The Centre For Business Relationships, Accountability, Sustainability and Society

Working Paper Series No. 56

A business perspective on the transposition of the WEEE Directive into UK law: Part I

Cerys Ponting and Hazel Nash

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

BRASS
The Centre for Business Relationships Accountability, Sustainability & Society

About the BRASS Centre

The ESRC Centre for Business Relationships, Accountability, Sustainability and Society (BRASS) was the first ESRC Centre in Wales. It was established in 2001 with a £3.1 million grant, and has very recently received its second phase funding of £4.8 million which will take it up to 2011. The Centre is a joint venture between the University's Schools of Business, City & Regional Planning and Law. It brings together the three Schools' existing research expertise on issues of sustainability, business ethics, company law, corporate reporting and business communication.

The Centre started work in October 2001 under the leadership of Professor Ken Peattie of the Business School, Professor Terry Marsden of the Department of City and Regional Planning and Professor Bob Lee of the Law School. The Centre exists to understand and promote the vital issues of sustainability, accountability and social responsibility, through research into key business relationships.

Published by

The Centre for Business Relationships, Accountability, Sustainability & Society (BRASS)
Cardiff University
55 Park Place
Cardiff CF10 3AT
United Kingdom
http://www.brass.cf.ac.uk

ISBNs 978-1-906644-28-4 (print)
978-1-906644-29-1 (web)

BRASS
The Centre for Business Relationships
Accountability, Sustainability & Society

E·S·R·C
ECONOMIC & SOCIAL RESEARCH COUNCIL

CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

A business perspective on the transposition of the WEEE Directive into UK law: Part I

Cerys Ponting & Hazel Nash

Abstract

In the UK, waste electrical and electronic equipment (WEEE) is growing faster than any other form of waste in Europe. Directive 2002/96/EC amended by Directive 2003/108/EC on waste electrical and electronic equipment (the WEEE Directive) aims to prevent WEEE arising and divert WEEE away from landfill through promoting its reuse, recycling and recovery. The WEEE Directive aims to incentivise producers to change the way EEE is produced, used and disposed of.

This paper draws on the findings of the first part of a study conducted in 2006, examining the implementation of the WEEE Directive into UK law. The study draws upon the views of relevant businesses and stakeholders to the WEEE Directive's obligations and the process of transposing these European obligations in the UK. Amongst other things, findings indicated that 60.6% of respondents considered that the requirements of the WEEE directive had not been communicated adequately. It considers lessons which can be learnt for the transposition of future EPR obligations. Further survey research was conducted in 2008 to determine the extent to which attitudes have changed and the issues which have arisen. These findings will be covered in Part 2.

This study concludes that whilst stakeholders support the aims of the WEEE Directive, most considered the transposition process poorly managed. More specifically, participants pointed to the limited opportunities for effective involvement in the consultation process resulting from: (i) fragmented stakeholder engagement; (ii) staff changes to the lead transposition team; (iii) the perceived collaboration between the governmental team and certain larger businesses; and (iv) the impression that responses to consultations were not taken into account in decision-making. These experiences of transposing the WEEE requirements into UK law left stakeholders confused about both their role in managing WEEE and how they could ensure compliance with their obligations.

Key Words: WEEE, Regulation, Transposition, consultation, Extended Producer Responsibility

Abbreviations

BERR	Department for Business Enterprise and Regulatory Reform
BIS	Department for Business, Innovation and Skills
DTI	Department of Trade and Industry
DIUS	Department for Innovation, Universities and Skills
EC	European Community
EEE	Electrical and Electronic Equipment
EPR	Extended Producer Responsibility
EU	European Union
OECD	Organisation for Economic Co-operation and Development
RoHS	Restriction of certain Hazardous Components
SCP	Sustainable Consumption and Production
SME	Small to Medium Sized Enterprise
UK	United Kingdom
WEEE	Waste Electrical and Electronic Equipment

1 Introduction

This paper stems from a flagship electronics project which examined key issues, relationships, and sustainability impacts of the electrical and electronics sector in the UK. It draws on the findings of a multi-phase study in the UK which investigated the transposition and implementation of the Directive on waste electrical and electronics equipment (the WEEE Directive) into UK law. The results are being published in two parts. This paper, Part 1, examines the process of transposing the WEEE Directive into UK law from the viewpoints of UK businesses and stakeholders. From these experiences and perspectives the paper offers a set out recommendations with a view to conducting more effective consultation and transposition processes in future extended producer responsibility obligations. Part 2 (forthcoming) investigates the extent to which businesses and stakeholders consider the UK WEEE Regulations to be effective two years after coming into force. In addition, it discusses the current scope of proposals to revise the WEEE obligations at national and European level with a view to providing clarity of legislative responsibilities and minimising burdens on businesses.

The paper presents findings from interview and survey research, exploring views of relevant UK businesses and other key stakeholders on the transposition of the WEEE Directive into UK law. The study aims to provide an insight into the consultation and transposition process of the WEEE Directive from the perspectives of business and other stakeholders. The findings uncovered that the majority of respondents felt that the consultation process was opaque, which discouraged upfront investment in WEEE prevention activities. Furthermore, survey research indicated that 60.6% of respondents considered that the requirements of the WEEE directive had not been communicated adequately.

Underpinned by a legal analysis and desk-based review of relevant literature, the paper first considers the importance of regulating WEEE. The findings from the empirical stages of the project is then analysed in section 4, which specifically discusses the transposition of the WEEE directive into UK legislation.

Central to the WEEE Directive is the obligation placed on producers to facilitate the dismantling, recovery for reuse and recycling of e-waste through extended producer responsibility (EPR). EPR aims to make producers responsible for their products, throughout a product's lifecycle, by encouraging producers to facilitate the repair, reuse, disassembly, recycling and environmentally sound disposal of their products. The paper concludes that the difficulties encountered by business and other stakeholders in the UK's transposition of the WEEE Directive was a cumulative result of a variety of independent elements including (i) the character and scope of the European legislation itself, (ii) the infrastructure and practical demands associated with the delivery of WEEE targets and (iii) the project management aspects of the domestic consultation process itself. Undoubtedly, future legislative instruments following the trajectory of EPR raise regulatory and practical challenges particularly at a national level. It is therefore important to understand how these processes can be improved to ensure more effective transposition of similar EPR measures in the future. The paper therefore considers lessons which can be learnt for the transposition of future EPR obligations on items such as batteries and other specific waste streams.

Further survey research was conducted in 2008 upon the commencement of the second compliance year of implementation in the UK. This sought to determine the extent to which attitudes have changed and the issues which have arisen. These findings are covered in a separate working paper, Part 2.

