LONDONASSEMBLY

Protecting the City Environment

EU Directives affecting waste electrical and electronic equipment

Report of the Environment Committee
February 2004

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Greater London Authority
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Chair's Foreword

London is a dynamic city with a population of more than 7 million. With such a large population and so many businesses massive amounts of electrical and electronic goods are discarded every day.

The new European Directive on this equipment, which comes into force next year, means that local authorities, producers and retailers need to act immediately. They can reduce the numbers of dumped goods like microwaves, hairdryers, fridges and computers plaguing our streets. Current plans mean that shops will rely on customers bringing back their appliances or transporting them to special sites.

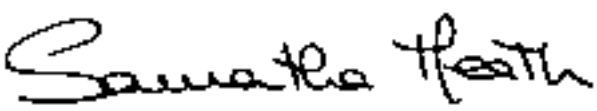
This is unrealistic – especially since nearly half of London's households do not own a car. Expecting us to haul old microwaves with us when we are shopping for a new one, or cart our vacuum cleaners to a recycling centre, which could be miles away, is pie in the sky.

But where we have a problem we also have a huge opportunity. No one wants someone's old fridge lying at the side of their road. But there is also a market to exploit here. Refurbishing and recycling these goods could mean the creation of new jobs in recycling and less waste dumped in overburdened landfill sites. To take advantage we need real investment from producers and retailers now. London Remade has a major role to play here in bringing together the people who can make this happen.

Our report gets to grips with these issues. It shows how we can avoid the pitfalls of new regulations and use them to boost employment while protecting our environment. We can turn the nuisance of unwanted goods into a real opportunity.

I am grateful to Anna Malos, Shirley Rodrigues and our consultant Bruce Bratley and all those who provided us with information for our report.

Samantha Heath, 20 February 2004



Environment Committee Membership & Terms of Reference

At the meeting of the Assembly on 7 May 2003, the membership and terms of reference of the Environment Committee was agreed as the following:

Samantha Heath (Chair)	Labour
Roger Evans (Deputy Chair)	Conservative
Brian Coleman	Conservative
Darren Johnson	Green
Diana Johnson	Labour
Graham Tope	Liberal Democrat

The terms of reference of the committee are as follows:

1. To examine and report from time to time on -
   - the strategies, policies and actions of the Mayor and the Functional Bodies
   - matters of importance to Greater London
2. To examine and report to the Assembly from time to time on the Mayor's Air Quality, Biodiversity, Energy, Noise and Waste Strategies, in particular their implementation and revision.
3. To consider environmental matters on request from another standing committee and report its opinion to that standing committee.
4. To take into account in its deliberations the cross cutting themes of: the health of persons in Greater London; and the promotion of opportunity.
5. To respond on behalf of the Assembly to consultations and similar processes when within its terms of reference.

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Executive Summary

London generates a substantial amount of waste electrical and electronic equipment. The way this is collected, stored and processed all needs to change in order to meet new EU legislation. The challenge for the private and public sectors in London is to meet the requirement of the Directives affecting the disposal of electrical and electronic equipment, and use this as an opportunity to improve significantly the way in which this waste is handled. Here is the chance to reduce landfill, improve the use of resources and create new jobs and training.

The Committee was interested in how to encourage both supply of suitable waste and demand for products and what could hinder these. We feel there needs to be a coherent strategy for London to develop both these factors along with the development and refurbishment of facilities to meet new demands.

UK consultation on the EU Waste Electrical and Electronic Equipment Directive is still in train and many options for implementation are still open. London government, locally and regionally, must contribute to the debate on behalf of Londoners. In the Committee's view the funding of good collection services, encouragement of reuse and support for the community sector to develop capacity are the key issues for this work.

There is a risk that the producers and retailer compliance schemes currently proposed by the UK government could sideline smaller businesses and particularly the community sector which should have a key role in reuse and recycling because of the additional social benefits it brings. The detail of these schemes must prevent disadvantage to the community sector.

Despite producer and retailer responsibility covering most aspects, there are situations where there will be a timelag and/or shortfall in funding. Funds need to be available for the support of household collections e.g. household or kerbside collections to prevent dumping.

Local authorities will still have a key role in waste electrical goods, particularly if they want to meet wider targets on waste. They should:

- collect and handle this waste to facilitate reuse and recycling through their existing facilities and the creation of new ones
- deal with and try to prevent dumped waste
- ensure that information is available to residents and businesses on waste disposal
- demonstrate good practice in disposal of equipment from their own operations
- use procurement and grant giving to encourage use of recycled and refurbished goods where appropriate

Other roles:

- ALG: lobby and research on behalf of boroughs; provide information to boroughs
- Mayor of London: lobby, use his waste strategy to support compliance and use of wider opportunities; encourage London Remade and Recycle for London to address waste electrical and electronic equipment.
- LDA: support businesses to develop and expand in reuse and recycling through London Remade and other interventions, provide information to businesses to ensure they can meet their obligations

A final, slightly distinct, issue is that cathode-ray tubes (CRTs) will be a major issue from this year because they contain hazardous chemicals banned from landfill disposal, and markets for products from recycling their components are currently very limited.

1 Introduction

Background

1.1 This report has developed out of the London Assembly Environment Committee's scrutiny on Protecting the City Environment, which considered levels of dumping and illegal waste disposal that blight many people's lives. A factor that may increase dumping is the changes in European legislation which affect the processing and disposal of electrical and electronic waste. We are keen to establish the implications of these changes, including if any extra costs would fall on Londoners.

1.2 This report concentrates on the EU Waste Electrical and Electronic Equipment (WEEE) Directive because the implementation of this is still under consultation. We also look at issues from two further directives which will affect disposal of this kind of waste. Other implications for dumping of EU legislation on waste will be considered in the Committee's main report on the Protecting the City Environment scrutiny.

1.3 The Committee welcomes these new Directives because they aim to prevent hazardous materials being disposed of inappropriately, and they aim to increase levels of reuse and recycling. In our view, for Londoners to benefit, the UK government should not only meet the statutory requirements of the Directives, but also make the most of the opportunity to change behaviour and improve waste management.

1.4 In order to examine this issue, the Committee appointed consultants[1], in partnership with the Association of London Government, and held an evidentiary hearing on the EU WEEE directive and illegal dumping on 20 November 2003.

1.5 The consultants were asked to:

- Provide estimates of the amounts and cost for London's boroughs.
- Estimate changes in activity needed in the public and private sectors.
- Identify the key actions for London's Boroughs.
- Identify opportunities for investment.

1.6 They looked at issues for collection, distribution, reprocessing, monitoring and storage in order to improve the supply of goods for reuse and recycling. How to improve collection systems is discussed in Chapter 4. Chapter 5 looks at other supply issues in terms of economic benefit and increasing refurbishment and recycling. However, high levels of reuse and recycling are not solely dependant on supply so this chapter also considers demand for end products, whether this be for reconditioned fridges, or products using recyclates (the materials produced from recycling).

1.7 Compliance with UK legislation arising from the Directives will be a major issue for London and work is needed to develop a coherent strategy to deal with this. In addition, there is still a lack of precise, accurate data, separated by region.

1.8 We aim, through this report, to support local authorities and other key bodies in their preparations for the impact of these legislative changes. We must prevent fiascos such as the fridge mountain which arose after a comparable EU Directive in 2002.

[1] London Remade. Further information from their report is given in Annex D.

EU Directives affecting waste

1.9 The three EU Directives which we consider in this report, which will affect the disposal of electrical and electronic waste, are:

- Landfill
- Waste Electrical and Electronic Equipment
- Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment

1.10 These Directives are based on the idea that producers[2] should be responsible for the cost of disposal of their product once it becomes waste and that disposal costs should be included in the cost to the consumer. Producers must provide information on how materials used can be recycled and will be obliged to cover the costs of processing a set proportion of their products by reuse or recycling.

1.11 The Landfill Directive[3] aims to reduce danger to human health and the environment by tightening requirements on how hazardous waste is disposed of in landfill sites. This will affect the methods and costs of disposal of hazardous waste. The directive requires pre-treatment and separate disposal of the categories of hazardous, non-hazardous and inert wastes as defined by the EU. There will be a complete ban of certain waste types being disposed of in landfill by 16 July 2004. The wider impacts of this will be considered in our main Protecting the City Environment report.

1.12 For the purposes of this report the Committee has only considered how the Landfill Directive will affect the disposal of electrical and electronic equipment. The impact is most important for cathode ray tubes (CRTs) which are partly made of glass that contains lead, although the handling of some other materials will also be affected. Cathode ray tubes are commonly used in TV sets and computer monitors.

