facilities, or DCFs.

For example, Southwark Council's main waste collection site is its Manor Place depot. This site is a registered DCF. Five categories of WEEE are stored separately on the site. These categories are large household appliances, appliances containing refrigerants, display equipment containing cathode ray tubes, gas discharge lamps (fluorescent tubes), and all other mixed WEEE.

Your computer's monitor will go in one container, while the PC system itself goes in another. The categories reflect the different ways items might be recycled. So a washing machine goes through a mainly metal-recycling process, while a printer is directed to a recycling plant that deals in plastics. The compliance scheme, such as ERP or Electrolink, covers the cost of collecting the WEEE from the local authority and delivering it to the ATF. The compliance scheme proves, on its member's behalf, that the waste has been recycled to the correct standard. Sixty-five per cent of the weight of a container has to be recycled – that is, made into new products. A further 10 per cent could be recovered, so for example it might be incinerated for energy recovery. The ultimate aim is to ensure that very little goes to landfill.

Barry Van Danzig, CEO of the compliance scheme Electrolink, explained how the audit trail works. "A vehicle takes the container from

the DCF to an ATF, where the [WEEE] is recycled in a controlled way. The ATF reports what has happened to all the bits in the container. When the process is complete, evidence is produced by the ATF, and this evidence is procured by the PCS. The PCS submits that evidence to the government to meet its obligation."

As we have established, the EA decides the amount of WEEE a producer must pay for. However, a producer's PCS may not meet this target, or may end up recycling more than it needs to. To meet its shortfall, the producer can buy evidence from the settlement centre. If more than its share of WEEE has been treated, the producer can sell the excess. So if company A's PCS treats 10 tonnes more WEEE than it is obligated to, and company B's treats 10 tonnes less, company B can buy that excess from A through the settlement centre.

Movement of waste from the DCF to the treatment facility is paid for by the PCS operator. Either the PCS collects the waste, or the PCS funds the current method of collection used by the council. There is ambiguity over how money from the resulting scrap will be allocated. Until the new directive came into force, this money went to those running the refuse site. If the PCS takes the scrap, however, the money made from that will go back to the producer. This leaves the refuse site out of pocket, and requires the council to fill the gap, or it may result in the site being closed to the PCS. Either way, council tax payers may end up footing the bill.

This is a situation that needs to be resolved. As Van Danzig was keen to point out, "Existing contracts for collection and recycling need to be recognised in framing the new arrangements for WEEE. Compliance schemes must ensure that their members pay only for the collection and recycling of obligated material, and that costs are controlled and predictable."

TAKEBACK SCHEMES

Reuse is also an aim of the WEEE Directive. This doesn't happen with products taken to refuse sites. Products are often too old, have been badly damaged in transport or have been exposed to rain and snow. Some manufacturers are running schemes of their own, however.

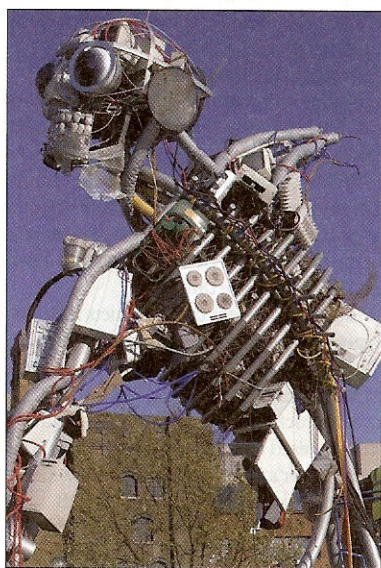
Weight of responsibility The WEEE man and the part we play

The WEEE man, currently installed at the Eden Project in Cornwall, was designed by Paul Bonomini. The sculpture is made from scrap such as old MP3 players and disused kettles and it weighs three tonnes, which is the amount of waste electric and electronic equipment the average UK citizen throws away in a lifetime. You can visit www.weeman.org for details.

Waste is measured in weight rather than the number of items chucked away. So a whopping 69 per cent of WEEE is made up of large household appliances such as fridges and washing machines. IT waste makes up only seven per cent of the total figure, though you'll probably go through more printers than you will dishwashers.

In an average lifetime, it is estimated that each of us will throw away 35 mobile phones, 23 keyboards and mice, 15 printers, seven monitors and eight PC systems.

However, while our electronic waste is growing by four per cent a year at the moment, the amount of electrical products we buy is growing by 11 per cent. So at some point soon, our WEEE will increase considerably.



▲ The WEEE man represents the total electric and electronic waste that the average UK citizen throws away

WEEE small words Glossary of terms

ATF Authorised treatment facility. Approved reprocessing facilities that provide evidence of treatment and recovery. These sites are licensed by the Environment Agency.

DCF Designated collection facility. Civic amenity sites put forward by councils for WEEE collection. DCF sites receive funding from the DTS. PCS operators are responsible for clearing WEEE from DCF sites.

DTS Distributor takeback scheme. Administered by Valpak (www.valpak.co.uk), this is an alternative to taking back WEEE products in store. Members of the DTS provide details of collection facilities to those buying like-for-like products. A contribution of £10 million from the DTS will go to local authorities to upgrade DCF sites.

EA Environment Agency, a public body for the protection and improvement of the environment in England and Wales. Although the DTI drew up the guidelines for WEEE, it is

the Environment Agency that will be responsible for enforcing it.

EEE Electrical and electronic equipment. The acronym refers specifically to new equipment put on the market after 13th August 2005. As of the 1st April this year, all producers of EEE were required to mark their products with the wheelie-bin symbol.