1.1 Waste electrical and electronic equipment (WEEE) in contex

Directive 2002/96/EC, amended by Directive 2003/108/EC, on waste electrical and electronic equipment (the WEEE Directive) seeks to address rising volumes of WEEE and reduce the environmental impact associated with the hazardous nature of components in electrical and electronic equipment (EEE). Recital 7 of the WEEE Directive explains:

> *The amount of WEEE generated in the Community is growing rapidly. The content of hazardous components in electrical and electronic equipment (EEE) is a major concern during the waste management phase and recycling of WEEE is not undertaken to a sufficient extent.*

Regulating waste electrical and electronic equipment (WEEE, or e-waste) is important for three reasons. First, WEEE can have a significant and detrimental environmental impact when disposed of inappropriately due to the hazardous nature of components in WEEE (see 1.1.1), second the volume of WEEE arising is increasing at an unprecedented rate (see 1.1.2) and third, up-take of electrical and electronic equipment is detrimental to the use of natural resources and encourages unsustainable patterns of consumption and production (see 1.1.3).

1.1.1 Hazardous components of WEEE

WEEE contains more than 1000 different substances, many of which are toxic metals which could contaminate land, or at worst leach into ground water supplies, posing health hazards unless disposed of correctly at the end of their useful life. Among the most toxic are lead, arsenic, cadmium, hexavalent chromium and flame retardants used in plastics (Widmer et al., 2005). The cadmium from one discarded mobile phone (typically contained in a battery) is enough to pollute 600,000 litres of water (Directgov, 2008), and is carcinogenic. Similarly, the Industry for Electronic Equipment Recycling estimates that 4.1 million units contain cathode ray tubes which may contain barium compounds and toxic phosphors which are harmful to health and the environment (House of Commons, 2007, at col.1039W). Therefore, the metals, materials and other hazardous components within electrical and electronic equipment make WEEE a serious environmental and social concern at global, national and local levels.

Directive 2002/95/EC on the Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (the RoHS Directive) builds on the obligations contained in the WEEE Directive by specifically aiming to control the use of hazardous substances in electrical and electronic equipment. Accordingly, Recital 5 of the RoHS Directive provides:

> *The available evidence indicates that measures on the collection, treatment, recycling and disposal of waste electrical and electronic equipment (WEEE)…are necessary to reduce the waste management problems linked to the heavy metals concerned and the flame retardants concerned. In spite of those measures, however, significant parts of WEEE will continue to be found in the current disposal routes. Even if WEEE were collected separately and submitted to*

recycling processes, its content of mercury, cadmium, lead, chromium VI, PBB and PBDE would be likely to pose significant risks to health or the environment.

The RoHS Directive seeks to reduce the environmental impact of WEEE by restricting the use of certain hazardous substances during manufacture. As part of this drive, Article 4(1) of the Directive requires Member States to ensure that all electrical and electronic equipment put on the market does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers.

1.1.2 Rising volumes of WEEE

Rapid uptake of information technology around the world coupled with the advent of new design and technology in the electronic sector is causing the early obsolescence of many electrical and electronic items. For example, the average lifespan of a new model computer has decreased from 4.5 years in 1992 to an estimated 2 years in 2005 and is further decreasing (Widmer et al. 2005). The European Commission has recognised that "as the market continues to expand and innovation cycles become even shorter, the replacement of equipment accelerates, making WEEE a fast growing waste stream" (European Commission (b), 2008 at 13).

The volume of WEEE arising is increasing at a rate of 4% per annum (DTI, December 2006 at 20, para 65), approximately three times faster than other individual waste streams in the solid waste sector (Schwarzer et al. 2005) and is the fastest growing waste stream in Europe. In the UK, households throw away 1.2 million tonnes of WEEE every year. This is equivalent in weight to 150,000 double-decker buses, 444,444 range rovers, 164 Eiffel Towers (Directgov 2008). White goods such as fridges and washing machines make up 43% of this total, followed by IT equipment at 39% (Directgov 2008). It is estimated that 6 million electrical units are thrown away every year in the UK (Directgov, 2008). According to Darby and Obara (2005), small WEEE including mobile phones, MP3 players, PDA's, electric toothbrushes and toasters, is the fastest growing consumable electrical and electronic equipment (EEE). In Europe, over 105 million mobile phones are discarded every year because of the introduction of a new model (Canning 2006).

The problem of rising WEEE volumes stems from the crude product philosophy existing within industrialised and consumerist societies. The purposeful design of a

product for short term use that requires frequent replacement, known as planned product obsolescence, drives consumer demand and stimulates consumption of raw materials. This economic system, which depends upon the constant injection of new and finite resources, is contrary to the ambitions of the Waste Framework Directive. The Waste Framework Directive promotes as the primary objective the prevention of waste which can only be achieved by producing longer lasting products. Therefore, in terms of product life, the design intention behind current industrial infrastructure is to make attractive products that are affordable, that meet regulations that perform well enough and last long enough to meet market expectations (McDonough & Braungurt 2002 at 37). Planned product obsolescence is just one side of a double edged sword. Whilst industry produces in order to maintain consumption, society is generally acquisitive, individualistic and profligate which has an impact on product life (Cooper 1994). Producers and manufacturers have the ability to increase the life expectancy of products; this was recognised in a report published by the Organisation for Economic Co-operation and Development (OECD):

> [F]*rom a technical point of view there is no question that longer-lived appliances could be made. This is freely agreed upon by manufacturers of these products* (OECD 1982 at 15).

According to utility theory, the goal of economic activity is satisfying consumer desires and thus production is dictated to by demand. Consumerism therefore creates a vicious circle where industries strive to meet consumer demand in order to remain profitable (Thankappan, Marsden, Flynn & Lee 2004 at 24). It is clear that industry is led and simultaneously stimulates consumer demand and behaviour. Achieving sustainable waste management and a closed loop economy for electrical and electronic products requires regulatory measures which stimulate behavioural changes and incentivise more sustainable patterns of consumption and production.

1.1.3 Patterns of sustainable production and consumption

The way in which a commodity is produced and consumed contributes to global warming, pollution, material use and natural resource depletion (European Commission (a) 2008 at 2). With globalisation, supply chains in the electronics sector can be complex, often requiring components to be shipped to different locations before the final product can be assembled before the product is again transported to the point of sale. In addition, the transportation of the goods, the processes used in

materials extraction and product assembly can be resource intensive. For example, the manufacture of one new computer and monitor uses 240kg of fossil fuels, 22kg of chemicals and 1500 litres of water (Kuehr 2003: 24). This is before taking into account the energy needed for the equipment to function when in use, as well as any resources used to treat prior to disposal (see Figure 1 below).

The European Commission's Communication on the sixth environment action programme entitled, *Environment 2010: Our Future, Our Choice – The Sixth Environment Action Programme* (6EAP) recognises the need to promote a sense of shared responsibility for resource use and promotes greater adoption of sustainable production and consumption patterns within industry and households:

> *…Business must operate in a more eco-efficient way, in other words producing the same or more products with less input and less waste, and consumption patterns have to become more sustainable* (European Commission [2002] at Executive Summary).