1.13 The Waste Electrical and Electronic Equipment (WEEE) Directive[4] aims to reduce the environmental impact of electrical and electronic equipment throughout its life. It encourages reuse and recycling which will reduce the amount of waste being buried or burnt; and influences the materials that are used in production of the goods and the techniques for reprocessing them. This directive introduces targets for separate collection, recovery[5] and reprocessing through recycling. UK legislation for implementation must be in place by 13 August 2004 and the requirements on producers start in Spring 2005. UK government's original estimates for the cost of compliance with this directive are £150m - £320m[6].

1.14 The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive[7] aims to restrict the use of hazardous substances in these goods in order to protect human health and to contribute to their appropriate recovery and disposal. It will have the least immediate impact for London households, businesses and waste handlers because substance bans will only come into force from 1 January 2007. When implemented, recycling costs will be reduced because fewer materials in relevant goods will require special handling.

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[2] Producer also includes the importer to the UK if the producer has no UK office.
[3] Landfill Directive 1999/31/EC, for further details see Annex C
[4] Waste Electrical and Electronic Equipment Directive 2002/96/EC, for further details see Annex C
[5] Recovery includes recycling, composting and incineration plants which produce energy from burning.
[6] Study undertaken for the Department of Trade and Industry by PriceWaterhouseCoopers February 2002. It updates an earlier study by Ecobalance UK/Dames and Moore August 1999
[7] Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive 2002/95/EC, for further details see Annex C

2 Encouraging reuse and recycling

2.1 A key barrier to encouraging reuse and recycling is the behaviour of those getting rid of unwanted equipment. Most people do not think about disposing of unwanted electrical and electronic goods in a way that allows them to be reused or recycled. Only one in five households in London regularly recycles anything other than paper and glass[8]. For this to change, the public and businesses need easy-to-use systems for collection of suitable goods, and clear information about the options.

2.2 Research for Resource Recovery Forum (RRF) showed that 77% of Londoners felt that 'recycling would only work if people are provided with a convenient home collection service' with kerbside collection the favoured incentive for recycling. Whilst this was on recycling from general waste, the main findings are likely to apply to electrical goods. Research participants felt more information was also important, connected with consistent services, so that people could understand how to recycle:

> It needs to be something that is done throughout the country, every borough the same and then you could … announce[d] it to everybody, and everybody had to do the same thing and you [all] know'[9]

2.3 There are good initiatives already in place to encourage people to dispose of electrical goods so that they can be recovered, especially for large white goods and computers. These include the promotion of relevant organisations through London-wide websites[10] and marketing by social enterprise projects. We are also interested in London Remade's ideas on financing a national reuse website and marketing teams for refurbished goods via implementation of the Directive.

2.4 Refurbishment to allow reuse is preferable to recycling because it tends to require less energy and fewer resources to refurbish a product than to reprocess its components. In addition, a typical electrical appliance weighing 70kgs requires 1162 kgs of material to produce so extending the life of an appliance reduces consumption of primary materials. Refurbished goods also have a higher resale value. For example, refurbished washing machines have a value of £1500 per tonne whereas the scrap value for the separated materials is £65 per tonne.[11]

2.5 Refurbishment through the community sector also has additional benefits as outlined by Bruce Bratley of London Remade[12].

> It is obviously an excellent activity as it provides products for low-cost housing, etc, and provides training, and jobs for the long-term unemployed.

2.6 The key issue ensuring that items can be reused is that they need to be in good condition when they reach the processing organisation. This is dependant on how goods are transported and stored rather than the behaviour of the householder or business discarding them.

2.7 In the Committee's view, it is unfortunate that the Directive has no specific targets for refurbishment, although it states this as the preferable route for handling waste. We do welcome UK Government plans to exclude equipment suitable for reuse from the recovery targets in order to prevent them being recycled instead. However we consider that this still does not go far enough to encourage reuse.

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[8] Household Waste Behaviour in London, p vii Resource Recovery Forum September 2003
[9] Household Waste Behaviour in London, p 61 op cit
[10] www.recycleforlondon.com and www.capitalwastefacts.com
[11] Colin Crook, Renew Trust. Written evidence submitted to Committee.
[12] Oral evidence, 20 November 2003.

2.8 The Government has decided to rely on voluntary measures by producers in order to meet its obligation to encourage better design to facilitate reuse and recycling. The Committee believes voluntary measures should be monitored to ensure that this approach is working. The implementation of the RoHS Directive would be a suitable time to review this decision as the RoHS Directive will introduce compulsory changes in product design.

3 Scale of the issue

Amount of electrical and electronic waste

3.1 London is expected to generate at least 170,000 tonnes of electrical and electronic waste each year from around 30 million items[13]. This is the enough equipment to fill St Paul's Cathedral. Annex D gives the consultants' estimates broken down by category of equipment (e.g. large household) and by borough, based on their population. The percentage of waste expected to be handled by the boroughs is also given for each category.

3.2 Local authority waste facilities currently handle an estimated 20 – 90% of the total quantity of waste goods, depending on the category. For example, 75% of large household items are currently estimated to pass through local authority waste facilities or 60,000 tonnes of white goods, but only 20% of IT and telecom equipment. These figures suggest that local authorities across London are handling 1.5 million fridges, freezers and washing machines.

3.3 It is not only the total amount of waste that will affect the amount available for reprocessing, but also the amount discarded in such a way that it can be separated from normal rubbish. Predictions of what will be available, and who will have to handle it, is further complicated because this waste is discarded through different means at present. Waste equipment is discarded through:

- local authority collections and facilities,
- other collectors, particularly those who handle commercial waste
- other means such as 'take-back' to retailers.

3.4 More accurate estimates of amounts of electrical and electronic waste have yet to be calculated for the UK or London. Industry Council for Electronic Equipment Recycling (ICER) is currently researching to provide more detailed information on the likely amounts by category. This research is due to be published by Spring 2004 and will help predict the total amounts of waste produced, the amounts currently being reprocessed in some manner that will become the financial responsibility of producers and the amounts retailers may have to handle through take-back schemes or their equivalent.

3.5 The collection target set in the Directive of 4 kg per head of population by 31 December 2006 should not be a problem for the UK, because figures suggest that this is already met. However, the UK will have to introduce a monitoring system to show that this, and other targets, are achieved. The Directive will also influence the amounts collected because it obliges producers to 'encourage' separate disposal. Hence the amount collected will be sensitive to local and company campaigns

New responsibilities

3.6 The EU WEEE Directive will affect retailers and producers in two distinct ways. Retailers will be obliged to offer their customers a take-back system for unwanted goods when they are being replaced, or to pay for the equivalent service for their clients. They are not obliged to ensure that customers use the service nor are there any targets for collection. Producers, and retailers where they have producer responsibilities, must pay for collection from a centralised point and processing of the goods with targets set. The definition of producers and retailers is given in Annex C.

[13] Based on figures provided by London Remade and extrapolations from ICER's 1998 research.

3.7 The DTI has pledged to local authorities that they will not be liable for any increased costs that arise out of the WEEE directive.[14] Despite these assurances, the Committee examined potential costs to London boroughs and whether these all would be attributable to producers or retailers. This was complicated because exact costs are difficult to establish at this stage due to the absence of accurate data and the details of implementation of the Directive still being under consultation.

Cost of dealing with waste

3.8 Government estimates predict the total costs of dealing with waste electrical and electronic equipment at between £217 million and £455 million per annum depending on a range of scenarios for collection systems. 60 - 70 per cent of these costs relate to treatment and recovery and are expected to fall on producers and 10 - 20 per cent relate to costs for separate collection which will fall on retailers.[15]

3.9 Londoners are likely to pay towards these additional costs in two ways: an extra cost on the price of new goods to pay for producer and retailer responsibilities and through Council tax for any costs that do fall to the boroughs. The European Commission estimates that the WEEE Directive will result in average price increases of 1 per cent for most products, and 2-3 per cent for some products, such as refrigerators and televisions[16].

3.10 The main factors that will affect the costs to the boroughs of the directives are:

- the cost of updating and running their facilities, particularly civic amenity sites[17]
- increased demand on any bulky collection service they offer
- the cost of dealing with waste dumped illegally
- increased cost of landfill due to the Landfill Directive
- the cost reduction due to producer responsibility and diversion from landfill

3.11 The cost savings for the boroughs will come about because producers will be responsible for the costs of disposal of the separately collected goods that are currently the liability of the boroughs. At present, the general public pay for waste management through Council tax payments to the boroughs and businesses pay waste collection companies to remove and dispose of their waste.

3.12 Illegal dumping directly from domestic sources is not expected to increase because of the WEEE Directive. Instead, because householders will have increased options for how to dispose of their waste, and their responsibilities will not change, the incidence of illegal dumping potentially could lessen.