Historic WEEE Waste electronic and electric equipment that was sold before 13th August 2005. A producer's obligations to the WEEE Directive will vary, depending on whether the equipment that is being disposed of by a particular business was sold before or after that date.

ICER Industry Council for Electronic Equipment Recycling, an association focusing on WEEE.

PCS Producer compliance schemes. Private-sector organisations that help producers meet their WEEE obligations. Schemes are licensed by the Environment Agency.

HP has run takeback schemes where people are encouraged to bring in their old kit for refurbishment. A recent series of events resulted in 5.5 tonnes of old kit being brought in, of which 45 per cent was refurbished for children's charities. Dell has a scheme for individual users and businesses (www.euro.dell.com/recycling), whereby it collects functioning computers when new ones are delivered. However, it doesn't refurbish PCs for reuse. It works with recycling partners, who may reuse some functioning parts of a system but also remove materials such as copper and plastic, for use in making new products or for environmentally friendly disposal.

To make sure your computer is refurbished for reuse, particularly if it is still in good working order, try donating it to ComputerAid (www.computeraid.org). This charity specialises in refurbishing IT equipment to a professional standard for use in developing countries and it recycles all PCs that aren't re-used, so zero per cent of donated machines will go to landfill.

IMPLEMENTATION

The WEEE Directive has been implemented in the UK to fit in with existing methods of practice. Biffa Waste Services is one of the UK's largest waste management companies. Biffa also runs a PCS, which means that, for manufacturers who use its scheme, it manages the paperwork and collects WEEE from businesses and local authority sites. It also operates some local authority sites. Phil Conran, general manager of recycling development at Biffa Waste Services, described this as "part of a general trend towards more recycling that has been happening for some time. Only a very small proportion of the waste stream is WEEE."

Even so, there's a substantial cost attached to the implementation of this directive. In 2006, the government estimated that this could be between £111 million and £133 million for 2007, possibly rising to between £331 million and £434 million by 2017.

Clearly, producers won't be paying for collection and treatment entirely out of their own pockets. The costs will eventually be passed on to the consumer through higher prices. According to analyst firm Gartner, meeting the

requirements of the new directive will add up to £33 to the price of a new computer.

RETURNS POLICY

Retailers have to provide some method of takeback for old electrical products when you buy a new one – that is, when you're replacing like with like. A retailer could be a high street shop, a mail order company or an online store. So if you buy a new inkjet printer, the store would have to take back your old dot-matrix printer no matter who made it or where you bought it. They can either do this in store, or opt out and join the distributor takeback scheme (DTS). This means they don't have to take back the products in store, but can direct customers to a DCF. Money from the DTS goes to local authorities to help them handle WEEE. The containers used by DCFs to collect WEEE are provided by compliance schemes but there are other costs, such as erecting appropriate signs, that need to be covered by the council. For this reason, £10 million from the DTS will be given to local authorities to enhance DCF sites.

If the retailers haven't opted out, they must accept the like-for-like item free of charge in store. Some companies offer to take large items away when the new one is delivered. They may do this for free, which is a great selling point, and one that Dixons is using in its current advertising campaign; it has chosen to do in-store collections rather than join the DTS. However, the retailer can charge a fee for collection. If you don't want to pay the fee, you can take it back or take it to a DCF yourself. The only requirement placed on retailers is that these collection points must be accessible and in appropriate places.

There is no obligation on the retailer you bought an item from to take it back once you've finished with it. If you're not making a like-for-like purchase, your options are those already outlined: take it to your local refuse site, donate it to a refurbishment charity or, if it was sold after 13th August 2005, have the manufacturer take it back. The EA recommends checking out the manufacturer's website, as many companies provide recovery and recycling information and make special arrangements for collecting WEEE regardless of when it was sold. **E**

Waste material Useful resources

Community Recycling Network UK

www.crn.org.uk

National organisation for community-based, not-for-profit and cooperative waste management groups that work in reduction, re-use and recycling.

ComputerAid International

www.computeraid.org

Provides professionally refurbished computers for education, health and not-for-profit organisations in developing countries.

Department for Business, Enterprise and Regulatory Reform

www.berr.gov.uk

Replaced Department for Trade and Industry, which drew up UK WEEE directive. For details on WEEE, visit www.dti.gov.uk/innovation/sustainability/weee/page30269.html.

Environment Agency

www.environment-agency.gov.uk

Government body responsible for enforcing the WEEE directive. Read the regulations at <http://publications.environment-agency.gov.uk/pdf/GEHO0507BMOM-e-e.pdf>.

EnviroWise

www.envirowise.gov.uk

Government-sponsored programme of free, confidential advice to UK businesses.

EurActiv

www.euractiv.com

Online magazine providing independent coverage of EU policy.

Europa

http://ec.europa.eu/index_en.htm

The EU's own online magazine.

London CRN

www.lcrn.org.uk

London-based community recycling network. Registered charity that supports organisations and local authorities involved in recycling.

NetRegs

www.netregs.gov.uk

Partnership between all UK environmental regulators promising free environmental guidance for small-to-medium-sized businesses. Details specific to WEEE are at www.netregs.gov.uk/netregs/legislation/380525/473094/?lang=_e.

Recycle More

www.recycle-more.co.uk

Offers help and advice on all aspects of recycling at home and at work.

Valpak

www.valpak.co.uk

Providers of the distributor takeback scheme. To check your WEEE obligation, go to www.valpak.co.uk/nav/page1554.aspx.

Waste carriers

www.wastedirectory.org.uk

www2.environment-agency.gov.uk/epr/search.asp?type=register.