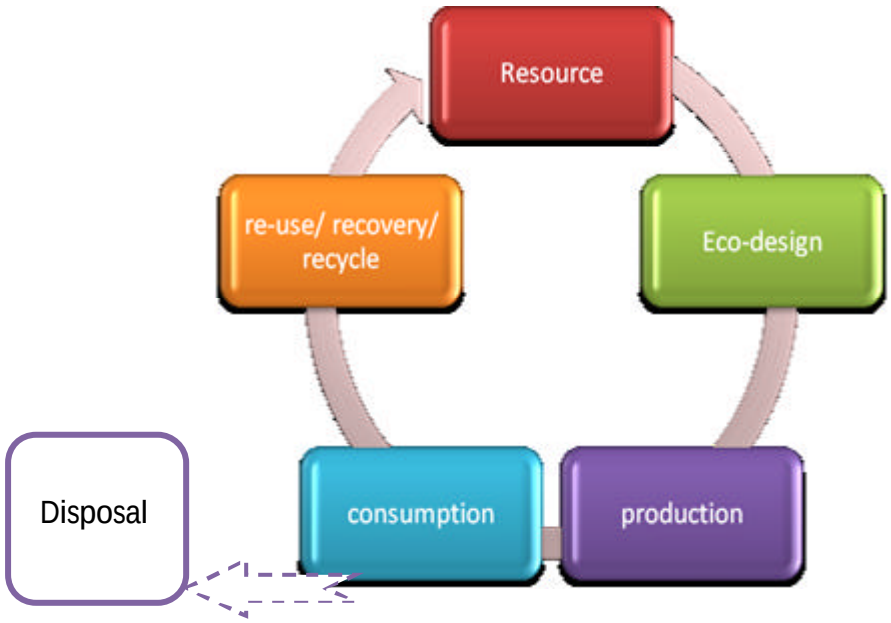
Similarly, the main objective contained in the European Sustainable Development Strategy (European Commission *Communication: on the review of the sustainable development strategy: A platform for action* COM (2005) 658 Final) is to promote change by ensuring that markets send the right signals. The Strategy considers by doing so, people are encouraged to change their behaviour and this, in turn will shape the market place. EPR is the method by which these changes are considered attainable:

> *This can be done by making sure that all of us, producers and consumers alike, face the full costs and consequences of our decisions – when we are making those decisions* (European Commission, 2006 at 15).

Extending the responsibility of producers throughout the lifecycle of their products, in particular, the point at which products become waste plays a key role in achieving the decoupling of economic growth from resource use. Internalising the costs associated throughout the lifecycle of a product including the collection, treatment and recycling of the product, producers are incentivised to substitute materials and alter product designs to accommodate all phases of a products life including disposal (See Figure 2 below).

There are a number of European Community (EC) Directives which impose producer responsibility on certain waste streams including Directive 1994/62/EC on packaging and packaging waste, Directive 2000/53/EC on end-of-life vehicles, Directive 2006/66EC on batteries and accumulators and waste batteries and accumulators and Directive 2002/96/EC amended by Directive 2003/108/EC on waste electrical and electronic equipment. These Directives all introduce the concept of EPR for the recycling and disposal of products at the end of their useful life. They encourage business to consider the end-of-life impact of their products at the design stage by specifying both certain thresholds for the use of hazardous substances in the manufacture and import of products and by placing weight based collection and recovery obligations on manufacturers and importers when their products become waste (DEFRA, BERR & DIUS 2008; see also, Bell and McGillivray 2006 at 570).

Figure 1: Extended Producer Responsibility Objective – The Closed Loop Economy



2 Purpose of the research

The research explores the interactions and dynamics amongst key UK stakeholders affected by the WEEE obligations during the transposition of the WEEE Directive into UK law. Lee (2008) observes that EPR legislative models, such as the WEEE Directive, are especially interesting since they involve a vast number of stakeholders whose interests may conflict, including: local and central government, producers,

trade associations, retailers, importers and exporters, non-governmental organisations as well as consumers. This paper examines the transposition process itself and seeks to understand the difficulties faced by businesses during an unusually lengthy process of transposing a European Directive at the nation-state level. In doing so, this paper provides practical guidance for similar EPR legislation that is transposed in future, and will outline the key lessons learnt from this study. No research has hitherto approached this topic from these perspectives.

Whilst Watson and Crowhurst (2007) critically analyse the UK WEEE Regulations, in terms of the products falling within the Directive's scope and outline the obligations that the Directive places upon different stakeholders, they do not offer any primary research findings to substantiate and support their analysis.

In reviewing other studies which focus on the transposition of WEEE, it is evident that the methodology taken in this research is unique in terms of gathering a fuller understanding of the dynamics of implementation. For example, Walther et al. (2009) discuss efficiencies and costs of the German system in terms of material flows before and after the implementation of the WEEE Directive, using quantitative data from one German disassembly company in their analysis. They deduce that the occurrence of reuse declines after the implementation of the WEEE Directive, and that this could be avoided by testing the products that are disposed of at collection centres. They also suggest that cost efficiencies could be improved in a number of ways; though again the focus here is more on logistical considerations rather than stakeholder interactions or dynamics. Khetriwal, Kraeuchi and Widmer (2007) examine the Swiss experience of adopting EPR to manage e-waste. Their analysis focuses in particular on ways to overcome logistical network issues, ensure full and fair compliance and securing financial support for the system. They offer recommendations for policy makers in establishing e-waste management and take-back schemes, whilst Huisman and Magalini (2007) provide a brief and generic overview in their paper of the key issues encountered at a European level by way of issuing guidance to the USA on how best to transpose similar legislation on a federal basis, as opposed to at the state level.

The requirement contained in Article 17(5) of the WEEE Directive on the European Commission to submit a report to the European Parliament and the Council on the

application of the WEEE Directive throughout Member States has resulted in a number of reports. Arcadis and RPA (March 2008), commissioned by the European Commission DG Enterprise and Industry explored the impacts of the WEEE Directive in respect of innovation (incentivising eco-design) and competitiveness (changes in commercial relationships along supply chain). Their findings indicated, amongst other things that the WEEE Directive's obligations and the methods by which they had been subsumed into Member State national law had had a very limited influence over decisions to allocate resources (people, time and money) to research and development (at p.XVI). In addition, they observed competition problems brought about by the lack of clarity of scope of the requirements and recommended the harmonisation across Member States through a revision of the WEEE Directive. As part of their evaluation of the implementation of the WEEE Directive in Member States, the United Nations University's (August 2007) "Administrative Burden Survey" highlighted a number of areas where the burdens experienced by stakeholders can be reduced. This includes improving: consistency in legislative requirements across Member States, consistency in registering and reporting activities across Member States and stakeholder awareness of specific responsibilities (at p.15). AEA Technology (2006) echoed the findings from the United Nations University by recognising that the difficulties experienced by many Member States with the implementation of the WEEE obligations arose as a result of the complexity of the Directive (specifically noted is: the definition of producer, product scope and labelling requirements) coupled with a lack of existing WEEE culture. These difficulties manifested themselves either in delays to transposition and/or ineffective legislation requiring secondary regulations and further clarifications (at p.5).

Following the findings from these studies, in December 2008 the Commission produced a proposed recast of the WEEE Directive. This seeks to address the technical, legal and administrative problems with the effective implementation of the WEEE obligations in Member States which were identified in the reports. At the time of writing, the proposed WEEE recast is currently being considered by the European Parliament's Committee on Environment, Public Health and Food Safety[1].