3.13 Illegal dumping from business sources may be affected because disposal of the waste is the firms' responsibility, unless they are replacing like-for-like. Disposal costs will increase where the goods contain materials that have restrictions under the Landfill Directive which may influence who chooses to act illegally. This will also apply to the less legitimate operators who pick-up from house clearances or businesses and may already dump waste illegally rather than pay disposal costs. However, it should be remembered that the majority of businesses dispose of waste.

[14] For example see Consultation on Government implementation proposals DTI, 25 November 2003
[15] p 21 Partial regulatory impact assessment on the WEEE Directive, DTI 28 March 2003
[16] p 2 Partial regulatory impact assessment on the WEEE Directive, DTI 28 March 2003.
[17] Sites owned by the local authority where residents can take waste not accepted through the normal collection service. Small quantities of commercial waste may be accepted. May offer recycling facilities.

3.14 The cost of dealing with dumped waste in London is already substantial and clearing illegally dumped electrical and electronic waste will be the responsibility of the boroughs. However, if it is separated and taken to a centralised collection point it becomes the responsibility of the producer. If it cannot be separated, because of the manner in which it is dumped, then the borough will end up paying disposal costs. Disposal, other than through recycling or reuse, will become more costly because of the requirement for pre-treatment and separate disposal under the Landfill Directive.

3.15 The net cost for boroughs is likely to be positive so long as funding can be found to improve separated collection from householders. However, it is hard to estimate the balance of costs precisely in advance of forthcoming research especially that by ICER on amounts of relevant waste and that on collections by London Remade.

Recommendation 1

When new research becomes available, the Association of London Government, the Mayor and London Remade should re-examine the data available on the amounts and cost implications arising from waste electrical and electronic equipment. This examination should interpret the implications of this data for the boroughs, and for London as a whole, and assess whether further research should be commissioned.

3.16 The Environment Agency will be responsible for ensuring compliance with the EU Directive on Waste Electrical and Electronic equipment[18]. The Agency will need to plan and resource any additional activities that this will create.

Impact of the Landfill Directive on the cost of waste disposal

3.17 Of imminent concern for the boroughs and waste authorities is that hazardous waste cannot go into normal landfill sites from 16 July 2004, because of stricter control under the Landfill Directive. The requirement for pre-treatment and separate disposal means that only a small number of landfill sites will be licensed by July and very few are expected to be local to London. According to the Environment Agency:

> At the moment there are 182 sites in England and Wales where you can dump hazardous waste … that will reduce to 14 sites. If you look at the London area, or the southeast, you are talking a reduction to possibly only one site in the whole of the south east of England where you can dump hazardous waste.[19]

3.18 London Remade has estimated that disposing of electrical and electronic waste, shortly to be banned from landfill, could cost London £4 - 6.5 million per year.[20] As Bruce Bratley states: "waste companies are just going to start saying, that waste has TVs in it, and I am not going to take it, or I am going to charge you extra to take it out and get it disposed of properly". These higher costs are likely to increase illegal disposal and raise clear-up costs for the local authority or the Environment Agency.

3.19 Two measures are needed to tackle this issue. Recycling lead glass needs to become more financially rewarding through work to develop markets for the products as considered in paragraphs 6.26 to 6.29. Waste disposal companies must be encouraged to invest in the necessary changes to their sites and in pre-treatment facilities, discussed in paragraph 6.8.

[18] Department for Trade and Industry in presentation www.dti.gov.uk/sustainability/weee
[19] Craig Woolhouse, Regional Strategic Manager, Environment Agency, Oral evidence 20 November 2003
[20] Based on estimates by the Waste Reduction Action Programme for all UK amounts, calculated for London on the basis of its population and multiplied by an assumed cost of £3-5 per unit.

4 Appropriate collection systems

4.1 Research on recycling rates has shown the importance of easy-to-use collection systems that are easy to find out about and understand, as mentioned above. With electrical and electronic equipment there is the added complication that collection systems must ensure that the goods remain in good condition in order for reuse and refurbishment to be possible. Goods need to be handled carefully and not left outdoors for long periods. Unwanted items left outside premises are unsightly, dangerous, and degrade in condition.

4.2 Improving collection systems for electrical and electronic goods should not only reduce the amount of waste that needs to be buried or burnt, by encouraging reprocessing, but should also reduce illegal dumping by providing an easy alternative.

4.3 The methods of collection for domestic waste goods are:

- direct collection by refurbishment/recycling organisations
- 'take-back' or retailer collection either on delivery of new appliances or where the customer gives used equipment to the retailer when purchasing new goods
- local authority bulky collection services – either existing 'on-demand' services or the establishment of scheduled kerbside collection following the pattern of other kerbside recycling services
- 'bring banks' established by local authority or others – where householders bring goods for disposal as for existing recycling banks
- own transport by householder to civic amenity sites

4.4 It should be remembered that under the UK government proposals for implementation the costs of collection from the householder are not the responsibility of the producer, who instead are responsible for the costs of handling and processing only from a centralised collection point. Retailers are obliged either to provide take-back systems in their shops or to fund an equivalent service and this could be a source of funding towards improved household collection services.

4.5 As businesses produce large amounts of certain categories of these goods, it is not only householders that need to be encouraged to dispose of their unwanted goods appropriately. The right collection systems for businesses are also important.

4.6 Refurbishment of waste from commercial sources is unlikely to be handled through local authorities, particularly from large corporations. Large corporations, and the leasing companies that usually provide their equipment, have traditionally been a major source for refurbishment organisations which typically have direct collection arrangements. It will be important to use such relationships to scale up operations.

4.7 Conversely IT and electrical waste from small businesses is more likely to be disposed of through civic amenity sites. Small businesses do not have established links to refurbishment organisations because of the scale of their disposals and it will not be effective to develop direct links.

Community sector collection

4.8 The community sector is keen to collect used equipment as directly as possible. This should include developing relationships with local authorities and collecting from civic amenity sites as well as from the commercial sources mentioned above. It is not yet clear how this would be able to fit in effectively with the national clearing house supported by producer groups and outlined in current government proposals under

consultation. It will be important that when the details of this concept are finalised that the community sector is not disadvantaged.

Retailer take-back

4.9 Take-back systems through retailers cover both where customers are allowed to return old, unwanted goods to stores and where the retailer picks up the old goods on delivery of the new. Main retailers already operate large item pick up for like-for-like purchases. These are often linked with community sector refurbishment projects such as CREATE or Renew. There are also successful schemes for some small high value items such as mobile phones and printer cartridges.

4.10 There are two major disadvantages to the idea of collection via stores. The first is that people are unlikely to shop with the old equipment they are replacing, particularly because they could not guarantee to find a replacement. In addition, for many goods, retailers will not welcome take-back to stores for several reasons including: space; cost and health and safety. The Committee were told:

> With the rest of the categories of equipment, you are right, first of all, we do not particularly want them in the store. Secondly, I do not think that we really believe that people will bring them back.[21]

> Taking back old leaky appliances just would not fit within storage health and safety issues.[22]

4.11 The Government consultation on the WEEE Directive, issued in November 2003, proposes a retail sector compliance scheme. This would allow retailers to contribute to a national scheme which would fund improvements to collection schemes in lieu of providing a take-back service for their customers. The Committee's view on suggested changes to the scheme is given in paragraphs 4.29 and 4.30, comments on the Government's proposals for the establishment of new facilities in retail centres in 4.17 and on the implications for civic amenity sites in 4.23.

Bulky item collection services

4.12 Bulky item collection services vary between boroughs in terms of how much their residents use the service and whether the borough charges for it. At present in London, all these systems are 'on-demand', i.e. the resident must ring up and arrange a collection time rather than there being pre-arranged collections as for normal rubbish or other goods for recycling. However cities in other countries have regular collection times for bulky goods, which can additionally provide the informal opportunity for reuse by passers-by.

4.13 As discussed previously, kerbside collection services are highly likely to change the behaviour of householders disposing of unwanted goods such that they can be reused or recycled. The cost of improving these services must be weighed against how this may reduce dumping rates and thus the cost and inconvenience such dumping incurs.

4.14 Should a local authority decide to expand bulky collection services, it will need to decide whether a regular collection time, which provides a consistent, easy-to-advertise service, is preferable to the responsiveness of an on-demand system, which would require additional resources for arranging and respond rapidly to requests. It would be interesting to see research on which of these systems is preferred by householders and what impact each has on disposal of waste – in terms of both channelling goods into reuse and recycling and of preventing dumping.

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[21] Vivien Wilson, Dixons. Oral evidence, 20 November 2003

[22] Nigel Smith, British Retail Consortium. Oral evidence, 20 November 2003

Bring banks

4.15 The idea of bring banks for electrical goods is new. London Remade is funding work in Bexley to investigate whether this would be a useful system. Bexley is running this scheme in conjunction with the Salvation Army. Each bring bank costs £750.

> we have put 14 small bring-sites in for small items, in places like housing estates where a large population of people can come and drop their hairdryers and whatever into a small box. Half of those have just been set up so we do not have detailed information about what is coming back or what state it is in[23]

4.16 Early figures for this trial have indicate that over 7 tonnes of electrical waste has been collected between October to January through those bring banks already established.

4.17 The Government proposal for the retail sector compliance scheme includes the suggestion of establishing bring banks in major retail centres. This would require consumers to bring their old equipment to the shopping centre, which as mentioned is unlikely unless the item is non-functional. The Committee would therefore like to see trials of this idea to assess its appropriateness.

Recommendation 2

The Government should establish trials of 'bring banks' in retail parks and monitor their effectiveness in collecting waste electrical and electronic equipment, and reducing dumping, in advance of confirming the preference for funding of these in major retail centres. These trials should explicitly consider their appropriateness in London where many electrical retailers are on high streets rather than in retail parks.

Civic Amenity Sites

4.18 The advantage of these sites is that they are a well-established system for rubbish collection and are now commonly used as centres for recycling and reuse. However, they do require that the householder has access to a vehicle. This can be problematic in areas of low car ownership, which are common across London. The other disadvantage is that refurbishment organisations would prefer the use of collection services with trained staff and vehicles suited to the safe carriage of the goods, rather than householders trying to transport it themselves.

> Bulky fridges and the like are probably not appropriate to be put in the back of a car and taken to a civic amenity site, if it is to be refurbished in the way that CREATE [a community sector refurbishment organisation] want to.[24]

4.19 It should be noted that not all boroughs have a civic amenity site and that some have more than one. They differ in size and configuration and in the possibilities for introducing new facilities, particularly because of space constraints.

4.20 The cost to reconfigure a site to handle WEEE is estimated to vary between £35,000 and £110,000 for capital costs and additional labour costs of between £10,000 - £20,000 annually to ensure that waste equipment is handled to maximise the possibility of reuse.[25] Based on these figures, if all 39 sites were adapted the total cost for London would be around £2 million.[26] Lower figures of £39 000 to £1.6

[23] Bruce Bratley, London Remade. Oral evidence 20 November 2003
[24] Shirley Rodrigues, ALG. Oral evidence 20 November 2003
[25] London Remade. For further details see Annex D.
[26] This assumes that 10 of the 39 civic amenity sites will require the upper level of spending for reconfiguration and the remaining 29 the lower level.

million are suggested if research commissioned by the government is applied to London.[27] However, these lower figures are thought to be poorly representative because the study did not use a London case study or allow for the higher costs in London for altering such sites e.g. due to land shortages.

4.21 It is apparent from the range of estimates, that for local authorities to be able to plan for improvements to their sites, they need more precise estimates than are now available. There are initiatives in Harrow and Lewisham to reconfigure their civic amenity sites and this will provide useful information on the costs, and should provide indications about the success of using these sites and other implications.

4.22 Under current government plans for implementing the directive, boroughs are not obliged to set up civic amenity sites to recycle electrical and electronic equipment. However, boroughs can benefit from reconfiguring their sites because the amount of this waste that is recycled can contribute to their domestic waste recycling targets and increase waste disposal that is the responsibility of producers.

4.23 Funds are already available for improving the facilities and operation of civic amenity sites through the London Recycling Fund[28] and the Waste and Resources Action Programme (WRAP). Furthermore, it is proposed to allocate at least £5 million from a retail sector compliance scheme for these improvements across the UK. The Government has stated that it would 'devise alternative arrangements for funding of the civic amenity site upgrades'[29] in the absence of such a scheme.

4.24 When bulky collection services and bring banks are operated by a local authority, the waste collected will then need to pass through a civic amenity site or waste transfer site. At present there is insufficient information on whether London's waste facilities have the capacity to deal with the quantities of used goods that are discarded.

4.25 In order to generate a more accurate picture of the possibilities and costs for improvements, each site should be surveyed and assessed to determine what work would be required to adapt it and thus how much of this waste could be handled by London's civic amenity sites. This would have to be considered in the light of the above comments on whether these sites are an appropriate point of collection for the particular type of goods.

Next steps on collection

4.26 The Committee welcomes the work by London Remade on trials of methods for collection including bring sites in Bexley and the reconfiguration of civic amenity sites in Harrow and Lewisham. These trials should influence UK legislation and guidance to implement the WEEE Directive that is being developed at present. They should also inform boroughs on how to improve waste handling irrespective of the final detail of the UK law.

4.27 It should also be noted that boroughs are under pressure to divert other types of waste from landfill. Under current targets and incentives, boroughs may gain more benefits from improving their civic amenity sites and collection systems to separate other waste such as biodegradable waste from food and gardens.

4.28 Local authorities will have to lobby government and commercial bodies to ensure that producers and retailers contribute to collection schemes that are effective in

[27] CA site WEEE Capacity in the UK, Network recycling September 2003
[28] London's allocation from the Government's Waste Minimisation and Recycling Fund
[29] Proposals for implementation of the WEEE Directive article by article. UK Government November 2003

separating equipment and keeping it in the best condition possible. Private sector companies are likely to be willing to contribute not only to discharge their responsibilities, but also to show their corporate social responsibility.

4.29 The retailer sector compliance scheme, suggested in November's consultation document, could be a useful mechanism for funding appropriate collection and this will be a key area for lobbying. For example it is currently suggested that local authorities would be able to bid for these funds. The Committee would suggest that for London this needs to be considered London-wide as well as at the borough level, following current practice with similar funds.

4.30 The fund from the compliance scheme will be capped at £10 million which would be used to improve civic amenity centres and potentially other collection systems. The scheme also considers an obligatory element to be collection facilities in all major retail parks, with kerbside collection only considered if such a facility cannot be established. However, in order to make the most of the Directive from the outset, boroughs will have to spend money before it comes into force. We believe that funding for collection service improvements should be available in advance from the Government, and then recouped by them through any compliance scheme.

4.31 The Committee considers that in many circumstances, some form of kerbside collection may be preferable to a bring site at a retail park. We would suggest that such a fixed hierarchy of funding is not established before pilot studies show what kind of collection is most effective. Efforts by London authorities to influence the development of any retailer compliance scheme must be made with the retail sector as well as the Government, because the retail sector has been asked to lead on the development of such a scheme.

4.32 The details of the suggested mechanism of a national clearing house to discharge producer responsibilities need to be reviewed by London local authorities. This producer compliance scheme will influence collection methods, but will only be responsible for costs after a centralised collection point. The nature of the scheme is clearly an important area for lobbying. The Committee is concerned about how the scheme would operate within a dense area like London which already has a number of existing initiatives particularly on refurbishing electrical and electronic goods. The possible impact of this mechanism on the community sector is mentioned in paragraph 4.8, and considered more broadly in paragraph 5.8.

4.33 In order to improve borough recycling performance and service to householders and, boroughs should make financial provision for improved bulky item collection schemes. The Committee would recommend such improvements even in the absence of specific additional funding arising from the implementation of EU WEEE Directive because of the cost savings the boroughs could accrue by diverting waste from landfill into disposal under producer responsibility.

4.34 Therefore we would like to make the following recommendations:

Recommendation 3

The Committee supports the work of London Remade on methods of collection for electrical and electronic waste and infrastructure needed for appropriate separation. London Remade should issue guidance to the boroughs based on these trials and should use the trials to inform their lobbying work on behalf of the boroughs. The ALG should facilitate discussions between the boroughs to share best practice on this.

Recommendation 4

The boroughs should commission assessment of their civic amenity sites and their ability to collect and store separately electrical and electronic equipment in good order. The ALG should assist boroughs to plan for, and gain maximum benefit from, the WEEE directive using this assessment and other available research.

Recommendation 5

The ALG and the Mayor should work jointly to lobby government, retailers and producers for:

- **the funding of appropriate collection systems through the retailer compliance scheme so that no net costs fall on boroughs;**
- **ensuring that a national clearing house is appropriate to London's needs;**
- **support to the community sector in refurbishment and recycling activities.**

Recommendation 6

In order to make the most of cost saving opportunities through the EU Directive on Waste Electrical and Electronic Equipment, boroughs should plan to improve doorstep collection and facilities in civic amenity sites for electrical and electronic waste by August 2005, where technically feasible. Boroughs, with the assistance of the ALG, should identify and apply for public and private sector funding to finance these improvements.

5 Private sector responsibilities

5.1 The private sector not only has certain responsibilities under these Directives, but they also create key business opportunities that can be exploited, as considered in Chapter 6. Actions to promote reuse and recycling provide the chance to demonstrate corporate social responsibility. Responsibilities under the Directive include areas where existing activities should be expanded and ones where new systems will have to be developed.