[1] (See, the referred dossiers to Committee ENVI available at: http://www.europarl.europa.eu/document/activities/cont/200912/20091204ATT65997/20091204ATT65997EN.pdf correct 09/12/2009)

This paper offers recommendations to government, policy makers and other stakeholders in organising, communicating and participating in the transposition process of European Directives. Once again, the WEEE obligations are on the political agenda in Europe and in the UK. With the proposed WEEE Recast at a critical legislative and political juncture, the timing is propitious to consider the transposition of the WEEE Directive and the lessons which can be learned for the future.

3 Methodology

In order to examine the process of transposing the WEEE Directive into UK law from the viewpoints of UK businesses and stakeholders, the study used a multi-phase methodological approach. The research sought to address a number of questions:

1. What were the experiences of UK businesses and stakeholders to the transposition process?
2. What were the strengths and weaknesses of the WEEE Directive's transposition into UK law from a businesses and stakeholder perspective?
3. What was the relationship between businesses, stakeholders and the lead government department during the transposition of the WEEE Directive? Do businesses and stakeholders consider this to be material to the quality of the transposing UK WEEE Regulations?
4. To what extent were businesses and stakeholders incorporated into the transposition process of the WEEE Directive?
5. To what extent did businesses and stakeholders consider the transposition of the UK WEEE Regulations to be effective?
6. How can the experiences of businesses and stakeholders involved with the transposition of the WEEE Directive into UK legislation improve future transposition of similarly complex extended producer responsibility legislation?

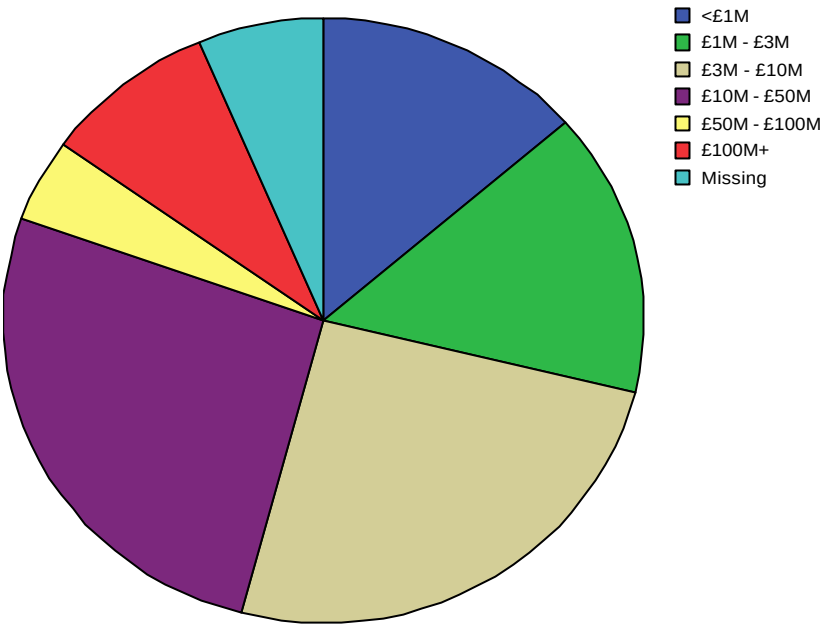
The empirical investigation was divided into three phases. Phase 1 comprised of a UK industry survey produced in both a postal and online form and disseminated in spring 2006. Phase 2 built on the findings of Phase 1 and involved a series of semi structured

interviews with European Community representatives, trade associations, UK businesses and relevant UK stakeholders. Following the commencement of the second compliance year of WEEE implementation in the UK, in autumn 2008 a follow-up survey disseminated to participants that had taken part in the Phase 1 survey was undertaken. Finding from this third phase are discussed in Working Paper Part 2. All Phases of the research were developed in accordance with the ethical guidelines set out in the ESRC *Research Ethics Framework* (ESRC, 2007).

3.1 Phase 1

Phase 1 was conducted following the announcement by the then Department of Trade and Industry (DTI) in January 2006 that there would be a further delay to the implementation of the WEEE Directive in the UK. A large-scale UK industry survey was launched in spring 2006 and sent to electrical and electronic goods manufacturers and other related industrial sectors in the UK. By the close of the survey in August 2006 the total number of responses received was 205. This represents a greater response by industry than that achieved by the DTI consultation in October 2006 (See, BERR October 2006). From the 205 responses 6% of participants fell within the category of micro companies (1-2 employees) and 76% were small to medium sized enterprises (SMEs. To be classified as an SME a business can have up to 249 employees). The remaining 18% of participants were large businesses with over 250 UK employees. From those businesses that supplied information on turnover, the vast majority of businesses (62%) had a turnover between £3M - £50M with the least number of respondents in the highest category of turnover of £100M or more and the lowest category of up to £1M (see Figure 2 below).

Figure 2: **Phase 1 Survey – Turnover £p.a.**



The questions contained in the survey were based upon (i) a desk-based legislative, policy and literature review and (ii) prior research conducted by the ESRC Centre for Business Relationships, Accountability, Sustainability and Society (BRASS). The previous research (Darby and Hines et al. 2004) focussed on the USA, examining factors that are likely to influence the nature and extent of the e-waste problem and determine the likely success or failure of strategies aimed at tackling it.

The survey sought participants' views on both the WEEE and RoHS Directives. This paper focuses on the responses relating to the WEEE Directive only. As such the research questions intended to gain an insight into the extent to which UK industry and other relevant stakeholders considered the requirements of the WEEE Directive to be effective in achieving its ambitions. In particular, the research investigated the attitudes and perspectives of industry representatives towards (i) the UK transposition process, led predominantly by the DTI and (ii) the way in which the DTI framed those obligations within the 2006 draft UK WEEE Regulations.

The survey, constituting Phase 1 of the research, was divided into seven distinct sections: (1) Company Information; (2) Effectiveness of the WEEE and RoHS Directives; (3) Experiences of the consultation process, the transposition and

implementation of the WEEE and RoHS Directives in the UK; (4) Eco-Design and Household WEEE Prevention; (5) Product take-back and end of life management; (6) The Social Economy (social enterprises, community waste groups or charities) and (7) Future Directions. A copy of the survey questions can be found in Appendix 1.

In particular, findings from sections 2 and 3 of the Phase 1 survey (with specific reference to the WEEE Directive) are analysed in this paper in order to assess business and stakeholder opinions and experiences during the UK transposition process for the WEEE Directive.

3.2 Phase 2

Phase 2 consisted of two strands of interviewing at both EU and UK level. The EU-level interviews consisted of semi-structured interviews with representatives from inter alia, the European Commission, European Parliament, Trade associations, Non-Governmental Organisations (NGO), Standardisation Committees, manufacturing and reprocessing associations.