5.2 Large retailers already have established systems for dealing with the return of some electrical and electronic goods. This has been in response to the value of certain goods such as mobile phones and toner cartridges for reprocessing and in response to previous legislation such as the EU directive on dealing with harmful refrigerants in fridges and freezers. Clearly if end markets develop for refurbished goods or recyclates, there will be more incentive for retailers to encourage their customers to bring back used goods.

> At the moment we collect things when we deliver – mainly large domestic appliances... Through Currys, we take about 750,000 white goods a year back in that way direct from the customers' home. It is dealt with in a specific way.[30]

5.3 Up-to-date figures from ICER due in Spring 2004 should provide further information on total quantities of goods collected through existing retailer take-back services as well as estimates of amounts that consumers may wish to return and thus provide further guidance to retailers about the scale of their responsibilities.

5.4 A number of retailers also recognize the wider value of offering such services:

> Fujitsu has already operated a take-back service for several years, getting value back from both components and recycled materials. This asset management approach strengthens our customer relationships.[31]

5.5 For a number of retailers such as Comet and Dixons (which includes Currys stores), these systems are often connected with social enterprise projects in the community sector. Although this is the first time that they have had responsibilities on this scale, plans are already being made to try and ensure that capacity will meet increased demands arising because of the new legislation.

> Comet expect to have a social enterprise refurbishment operation assigned to each of its home delivery platforms by end of 2004 [collection services after the sale of new goods] … We currently have 7 Renew/Remploy centres open across the UK. These centres are building their WEEE capability and expect to be fully operational in time.[32]

5.6 UK retail sales of the equipment covered by the directive are estimated at about £10 billion per year. The retailer compliance scheme, proposed in current Government consultation papers, aims to raise £10 million or 0.1 % of these sales.

5.7 Producers will have individual responsibility to provide for the cost of processing their own products manafactured after 13 August 2005. This individual responsibility creates an incentive to make processing more cost effective by varying the materials used and the mechanisms required for their disassembly. End-of life processing of equipment produced before 13 August 2005, or where the producer no longer exists,

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[30] Vivien Wilson, Dixons. Oral evidence 20 November 2003

[31] Joy Boyce, Head of Corporate Environmental Affairs, Fujitsu Services quoted in Directive on Waste Electrical and Electronic Equipment (WEEE) Directive on the Restriction of Use of Certain Hazardous Substances (ROHS) Actions you need to take – a guide for managing directors DTI/Defra Oct 2003

[32] Veronica McCarthy, Comet. Written evidence submitted 9 December 2003.

is the collective responsibility of current producers. Costs will be allocated according to market share.

5.8 Current Government proposals outline a national clearing house as the mechanism for producers to fulfil their obligations on collection and processing. When finalised, this mechanism should ensure that it uses London's natural advantage of the concentration of equipment to be collected, where feasible minimises the movement of the waste, and does not disadvantage small businesses unnecessarily.

5.9 Producers will have an added responsibility to ensure that design does not needlessly prevent reuse by using particular design features or manufacturing processes.

5.10 The Government remains undecided on how additional costs arising from producer responsibility should be passed on to the consumer, largely because the businesses are sharply divided on the issue. Generally retailers wish to make this integral part of the price, so that they can use the market and their buying pressure to reduce costs whilst producers favour a visible fee. How this occurs is also likely to influence how producers are asked to fulfil the requirement to provide financial guarantees for their responsibilities of reprocessing should they go out of business. Views are being sought through the consultation.

5.11 As mentioned previously, businesses do have responsibilities for the costs of disposal of their own equipment when no new equipment is being purchased. In the latter case, the end user is responsible for its treatment in the commercial sector.

5.12 The RoHS Directive will bring in substance bans from 1 January 2007 and thus affect design and manufacture of new products. The primary aim is to protect human health, but the exclusion of hazardous substances will aid recycling of products in the future.

Recommendation 7

The Committee believes that producers and retailers should recognise the benefits of active compliance with the EU Directive on Waste Electrical and Electronic Equipment. Private sector companies should fund effective collection and reprocessing systems which encourage reuse and recycling and not only fulfil legal requirements, but also make the most of this opportunity to demonstrate corporate social responsibility.

6 Increasing economic benefits

6.1 Greater economic activity is created by processing electrical and electronic equipment, rather than sending it for disposal. This added benefit should be maximised by improving the supply of suitable unwanted goods and developing markets for the products.

6.2 There are already organisations in the private and community sectors which handle electrical and electronic goods for reuse and recycling and the WEEE Directive will create a much larger demand for these services. Refurbishment of white goods is already an established sector of employment. The Furniture Recycling Network calculates that its 300 member projects across the UK collected around 300,000 fridges each year and provided 650 jobs in 2002[33]. Considering that Londoners are likely to dispose of some 2 million large household items each year[34], the opportunities for new jobs are clear.

6.3 London is a particularly prime area for investment because its large population not only discards a high volume of waste electrical and electronic goods, but also is a considerable potential market for reprocessed goods. Ideally, waste should be reprocessed within London to maximise benefits to the region and reduce transportation.

6.4 Expanded operations and new facilities should provide a boost to local economies and create opportunities for skills development. Community organisations in this sector have been particularly successful at linking reprocessing activities with training programmes and return to work projects. Additonally, refurbishment organisations can provide cheap, reasonable quality goods for social projects.

6.5 In the Committee's view, the refurbishment and recycling sector needs support to help organisations overcome barriers to expansion in order to build capacity. For example, support for networking would encourage joint working that could improve economies of scale and capacity. The Committee is concerned that the community sector is supported to scale up its activities to deal with the increased amounts of equipment that will be available rather than become sidelined.

6.6 Whilst business support will be particularly important for the community sector, it should not be confined to it. The role of the London Development Agency and London Remade in providing advice and help to bring in investment is vital and should include assistance with land acquisition. Locations for new facilities may prove particularly problematic because of the high cost of land in London and pressure from alternative uses, particularly for housing. There can also be difficulties with planning permission because the disadvantages of having a facility at a given site, such as higher traffic levels, tend to be very localised whereas advantages are spread across a number of boroughs.

6.7 The economic success of organisations involved in refurbishment and recycling clearly depends on the presence of markets for the materials and items they produce, as mentioned. These can be encouraged through activities to create demand, such as changing procurement practices. Mechanisms for this are considered in more detail in the sections on refurbishment and recycling below.

[33] Letsrecycle.com 13 October 2003 and The Guardian (Society) 11 June 2003.
[34] Figures extrapolated from ICER's 1998 research, updated figures pending.

6.8 In the UK at present, there are no organisations which can treat electrical and electronic waste in order to remove components that require special handling, because of hazardous chemical content e.g. lead and mercury. The UK government ought to clarify requirements for handling in order to reduce perceived risk because investors are concerned that plants might either not meet standards or exceed them and so lose competitive advantage[35]. This is a similar situation to that for changes to landfill sites, but on this, there is still opportunity to gear up for new requirements in time. The Government should also encourage more positive action by investors in what is a relatively new sector for the UK. Some other European countries already have a more developed reprocessing sector and so British industry should act quickly to be able to capitalise on forthcoming opportunities.

6.9 It is to be welcomed that producer organisations have already formed two consortia[36] that will handle contracts with recycling businesses. This is likely to encourage confidence in the sector, particularly as one of the consortia has stated that it aims to recycle 1.2 million tonnes of electrical products each year[37].

6.10 To provide efficient handling of waste goods, there will need to be 'bulking' facilities where goods requiring similar treatment are sorted and stored until there are sufficient quantities to pass to an appropriate reprocessing plant. These facilities would also provide an ideal opportunity for pre-treatment so that different components from an item could go to different organisations according to their requirements, such as reusable parts to a refurbishing company.

Recommendation 8

Private sector companies should continue to work with the community sector, developing new arrangements and facilities to maximise the economic and social benefits from reuse and recycling of waste electrical and electronic goods.

6.11 The Furniture Reuse Network, an umbrella organisation of community sector furniture refurbishment organisations, is developing business plans for several bulking and pre-treatment facilities in partnership with local authorities with the support of London Remade. Plans are most advanced for facilities in East London and in Croydon. They would also like to develop centres in west and north London.[38]

6.12 Operators must have a waste handling permit for the separation and treatment of the specified materials which allows regulation of permission to handle hazardous chemicals. The Committee support Defra's multi-tier approach to such permits, but the development of the detail to implement this system must ensure that the process is appropriate for the scale and nature of the handling operations.

[35] Article: Ministers slated over wave of EU green legislation. Financial Times 30 December 2003
[36] Recycling Electrical Producers' Industry Consortium and European Recycling Platform.
[37] Article: Electrical goods makers set up company to recycle dumped products. FT.com 20 January 2004
[38] Craig Anderson, FRN. Telephone conversation 9 January 2004

6.13 Our recommendations on this issue are:

Recommendation 9

The Mayor, particularly through the LDA and London Remade, should support the development of plans and funding for four bulking and pre-treatment facilities in London, and other work, to maximise the amount of electrical and electronic waste reprocessed in London. The ALG and the boroughs should also support the development of these centres.

Recommendation 10

Defra's proposed multi-tier system of permits for the separation and handling of waste electrical and electronic equipment ought to minimise paperwork and time needed for applications from small organisations. In addition the permit system must accommodate the requirements of refurbishment organisations to ensure that it does not create a disincentive for their operations.

Refurbishment

6.14 For organisations that undertake refurbishment, the main issue is receiving equipment in the best possible condition, which requires appropriate collection schemes as stated in paragraph 4.1. The storage of items after collection in good dry conditions is also important, and should to be considered during any reconfiguration of civic amenity and waste handling sites.

6.15 The ability for goods to be refurbished will depend on whether they can meet the latest standards of health and safety and how cost effective is the refubishment. Safety issues such as the nature of fire retardants they contain may also count against their suitability. There is clearly a limit to the number of times goods can be refurbished and remain of reasonable quality.

6.16 The cost effectiveness of refurbishment is likely to vary significantly by category of equipment. The most important aspect of this is the cost of new items, thus small items are unlikely to be worth refurbishing.

> A hairdryer, a toaster, a mixer, a vacuum cleaner – a lot of these things have [hardly] any, if any probably negative, value. They are probably never going to get reused, particularly if you go into Dixons and you can buy a new one for peanuts.[39]

6.17 As outlined in paragraph 6.7 above, a critical issue is the need to create markets. The Committee recognises the work to create and expand markets already undertaken by the London Development Agency and London Remade. Key activities are promotion work with private and social landlords and the inclusion of refurbished goods in green procurement codes. Public organisations should lead by example on this issue because of their significant buying power and influence through their grant giving powers.

6.18 However it is important to remember that other factors must be considered when encouraging the purchase of this equipment. With moves to improve product efficiency, particularly in energy and water use, it should be remembered that refurbished goods are likely to have lower ratings for these measures.

[39] Bruce Bratley, London Remade. Oral evidence, 20 November 2003

We work with a lot of local authorities to make sure that they only have triple-A appliances going into social housing. I get about as many letters about the fact that we are saddling a few poor with energy-hungry appliances as I do saying give us your old appliances.[40]

6.19 The Committee notes the work by the Furniture Reuse Network on setting standards for refurbished goods that will enable the easy identification of goods of the appropriate quality.[41]

6.20 Two issues ought to be clarified in the next stage of Government guidance in relation to refurbished goods and refurbishment organisations. First, whether these organisations become retailers under the Directive and so need to offer take-back. This is unlikely to be problematic for refurbishment organisations, because they will have facilities in place for taking in used goods and for passing on equipment that cannot be refurbished for recycling. If take-back is required there may be an increase in costs because unwanted goods brought in are likely to be of low value.

6.21 There may be greater implications if refurbishment organisations are considered as producers in some cases[42]. If they are, they would be partially responsible for end of life processing. This is of greater concern because of the high cost implications in relation to the value of the refurbished goods.

6.22 Retailers of second-hand goods are not considered by the Government to have to comply with the Directive if they do not refurbish or process the goods in any way.

6.23 To tackle the problems we have identified above, we therefore recommend:

Recommendation 11

The procurement codes of public bodies and social landlords should address the issue of using high quality refurbished goods instead of new items. This is likely to be most appropriate for housing portfolios, but could also be considered as part of the conditions of grants for grant recipients. The Mayor and ODPM should include use of refurbished goods in their suggested codes and training work on procurement by local government and other bodies.

Recommendation 12

The Committee recognises the work of LDA and London Remade to support the increase in capacity of the community sector to refurbish and recycle equipment. LDA and London Remade should continue to develop this viable business sector by:

- **encourage investment in and identify sites for necessary facilities**
- **supporting the marketing of refurbished goods including through RecycleforLondon**
- **support community sector partners to find suitable premises for collection and pre-treatment**

[40] Vivien Williams, Dixons. Oral evidence, 20 November 2003
[41] www.crn.org.uk/about/cases/frn.shtml
[42] Colin Crooks, Renew Trust. Written evidence to Committee.

Recommendation 13

DTI should clarify the situation for refurbishers on their retailer and producer responsibilities under the EU Directives, and ensure that these organisations are aware of their obligations.

Recycling

6.24 The biggest barrier to recycling of electrical equipment is the lack of new markets for the materials that arise. High rates of recycling already exist for mobile phones and printer cartridges because of the quantities of precious metals that they contain.

> [The] particular problem with recycling WEEE at the moment – and this is assuming that we do as much refurbishment as we can – is not the metal components [43]

6.25 Plastics and glass containing lead are the key markets which need developing to improve recycling rates of other types of electrical equipment.

> The particular problem … [is] the levels of non-metal materials, primarily plastics, but if you are looking at Cathode Ray Tubes, it is glass as well … As we are forced to recycle more of those materials, there is a problem with physically doing the recycling as the market is underdeveloped in the UK[44]

6.26 Plastics can be valuable, indeed according to Bruce Bratley, "engineered plastics have a high value. It is about 10 times the market value of steel" and there are existing markets for some types. The issue is that components are often a mix of different polymers which must be separated before or during recycling in order to create a valuable recycled material. There is also a lack of capacity in the UK. Whilst there are existing techniques for separating polymers no processing plants yet exist here. The Committee welcomes the news that producers are forming consortium organisations which aim to encourage reprocessing facilities. We also believe that timely Government action is needed to ensure that such facilities are created in the UK.

6.27 Markets for mixed polymers should also be developed, although these are always likely to be of lower value than separated polymers.

> with things like a hairdryer, or whatever, it is mostly plastic, maybe a little bit of copper. By the time you have collected it, moved it around the country, shredded it, whatever, there is really very little value in that.[45]

6.28 Developing markets for glass containing lead has two particular problems. The first is that the main market for this material is the production of new cathode ray tubes, but this is a declining market because of the switch to plasma screens for monitors and TVs. The second is that new uses have to be tested to ensure that the lead cannot leach out of the material during use.

6.29 The level of employment within the industry will clearly depend on the degree to which it is a labour intensive business or one dependant on a high level of capital investment. The community sector tends to operate as the former and the private sector the latter and the implementation of the Directive will tend to favour one approach over the other. Two key areas are the approach to reprocessing and to measuring recovery rates.

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[43] Bruce Bratley, London Remade. Oral evidence, 20 November 2003
[44] Bruce Bratley, ibid.
[45] Vivien Williams, Dixons. Oral evidence, 20 November 2003.

6.30 The approach to reprocessing covers how materials are separated for recycling, including removing high value components prior to using large scale processing techniques, to minimise the production of mixed materials. The community sector favours manual methods with particular components having to be removed from whole items before further processing. The larger companies in the commercial sector prefer use of technological reprocessing such as shredding followed by separation.

6.31 Government proposals currently favour the mechanised approach of shredding and separation. This approach is likely to be satisfactory, so long as the components which can be used in refurbishment are not needlessly recycled. Implementation of the Directive must therefore include a requirement for the removal of these useable components in advance of shredding, known as pre-treatment. It should also consider how to encourage the removal of pure materials in advance of shredding to prevent mixing and so the need for re-separation. Producers are likely to move towards materials that encourage the use of technology to allow removal of particular components e.g. the use of heat memory plastics can allow automatic disassembly of components using ovens.

6.32 The second issue is the method to be used for identifying and measuring the different categories of WEEE and the recovery rates of materials for recycling, with labour-intensive organisations tending to favour physical separation of the categories and direct measurement. The Government and commercial industry currently favour a protocol based approach with data primarily collected at authorised treatment facilities. The Committee do not have a strong view on this issue, so long as this approach does not create needless disadvantages for small community-run facilities.

6.33 As the RoHS Directive comes into force in 2007, recycling electrical and electronic goods should become more straightforward. It will reduce the number of materials that require special handling.

6.34 To tackle the problems we have identified above, we therefore recommend:

Recommendation 14

The Committee supports the work of the LDA and London Remade on the market development of products from recycling. The expansion of this work to include recyclates and their products from electrical and electronic goods will be crucial to the success of the WEEE Directive in London.

Annex A – List of Recommendations

Recommendation 1
When new research becomes available, the Association of London Government, the Mayor and London Remade should re-examine the data available on the amounts and cost implications arising from waste electrical and electronic equipment. This examination should interpret the implications of this data for the boroughs, and for London as a whole, and assess whether further research should be commissioned.