By the date of the first UK interview 58% of surveys (n=119) had been returned. Indicative questions for the Phase 2 UK interviews were shaped from both the desk based research and the preliminary findings from the Phase 1 survey (Hines et al. 2006 at 11). The interviews were aimed at gaining a deeper understanding of the opinions and experiences of stakeholders affected by the formulation and transposition of the WEEE requirements in the UK. There was a mixture of face-to-face and telephone interviews where a face to face meeting was not viable for reasons of time, location or cost. In order to enable wider comparative analysis, data from Phase 2 was divided into key themes (Ezzy 2002). The data analysis and interview transcripts should be considered within the context of the limitations imposed by social science research. Mason (2000) notes that separation of the interview from the social interaction in which it is conducted is impossible, and therefore it is difficult to minimise bias in the conduct and analysis of empirical research. Consequently, caution should be used with regards to generalising the findings of this research and placing it within a wider regulatory context.

4 Regulating Waste Electrical and Electronic Equipment

The WEEE Directive is a result of the Fifth Environmental Action Programme (5EAP) in relation to the environment and sustainable development entitled "Towards Sustainability". The 5EAP recognised that achieving sustainable development requires changes to existing patterns of development, production and consumption behaviour. Building on the commitments established in the 5EAP, in 1996 the European Parliament considered that proposals for legislation in a number of priority waste streams should be put forward as a matter of importance. Article 4 of the Resolution identified six priority waste streams for European regulatory action which included electrical and electronic waste. The 1996 Resolution considered that proposals should be based on the principle of producer responsibility and should be aimed at reducing waste.

4.1 The WEEE Directive

The purpose of the WEEE Directive is to minimise the negative environmental and health impacts of WEEE and contribute positively to sustainable development by maximising the separate collection of WEEE from other forms of waste (House of Lords Science and Technology Committee, 2007). The overarching aim of the WEEE Directive is provided in Article 1:

> … *The purpose of this Directive is, as a first priority, the* ***prevention*** *of waste electrical and electronic equipment (WEEE), and in addition, the* ***reuse, recycling and other forms of recovery*** *of such wastes so as to reduce the disposal of waste. It also seeks to* ***improve the environmental performance of all operators involved in the life cycle of electrical and electronic equipment****, e.g. producers, distributors and consumers and in particular those operators directly involved in the treatment of waste electrical and electronic equipment.* [Emphasis added]

In this way, the WEEE Directive echoes the waste management hierarchy laid down in Directive 2008/98/EC on waste (see Figure 3). This waste management hierarchy, referred to as "the waste hierarchy" provides a priority order for the various waste management options. The five options which comprise the waste hierarchy establish "prevention" as the most environmentally sound waste management option. The European Commission acknowledges the importance of preventing waste arising in the 6EAP:

> *Waste prevention is closely linked with improving resource efficiency, influencing consumption patterns, and reducing the waste arisings associated with products throughout their lifecycle of production, use and the point where the product itself becomes a waste. Action to prevent waste must, therefore, be first and foremost done 'at source'…* (European Commission 2002, at para 6.2.3).

Prevention in the waste hierarchy is followed by "preparing for re-use", "recycling", "other recovery including energy recovery" and finally "disposal".

Figure 3: The Waste Hierarchy

Recital 4 of the WEEE Directive considers waste recovery and reuse to be the best environment options upon WEEE arising:

> *…promoting waste recovery with a view to reducing the quantity of waste for disposal and saving natural resources, in particular by reuse, recycling, composting and recovering energy from waste…*

However, waste prevention remains paramount in securing sustainable waste management. The WEEE Directive highlights the importance of establishing producer responsibility obligations for electrical and electronic equipment over the course of a product's life[2]. Accordingly, Recital 12 to the WEEE Directive provides:

[2] The WEEE Directive defines producers as: (i) companies who manufacture & sell their own branded products; (ii) companies who import EEE; and (iii) sellers of their own branded products produced by other manufacturers. Distributors are those who provide EEE on a commercial basis to the party who is going to use it.

> *The establishment…of producer responsibility is one of the means of encouraging the design and production of electrical and electronic equipment which takes into full account and facilitates their repair, possible upgrading, reuse, disassembly and recycling.*

Lifset recognises the ability of EPR mechanisms to generate both economic and political incentives for waste recovery and green design (Lifset, 1993). Undoubtedly, one of the key objectives of the WEEE Directive is to target electrical and electronic equipment at the earliest stage in a product's lifecycle, the design. The obligations contained in the WEEE Directive require producers to facilitate the dismantling and recovery for reuse and recycling of WEEE through specific design features or manufacturing processes (Article 4). To this end, Article 8(3) places a duty on producers to finance the costs of the management of WEEE according to their market share by product type. Moreover, Article 8(2) establishes individual and collective producer responsibility where:-

> *"each producer shall be responsible for financing the operations…relating to the waste from his own products. The producer can choose to fulfill this obligation either individually or by joining a collective scheme".*

Producers, or third parties acting on their behalf, must set up systems to provide for the separate treatment, recovery and recycling of WEEE using best available treatment, recovery and recycling techniques (Article 6 and 7 of the WEEE Directive). Article 5(2)(a) confers on local authorities the responsibility of establishing appropriate WEEE containers and their maintenance. Thus, separate collection of WEEE is achieved predominantly through local civic amenity sites.

Distributors' obligations include the establishment of 'bring back' systems for households whereby WEEE can be returned to the distributor free of charge (Article 5(2)). This means that consumers are able to return their WEEE on a one-to-one basis when buying new electrical and electronic equipment of equivalent type and fulfilling the same function. In addition, distributors and producers have a responsibility under Article 10(4) to provide information to consumers on their role in contributing to reuse, recycling and other forms of recovery of WEEE and the separate collection and treatment points available to them at the end of a products life.

The paper will now examine business and stakeholder experiences and views of the process by which the obligations contained in the WEEE Directive, as set out briefly above, were transposed into UK national law.

5 The transposition of the WEEE Directive into UK legislation

The WEEE Directive must be considered within the context of European politics, compromise and the legal nature and function of European directives. Directives bind Member States as to the objectives to be achieved, but provide Member States with the flexibility to achieve those objectives in the way that each Member State considers appropriate to its specific circumstances, administrative and infrastructural systems (Treaty of the European Community, Article 249). Directives are characteristically lacking in detail, they are general in approach and discretionary. As a form of European law, directives enable varied and often diverging interpretations between Member States and also between devolved administrations in the UK, as to the scope and meaning of the provisions within a directive. Member States must transpose the requirements contained in Directives into national law. Transposition is the preparation of national law which reflects the obligations laid down at European level. It is therefore, the transposition of the directive's obligations into national law by Member States that determines (i) the route by which the obligations will be implemented and (ii) the ability of Member States to achieve compliance with those requirements in order to avoid infringement proceedings (Treaty of the European Community, Article 226).

The transposition of European law into UK law is done by the UK government department considered most appropriate. Since the WEEE Directive relates mainly to producer responsibility and trade, transposition was led by the then DTI. The DTI was disbanded and replaced in June 2007 by the Department for Business Enterprise and Regulatory Reform (BERR) and the Department for Innovation, Universities and Skills (DIUS), with BERR taking over responsibility for the WEEE Directive[3]. The DTI's Final Regulatory Impact Assessment published in 2006 considered the purpose of the WEEE Regulations to be the reduction of environmental impacts of electrical and electronic equipment in the UK and particularly when these items become waste. The Assessment continued:

[3] BERR and DUIS were merged and replaced in June 2009 by the Department of Business, Innovation and Skills (BIS).