Recommendation 2
The Government should establish trials of 'bring banks' in retail parks and monitor their effectiveness in collecting waste electrical and electronic equipment, and reducing dumping, in advance of confirming the preference for funding of these in major retail centres. These trials should explicitly consider their appropriateness in London where many electrical retailers are on high streets rather than in retail parks.

Recommendation 3
The Committee supports the work of London Remade on methods of collection for electrical and electronic waste and infrastructure needed for appropriate separation. London Remade should issue guidance to the boroughs based on these trials and should use the trials to inform their lobbying work on behalf of the boroughs. The ALG should facilitate discussions between the boroughs to share best practice on this.

Recommendation 4
The boroughs should commission assessment of their civic amenity sites and their ability to collect and store separately electrical and electronic equipment in good order. The ALG should assist boroughs to plan for, and gain maximum benefit from, the WEEE directive using this assessment and other available research.

Recommendation 5
The ALG, and Mayor should work jointly to lobby government, retailers and producers for:

- the funding of appropriate collection systems so that no net costs fall on boroughs;
- ensuring that a national clearing house is appropriate to London's needs;
- support to the community sector in refurbishment and recycling activities.

Recommendation 6
In order to make the most of cost saving opportunities through the EU Directive on Waste Electrical and Electronic Equipment, boroughs should plan to improve doorstep collection and facilities in civic amenity sites for electrical and electronic waste by August 2005, where technically feasible. Boroughs, with the assistance of the ALG, should identify and apply for public and private sector funding to finance these improvements.

Recommendation 7
The Committee believes that producers and retailers should recognise the benefits of active compliance with the EU Directive on Waste Electrical and Electronic Equipment. Private sector companies should fund effective collection and reprocessing systems which encourage reuse and recycling and not only fulfil legal requirements, but also make the most of this opportunity to demonstrate corporate social responsibility.

Recommendation 8
Private sector companies should continue to work with the community sector, developing new arrangements and facilities to maximise the economic and social benefits from reuse and recycling of waste electrical and electronic goods.

Recommendation 9
The Mayor, particularly through the LDA and London Remade, should support the development of plans and funding for four bulking and pre-treatment facilities in London, and other work, to maximise the amount of electrical and electronic waste reprocessed in London. The ALG and the boroughs should also support the development of these centres.

Recommendation 10
Defra's proposed multi-tier system of permits for the separation and handling of waste electrical and electronic equipment ought to minimise paperwork and time needed for applications from small organisations. In addition the permit system must accommodate the requirements of refurbishment organisations to ensure that it does not create a disincentive for their operations.

Recommendation 11
Procurement codes by public bodies, and including social landlords, should address the issue of using high quality refurbished goods in the place of new items. This is likely to be most appropriate for housing portfolios, but could also be considered as part of conditions of grants for external organisations. The Mayor and ODPM should include use of refurbished goods in their suggested codes and training work on procurement in local government.

Recommendation 12
The Committee recognises the work of LDA and London Remade to support the increase in capacity of the community sector to refurbish and recycle equipment. LDA and London Remade should continue to develop this viable business sector by:

- encourage investment in and identify sites for necessary facilities
- supporting the marketing of refurbished goods including through RecycleforLondon
- support community sector partners to find suitable premises for collection and pre-treatment

Recommendation 13
DTI should clarify the situation for refurbishers on their retailer and producer responsibilities under the EU Directives, and ensure that these organisations are aware of their obligations.

Recommendation 14
The committee supports the work of the LDA and London Remade on the market development of products from recycling. The expansion of this work to include recyclates and their products from electrical and electronic goods will be crucial to the success of the WEEE Directive in London.

Annex B – Evidence

To obtain any of the evidence listed below, please e-mail anna.malos@london.gov.uk

Written Evidence

The Committee commissioned London Remade to produce a report to:

- Provide estimates of the amounts and cost for London's boroughs.
- Estimate changes in activity needed in the public and private sectors.
- Identify the key actions for London's Boroughs.
- Identify opportunities for investment.
- Provide guidance on a London response to UK government consultation on implementing the EU Directive
- Outline funding proposal for initiatives to improve the handling and processing of WEEE.

London Remade can be contacted at:

1 Hobhouse court
Suffolk St
London
SW1Y 4HH
020 7665 1536
info@londonremade.com

Oral Evidence

The Committee held an evidentiary hearing on November 20th, 2003 at which the following attended to give evidence:

Bruce Bratley, London Remade
Shirley Rodrigues, Head of Policy, ALG
Daniel Harrison, Environment Policy Officer, ALG
Vivien Williams, Dixons
Nigel Smith, Corporate Responsibility Director, British Retail Consortium
Craig Woolhouse, Regional Strategic Manager, Environment Agency
Anna Burns, Environment Manager, South East London Environment Agency
Gail Lovell, London Borough of Waltham Forest

A transcript of the hearing can be downloaded from
http://www.london.gov.uk/assembly/envmtgs/index.jsp

Referenced sources of information

Craig Anderson, FRN, telephone conversation 9 January 2004

Colin Crook, Renew Trust. Written evidence submitted to Committee

DTI, Partial regulatory impact assessment on the WEEE Directive, 28 March 2003

DTI/Defra, Directive on Waste Electrical and Electronic Equipment (WEEE) Directive on the Restriction of Use of Certain Hazardous Substances (ROHS). Actions you need to take – a guide for managing directors, 2003.

FT Articles *Ministers slated over wave of EU green legislation* and *Electrical goods makers set up company to recycle dumped products* 30 December 2003 and 20 January 2004

Industry Council for Electronic Equipment Recycling (ICER), UK Status Report on Waste from Electrical and Electronic Equipment, 2000.

Veronica McCarthy, Comet. Written evidence submitted to Committee

Network Recycling, CA site WEEE Capacity in the UK, 2003

PriceWaterhouseCoopers, Environmental Life Cycle Assessment and Financial Life Cycle Analysis of the WEEE Directive and its implications for the UK, February 2002.

Resource Recovery Forum, Household Waste Behaviour in London, 2003

Annex C – EU Directives

Landfill Directive 1999/31/EC

EU Landfill Directive [1999/31/EC] was adopted on 16 July 1999. The Directive aims to improve standards of landfilling across Europe, through setting specific requirements for the design, operation and aftercare of landfills, and for the types of waste that can be accepted in landfills. Aspects of the Directive are to be implemented successively over a period of years. The main requirements of the Directive are that:

- All landfill sites are to classifies as either being able to deal with hazardous, non hazardous or inert waste. This will mean the end of co-disposal in a site.
- Once a landfill site is classified, the Directive dictates the types of wastes it can accept.
- Certain wastes will be banned from landfills over a number of years - liquids, explosives, infectious clinical wastes and tyres.
- Only treated waste may by landfilled.
- Full costs to be met by the gate price.

It also aims to reduce the amount of biodegradable waste sent to landfill and sets out a series of targets for reducing biodegradable municipal waste (BMW). BMW must be reduced to 75% of the 1995 baseline by 2010, 50% by 2013 and 35% by 2020. The Directive also requires Member States to set up a national strategy for the implementation of these targets.

For further information see: www.environment-agency.gov.uk/business/444217/444663/landfill/?lang=_e

Waste Electrical and Electronic Equipment Directive (WEEE) 2002/96/EC and Restrictions of the use of certain Hazardous Substances in electrical and electronic equipment Directive (RoHS) 2002/95/EC

13 February 2003	Directives published
Summer 2004	Regulations laid by members states
Summer 2004	Producers to commence registration
13 August 2005	Producer responsibility for financing commences alongside retailer take-back.
1 July 2006	RoHS substance ban commences
31 December 2006	Collection and recycling targets to be achieved

WEEE is an environmental directive to achieve only minimum objectives and may be extended in each state. RoHS is a single-market directive.

Under the EU WEEE and RoHS Directives, you are deemed as the Producer if you:

- manufacture within the EU
- import into the EU products that have been manufactured outside the EU
- market the product under your own brand name, wherever it is manufactured. (E.g. B&Q Power Tools.)

The Waste Electrical and Electronic Equipment Directive (WEEE) aims to minimise the impacts of electrical and electronic equipment on the environment during their life times and when they become waste. It applies to a huge spectrum of products. It encourages and sets criteria for the collection, treatment, recycling and recovery of waste electrical and electronic equipment. It makes producers responsible for financing most of these activities (producer

responsibility). Private householders are to be able to return WEEE without charge. Retailers have obligations to provide services to take back old electrical and electronic equipment on purchase of replacement goods or fund an equivalent service.

The RoHS Directive will ban the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants from 1 July 2006. There are a number of exempted applications for these substances. RoHS takes its scope broadly from the WEEE Directive. Manufacturers will need to ensure that their products - and their components - comply in order to stay on the Single Market. If they do not, they will need to redesign products.

Details of WEEE Directive requirements

Collection: A collection target for household WEEE of 4 kg per head of population per annum to be achieved by 31 December 2006.

Recovery: Setting of minimum recovery and recycling targets according to product category. Targets divided into overall recovery element, of which a certain amount must be achieved through recycling, component or substance re-use remainder could be incineration with energy production or equivalent. Targets range from 50% - 80% to be reached by 31 December 2006.

Financing: Producers to pay for collection (from centralised points), treatment and recovery/recycling of household WEEE from 13 August 2005. Producers must provide a guarantee that waste will be managed for products they place on the market after 13 August 2005. Products put on the market before 13 August 2005 are to be financed proportionally by producers, through collective schemes. Business to business WEEE to be dealt with by producers where replacements, users responsible in other cases. Costs may be shown to consumers for up to 8-10 years from 13 August 2005.

Treatment: Removal of all fluids and certain substances (e.g. lead, mercury) and components that contain them. To be carried out by permitted operators. Premises must have adequate storage facilities (i.e. weatherproof and with impermeable floors etc) for removed substances and components. Possible derogation from permitting for small businesses (subject to inspection).

Information: Member States to draw up register of producers of electrical and electronic equipment. Separate collection symbol (crossed out wheelie bin) to appear on all products from 13 August 2005. Users to be told of their role in contributing to the collection of WEEE, what collection/return facilities are available etc. Users to be told of the health and environmental hazards from hazardous substances used in electrical and electronic equipment. Treatment facilities to be given appropriate information to identify components, materials and the location of hazardous substances in products. Member States to record amount of goods on market and levels of recycling achieved.

Product design: Product designs should take into account and facilitate dismantling, recovery and recycling. Manufacturers should not "design out" re-use, unless there are over-riding reasons (safety or environmental).

For further information see: www.dti.gov.uk/sustainability/weee and www.envirowise.gov.uk

Annex D – Further information provided by the consultant

Costs of improving civic amenity sites

A number of key costing variables lead to high and low estimates for the cost estimates below:

- Some CA sites will require major reconfiguration work to accommodate WEEE facilities, this could include expensive civil engineering works
- Small CA sites can only accommodate small bins and will require more frequent collections
- Alternatives, such as bring systems, will be required where CA sites cannot accommodate WEEE bins

Cost estimations for reconfiguring a CA site

Cost	Low estimate	High estimate
Civil engineering/lean-to	£20,000	£80,000
WEEE bins	£15,000	£30,000
Total capital costs	***£35,000***	***£110,000***
Labour	£10,000	£15,000
Collections*	£0	£5,000
Total annual ongoing costs	***£10,000***	***£20,000***

* excludes cost of fridge disposal

Assuming the low estimates can be achieved for 29 of London's 39 CA sites, and a further 10 require the top-level spending to get them to a standard for accepting WEEE, the total cost for London would be in the region of £2m.

Population based estimate of electrical and electronic equipment discarded in London boroughs

					Estimate of theoretical maximum tonnes of WEEE arising in each Borough									
Borough	**Population**	**% total pop**	**Total WEEE in waste stream per annum**	**Estimate of current WEEE arisings in Borough**	**Large hshold**	**IT & Teleco**	**Consume r equip**	**Small hshold**	**Tools**	**Lighting equipmen t**	**Toys, leisure, sports**	**Monitor & control insts**	**Medical devices**	**Auto vending**
City of London	7,185	0.10%	170	85	55	14	12	5	4	0	1	-	-	-
Camden	198,020	2.76%	4,694	2,347	1,508	374	332	139	115	12	33	-	-	-
Hackney	202,824	2.83%	4,808	2,404	1,545	384	340	142	118	13	34	-	-	-
Hammersmith and Fulham	165,242	2.30%	3,917	1,958	1,258	312	277	116	96	10	27	-	-	-
Haringey	216,507	3.02%	5,132	2,566	1,649	409	363	151	126	13	36	-	-	-
Islington	175,797	2.45%	4,167	2,083	1,339	332	295	123	102	11	29	-	-	-
Kensington and Chelsea	158,919	2.22%	3,767	1,883	1,210	301	267	111	92	10	26	-	-	-
Lambeth	266,169	3.71%	6,309	3,155	2,027	503	447	186	154	17	44	-	-	-
Lewisham	248,922	3.47%	5,900	2,950	1,896	471	418	174	144	15	41	-	-	-
Newham	243,891	3.40%	5,781	2,890	1,857	461	409	171	142	15	40	-	-	-
Southwark	244,866	3.41%	5,804	2,902	1,865	463	411	171	142	15	41	-	-	-
Tower Hamlets	196,106	2.73%	4,648	2,324	1,494	371	329	137	114	12	33	-	-	-
Wandsworth	260,380	3.63%	6,172	3,086	1,983	492	437	182	151	16	43	-	-	-
Westminster	181,286	2.53%	4,297	2,149	1,381	343	304	127	105	11	30	-	-	-
Barking and Dagenham	163,944	2.29%	3,886	1,943	1,249	310	275	115	95	10	27	-	-	-
Barnet	314,564	4.39%	7,456	3,728	2,396	595	528	220	183	20	52	-	-	-
Bexley	218,307	3.04%	5,175	2,587	1,663	413	366	153	127	14	36	-	-	-
Brent	263,464	3.67%	6,245	3,122	2,007	498	442	184	153	16	44	-	-	-
Bromley	295,532	4.12%	7,005	3,502	2,251	559	496	207	171	18	49	-	-	-
Croydon	330,587	4.61%	7,836	3,918	2,518	625	555	231	192	21	55	-	-	-
Ealing	300,948	4.20%	7,133	3,567	2,292	569	505	210	175	19	50	-	-	-
Enfield	273,559	3.81%	6,484	3,242	2,083	517	459	191	159	17	45	-	-	-
Greenwich	214,403	2.99%	5,082	2,541	1,633	405	360	150	124	13	36	-	-	-
Harrow	206,814	2.88%	4,902	2,451	1,575	391	347	145	120	13	34	-	-	-
Havering	224,248	3.13%	5,315	2,658	1,708	424	376	157	130	14	37	-	-	-
Hillingdon	243,006	3.39%	5,760	2,880	1,851	460	408	170	141	15	40	-	-	-
Hounslow	212,341	2.96%	5,033	2,517	1,617	402	356	149	123	13	35	-	-	-
Kingston upon Thames	147,273	2.05%	3,491	1,745	1,122	279	247	103	85	9	24	-	-	-
Merton	187,908	2.62%	4,454	2,227	1,431	355	315	131	109	12	31	-	-	-
Redbridge	238,635	3.33%	5,656	2,828	1,817	451	401	167	138	15	40	-	-	-
Richmond upon Thames	172,335	2.40%	4,085	2,042	1,313	326	289	121	100	11	29	-	-	-
Sutton	179,768	2.51%	4,261	2,131	1,369	340	302	126	104	11	30	-	-	-
Waltham Forest	218,341	3.04%	5,175	2,588	1,663	413	367	153	127	14	36	-	-	-
TOTALS	**7,172,091**		**170,000**	**85,000**	**72,831**	**67,814**	**13,377**	**5,574**	**5,202**	**2,230**	**1,486**	**1,486**		
% estimated to be destined for LA waste facilities					75%	20%	90%	90%	80%	20%	80%	0%	0%	0%

Annex E – Orders and translations

How to order

For further information on this report or to order a copy, please contact Anna Malos, Assistant Scrutiny Manager, on 020 7983 4207 or email to anna.malos@london.gov.uk

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Haddii adiga, ama qof aad taqaanid, uu doonaayo inuu ku helo koobi ah warbixinta oo kooban iyo talooyinka far waaweyn ama farta qofka indhaha la' loogu talagalay, ama luuqadooda oo bilaash u ah, fadlan nagala soo xiriir telefoonkan 020 7983 4100 ama email-ka cinwaankiu yahay assembly.translations@london.gov.uk

Annex E – Principles of Scrutiny

The powers of the London Assembly include power to investigate and report on decisions and actions of the Mayor, or on matters relating to the principal purposes of the Greater London Authority, and on any other matters which the Assembly considers to be of importance to Londoners. In the conduct of scrutiny and investigation the Assembly abides by a number of principles.

Scrutinies:

- aim to recommend action to achieve improvements;
- are conducted with objectivity and independence;
- examine all aspects of the Mayor's strategies;
- consult widely, having regard to issues of timeliness and cost;
- are conducted in a constructive and positive manner; and
- are conducted with an awareness of the need to spend taxpayers money wisely and well.

More information about scrutiny work of the London Assembly, including published reports, details of committee meetings and contact information, can be found on the London Assembly web page at www.london.gov.uk/assembly.

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