> "*Given the trans-boundary nature of these impacts, the SI [statutory instrument] is also intended to contribute to environmental protection at the European, and global, level more widely*" (DTI (b) 2006 at 1, para 1).

The WEEE Directive was due to be transposed by 13th August, 2004 however the UK was almost three years late in complying with this deadline. The discussion below examines the influencing factors and difficulties which contributed to the delay in transposition.

5.1 Split in responsibilities

The majority of the obligations contained in the WEEE Directive are transposed into UK law through the Waste Electrical and Electronic Equipment Regulations 2006, SI 2006 No.3289 (the WEEE Regulations 2006) which came into force in their entirety on 1st July, 2007[4]. Along with the WEEE Regulations 2006 which transposed the bulk of the WEEE Directive's requirements, separate regulations deal with the devolved matter of empowering the environmental regulator (the Environment Agency, Environment Agency Wales, the Scottish Environment Protection Agency in Scotland and the Northern Ireland Environment Agency) to ensure that the waste management licences for the treatment of WEEE meet the requirements of the WEEE Directive. In England and Wales these requirements are transposed jointly through the Waste Electrical and Electronic Equipment (Waste Management Licensing) (England and Wales) Regulations 2006 SI 2006 No. 3315 and in Scotland they are transposed through the Waste Management and Licensing (Waste Electrical and Electronic Equipment) (Scotland) Regulations 2007, SSI 2007 No.172. Although the regulations dealing with the registration and monitoring of obliged producers have been made separately by Scotland they remain almost identical to their England and Wales counterpart regulations (Ross et al. 2009).

> *The WEEE Directive is an environmental Directive that covers some devolved policy matters. Therefore, the Devolved Administrations; the Scottish Executive, the Welsh Assembly Government and the Northern Ireland Administration have the discretion to decide implementation for their own territories. However, the WEEE Regulations provide a uniform, UK-wide implementation* (WEEE Consultation Part II, 2006 at 1).

[4] Most of the obligations relating to WEEE came into force on January 2, 2007 except those concerned with the marking of EEE (which came into force on April 1, 2007) and distributor obligations and rights (which came into force on July 1, 2007).

For England and Wales the transposition of these requirements of WEEE were led by DEFRA. The split between lead government departments of the WEEE Directive's producer responsibility obligations and the environmental licensing requirements between DTI and DEFRA was considered in the Partial Regulatory Impact Assessment as the most effective way to facilitate streamlining for the necessary WEEE infrastructure and enable parties to discharge their obligations cost-effectively. Whilst the DTI was responsible for the market share based WEEE allocations for producers, the Environment Agencies, provide the registration and monitoring service (DTI 2005 at 4, para 23). Splitting responsibility between appropriate government departments for transposing specific aspects of a Directive is not uncommon but this division of responsibility must be clearly defined and publicised. Furthermore, it becomes even more important to ensure cross-department liaison between government departments to ensure a consistent approach. In the case of the WEEE Directive transposition stakeholders considered that:

> [the] *DTI and DEFRA… it's not joined up in any way at all and I don't think Government policy is underpinned by that principle at all*.

Government policy on transposing European directives, set out in the 2007 Transposition Guide entitled "*How to implement European directives effectively*" produced by BERR describes how to transpose directives in a way to ensure, in a proportionate manner, compliance with the Community obligations. The overarching Government policy in this regard is "to transpose so as to achieve the objectives of the European measure, on time and in accordance with other policy goals, including minimising the burdens on business" (BERR 2007 at 7, para 1.3).

5.2 Delays

There are sometimes good reasons for delay in implementation and it is preferable to deliver law which is clear, certain, effective and cohesive than it is to introduce legislation to simply meet a deadline. Indeed, the Davidson Review concludes that it is better to transpose late than to implement a Directive poorly but on time (Better Regulation Executive, 2006). The transposition of the WEEE Directive was almost 3 years late. According to the DTI, the postponement of the producer responsibility obligations of household WEEE occurred due to "major practical difficulties"

(www.letsrecycle.com, March 2005). The problem was focused predominantly on how to get WEEE from those who discard it (i.e. consumers) to producers who are obligated to deal with it, whether each individual producer should physically handle WEEE through a system of individual producer responsibility or be able to discharge their obligation to third party by financial means under collective responsibility (DTI (b), 2006 at 9, para 31). In the case of the WEEE obligations, the infrastructure required by the obligations was a significant hurdle, as AEA Technology acknowledged many Member States struggled with the implementation of the WEEE requirements since they did not have a "WEEE culture" (at p.iv). In December 2005, the DTI announced that the implementation of the WEEE obligations on producers and distributors of electrical and electronic equipment in the UK would be delayed. According to the DTI's Final Regulatory Impact Assessment the aim of this announcement was to

> "*ensure that the UK established a robust and workable system for WEEE, which could achieve the environmental benefits of the Directive in a cost-effective manner, over the short-term and into the medium-term*" (DTI(b) 2006 at 9, para 30).

The delay in implementation of the WEEE obligations resulted in the European Commission beginning infraction proceeding against the UK for failing to fulfil their Member State obligations (see, Judgment of the Court (Sixth Chamber) of 1 March 2007 - *Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland*, Case C-139/06). Notwithstanding the delays in the transposition, there are benefits to utilising fully the timeframe for transposition. It allows for effective and detailed consultation and scrutiny of measures which may produce more practical implementation in the long run. However, the extent to which the delays in the implementation of WEEE obligations can be considered to have led to a more efficient and streamlined system where burdens on business and stakeholders are minimised is debateable.

5.3 The Consultation Process

The implementation of all EU measures into UK law is subject to consultation. However, the way in which the consultation process is undertaken, the point it begins, the intensity of the consultation and the number of consultations vary depending upon the nature and the requirements of the Directive and the demands placed on the

present infrastructure, administrative and regulatory systems (Ross and Nash, 2009). Whilst the Cabinet Office has produced a code of practice in relation to consultations it provides only vague guidance as to best practice and provides very little detail. (Cabinet Office Better Regulation Executive, September 2005). It sets out six basic criteria: (1) consult widely throughout the process allowing a minimum of 12 weeks at least once during policy development; (2) be clear about what your proposals are and who may be affected by them; (3) ensure that your consultation is clear, concise and widely accessible; (4) provide basic feedback from responses; (5) monitor the department's effectiveness at consultation and (6) ensure your consultation follows better regulation practice. Whilst this document provides skeletal guidance on consultation, the consultation process remains characterised by a heavy reliance on informal and adhoc cross-administration liaison and communication at a 'functional level' between individuals (see, Bulmer, Burch, Hogwood & Scott 2006 at 85). While this may be effective for those within the administrations, such informality is frustrating for those outside the system.

Although the DTI undertook a review of implementation of the WEEE Directive, an informal consultation process and held three public consultations on proposals for implementing the WEEE Directive in order to inform the transposition, 48% of Phase 1 participants still considered that their involvement in the transposition process was limited and the opportunity for involvement was restrictive. It appears that the consultation processes carried out by the lead Government department must be conducted in a clear and inclusive way in order to provide business and stakeholders with an effective consultation system which enables them to inform and shape the scope and system practicalities of regulatory measures by which they will be affected. The limitations to business and stakeholder involvement in the transposition of the WEEE Directive into national law were voiced further by Phase 2 participants:

> *…the WEEE Directive has been an untransparent… process from start to finish, in my view. And I think that the problem that we've had in this country is that the original intended purposes of the WEEE Directive have been lost* [sic] (Participant ID 06).

5.4 Lack of information

In 2003 the Better Regulation Task Force published a report on the ongoing implementation of EU legislation focusing, in particular, on the Directive on end-of-life vehicles and the WEEE Directive. It offered a number of recommendations with a view to improving the transposition and implementation process. Recommendation 3b refers to the importance of enabling involvement in the process through early engagement and provision of information to stakeholders and the public:

> *ELV and WEEE project plans, with all critical dates, decisions and milestones, should be published as soon as possible and updated when changes are made. If changes are made, it should be clear what these are and why they have been made* (Better Regulation Taskforce 2003 at 6, Recommendation 3b).

In response to the Better Regulation Task Force's report, the Government accepted all bar one of the recommendations. The Government provided the routes used to inform third parties of the WEEE timetable for consultation and implementation:

> *These WEEE/RoHS guides on practical issues alongside the widely publicised consultation timetable and supporting activity form the core of the Government's communications strategy. The next detailed consultation phase … will be underpinned by promotional work involving press articles and conference presentations. Following the success of the series of 30 UK awareness seminars a series of eight much larger events are planned throughout the UK over the winter months. The many hundreds of stakeholders already contacted will also directly receive updates* (Better Regulation Commission Cabinet Office 2003 at para 6.2).

However, the Government conceded that circumstances may arise which will affect the proposed timescale for implementation:

> *Unforeseen circumstances can force an implementation schedule off track… In cases such as these, the Government will update the published implementation timetables as often as necessary*. (Better Regulation Commission, Cabinet Office 2003 at para 3.5 & 3.6)

Results from the Phase 1 survey found that 52% of participating stakeholders considered that the consultation process was not conducted in a fair, equitable or timely manner:

> [The consultation process] *has been largely opaque. It has obviously been full of prevarication and incompetence…no-one in the DTI has been able to provide concrete, believable details, even of timescales…* (Participant ID 373526)

Informing the public and all relevant stakeholders at an early stage in the transposition of Directives of forthcoming obligations and the timetable for consultation are paramount elements to achieving feedback from parties regarding the most efficient and least burdensome ways to introduce new duties. AEA Technology (2006) found that generally consultation at national level in Member States had been "very extensive" however, the conceded that timing of consultation contributed to delays in transposition of the WEEE Directive, "despite the fact that the Directive had been under discussion for several years before being approved" (at p.11).

Furthermore, the nature of the WEEE requirements is predicated upon coherent and coordinated infrastructure along with effective supply chain partnerships and broad working relationships across a variety of sectors. Therefore, opportunities for consultation must be widely publicised in a timely manner using a variety of media at local, regional and national level and reasonable opportunity to respond to consultations must be factored within the consultation timetable by the lead government department. One participant considered that the consultation process itself was transparent but the way in which decisions were ultimately taken on how best to transpose the WEEE Directive was not:

> *…they're* [consultation responses are] *not really taken any notice of at all and from a transparency perspective the process has been transparent but the decision making has been anything but transparent… Whose opinions do they* [the DTI] *actually value? And, who is getting to influence the decision is very, very difficult to understand* (Participant ID 23).

Indeed, 51.6% of participants in the Phase 1 survey felt that the DTI did not give sufficient recognition to their comments:

> *…the DTI have not listened to the producers…* (Participant ID 382432).

> *… The consultation process has not been the best and there are a million reasons behind that. It needs to be the best if this is going to work properly, it really does have to involve, and be listened to at a senior level by those people that are going to have to make this work and that's principally the major producers, the major retailers and the local authorities* (Participant ID 01).

5.5 Inadequate project planning

Key to efficient transposition and better regulation of EU obligations at Member State level is early design and co-ordination of a project plan. The 2007 Transposition Guide recognises that the project plan "should set out the timing and resources required in order to transpose the legislation properly and on time" (BERR, September 2007 at 21, para 3.2). Likewise, the Davidson Review highlighted the important role the transposition plan has in achieving clear national legislation:

> *There will need to be proper planning to enable sufficient resources to be devoted, early on in the process, to ensuring that an implementation fits properly into the legal regime rather than overlaying the existing position with a new layer of complexity* (Davidson Review, November 2006 at 38, para 3.8).

Yet, participants in the research study considered that the transposition process of the WEEE Directive was flawed from the outset by an insufficient and poor transposition work plan:

> *…I know they had a lot of changes of staff but they just didn't resource it right. They didn't think about it in the right way to begin with and they didn't resource it correctly* (Participant ID 23).

> *…they could have been more open, they could have planned things better, its project management really at the end of the day* (Participant ID 07).

5.6 Changes in personnel

Over the course of the transposition of the WEEE Directive the DTI team changed a number of times. This led to concerns being raised both publically by the Environmental Regulators and also during the empirical research. In evidence to the Scottish Parliament's European and External Relations Committee inquiry into the transposition of EU directives, the Scottish Environment Protection Agency recalls that during the process of transposing the WEEE Directive:

> *there were a number of personnel changes in the department while the Directive was being formulated and the discussions and negotiations at the UK level were at a critical stage…In the absence of full procedures, changes to the individuals in departments in particular policy areas can mean significant shifts in either position or understanding* (SEPA Oral Evidence, Feb 19, 2008 at col.402 as amended in the oral evidence March 11, 2008 col.471).

Similarly, participants in Phase 1 of the research commented:

> *The DTI team has changed 5 times…working against the continuity and providing a useful excuse for the present team to blame their predecessors – but the process itself was flawed from a project management viewpoint…* (Participant ID 380060);

> *There's been no continuity. The moment a new set of officials come you have to go round the same loops and the same process of explanation, at the end of which, you arrive at the same insoluble problems* (Participant ID 06).

Whilst changes in personnel appear to have led to revisions and overlaps in the consultation process and a general sense of inefficiency, consultation nevertheless took place and opportunities for involvement in the process seem to have been provided by the various DTI teams:

> *In four years I think I've had to…I've held discussions with four of five different DTI lead senior civil servants* (Participant ID 02).

Such challenges to a coherent transposition and consultation process are not unique to the WEEE Directive's implementation since movement of personnel is fundamental to the nature of the civil service:

> *…the problem is the way that the civil service is structured, is that people do tend to move on every four or five years* (Participant ID 22).

A further and detrimental impact of the changes in personnel was had on the timescale of the implementation. This was one of the pressures contributing to the delay in transposing the WEEE Directive in the UK:

> *Delays and vacillation by sponsoring government body – appallingly written first and second draft – it's plain that the authors did not understand the engineering aspects of the subject…* (Participant ID 384244).

5.7 Lack of expertise

Recommendation 2 in the Better Regulation Task Force's report recognised the importance of tapping into expertise early in the transposition process not only from within government departments but also externally:

> *From the earliest stage of developing waste policy and implementing new waste legislation, the Government should draw on the advice of a range of experts from outside Government. This includes seconding experts into Departments to develop policy alongside officials* (Better Regulation Taskforce 2003, at 6, Recommendation 2).

The perceived lack of industry experience within the DTI team was highlighted in the research interviews:

> *…these people have just got to have some industry experience I think… if there's a piece of legislation…that has major implications for the retail sector …but they do really have to really understand how these … how retail operates and how the waste management you know, infrastructure fits and everything else. And that can only come with work experience* (Participant ID 04).

5.8 Scope of WEEE obligations

Some participants in Phase 1 and Phase 2 of the study considered that the WEEE Directive had been unclear in terms of definitions and scope from the outset:

> *Although the aims and objectives of the WEEE Directive are laudable, the scope of the WEEE Directive is a mess as there are too many 'grey' areas and uncertainties. We are faced with the situation where different Member States have different interpretations meaning that the Annex 1A Category, or even whether a product is included within the scope, could be dependant the Member State. This is not conducive to a 'single market'* (Participant ID 377410);

> *Weaknesses are the variances in scope interpreted across EU member states. Scope should have been far more specific* (Participant ID 373475).

These findings echo those observed in the UNU (2007) and Arcadis and RPA (2008) reports. One of the problems with the WEEE obligations is the difficulty in concretely establishing operations and products which fall within the scope of the obligations and those that do not (see AEA Technology, 2006 at p.11). Particularly, when considering the speed that technology and design advances at. Part 2 examines the effectiveness of the UK WEEE Regulations 2 years on, however it is worthy of note that 36% of Phase 3 participants felt that the Regulations placed excessive burdens on them and 60.6% considered that the WEEE Regulations remained unclear.

One of the results of the lack of clarity of scope to the WEEE obligations was a general reluctance on the part of producers of electrical and electronic equipment to make investment decisions in advance of the implementation of the transposing WEEE Regulations. Indeed, 60.6% of Phase 1 participants considered that the DTI had failed to communicate the requirements of the WEEE Directive to relevant stakeholder groups. In addition, just 20% of participants considered that there was adequate guidance and information available to enable investment decisions in advance of the implementation of the UK WEEE Regulations:

> *It's been very unclear what was required from a business for them to comply with [the WEEE] directive. And there's been nobody there giving them a definitive response. They ring up the DTI and say 'well is my product within the scope of these directives?'… They want black and white and they've been given all the shades of colours in between* (Participant ID 19).

6 Conclusions & Recommendations

Getting through the EC co-decision procedure and adopting any European Directive is no mean feat. A directive is very much a political compromise between 27 diverse Member States. This forum coupled with the practical difficulties in achieving the objectives of WEEE and navigating through the various needs and demands of industry, consumers, policy-makers, other stakeholders and lobbyists inevitably dilutes and alters the initial intentions of the European Commission. Whilst directives, as a form of European law, enable flexibility for Member States to transpose as they see fit compliance, clarity and certainty regarding the duties imposed by the legislation can be precluded by the absence of refined provisions within the European measure. As a result, the UK's transposition process suffers from the practical weaknesses inherent in the WEEE Directive as well as the legislative duty as a Member State to comply with the European obligations whilst, at the same time, meeting their national policy in transposing in a way that minimises administrative burdens.

The WEEE obligations posed particularly acute difficulties due to the breadth of impact on a variety of sectors as well as the need to establish appropriate, efficient and convenient infrastructure alongside the introduction of new collection systems for WEEE. To some extent, the difficulties and controversies in the transposition of the

WEEE Directive, expressed by participants was foreseeable for example, in relation to how producers under the scheme fulfil their obligations. Definitive and earlier project planning for transposition was necessary to ensure legislative certainty, clarity, involvement in and the timely transposition of the WEEE Directive.

The transposition of the WEEE Directive was always going to be plagued with difficulties and controversies in relation to, for example how producers under the scheme will fulfil their obligations contained in the Directive. From the research findings, it appears that the UK transposition process of the WEEE Directive has been confusing for businesses in terms of understanding the scope of their obligations. In general, the transposition process was characterised by a lack of clear, reliable and accessible information, which had a negative impact on engaging businesses and stakeholders effectively, and was further exacerbated by severe delays. Furthermore, the transitory nature of the civil service was a factor that impacted detrimentally on the transposition process. In the experiences of the participants involved in this study, these problems were exacerbated by flawed decision-making from the outset of transposition and include: the decision to split the responsibility for the transposition of the WEEE obligations between the DTI (for producer responsibility elements of the Directive) and DEFRA (for the waste management licensing aspects of the Directive)[5].

There are some clear lessons to be taken from these research findings for the benefit of future transposition of similarly complex EPR legislation. In order for EPR to be successfully introduced into national law, the appropriate government departments must from an early stage work closely and transparently with each other and external stakeholders to develop solutions that increase awareness and participation and minimise burdens whilst ensuring full compliance with European obligations.

The UK transposition process of the WEEE Directive has been confusing for businesses in terms of understanding the scope of their commitments, which was detrimental to up-front and proactive investment to ensure compliance. The process was characterised by a lack of clear, reliable and up-to-date information, which had a

[5] See above for a fuller discussion of the split in transposition responsibilities.

negative impact on engaging businesses and stakeholders effectively, and was further exacerbated by severe delays. The perceived lack of industry experience amongst officials resulted in stakeholders mistrusting in their ability to deliver appropriate legislation. Furthermore, the transitory nature of the civil service can be detrimental to transposition processes of EU legislation, in particular where the process is likely to be lengthy, complex and involving multiple stakeholders, which was apparent in the course of transposing WEEE given the four changes observed in DTI teams.

All efforts should be made to ensure that information available to stakeholders is accurate, reliable and up-to-date, and offered in a variety of formats and media. This is true of processes at both EU and member state level. This should also include clear information on the team responsible for the transposition process, detailing their relevant experience to the area, which can help in building trust and a good rapport between government departments and stakeholders. If there are any personnel changes or whole team rotations, this should also be communicated clearly to circumvent any repetition of discussions from previous consultations or any resultant administrative delays.

To better ensure stakeholder involvement at the point at which a Directive is being introduced at EU level, information channels and groups should be established (see the Scottish Parliament's Inquiry into the transposition of EU directives in Scotland). This would strengthen the communication channels with key stakeholders, competent authorities and interested parties in order to inform the debate and take a position at a stage where the proposed Directive can potentially be influenced prior to adoption. Where businesses are key stakeholders, special consideration of how best to communicate with SMEs is instrumental in ensuring successful transposition. It is not sufficient to assume that all SMEs are a member of a Trade Association who can provide them with the information, or that they will have the resources to deal with the information independently. Transparency in whose consultation responses have informed decisions will ensure that there is no bias towards strong or powerful lobby groups that might otherwise be dominated by larger, multinational businesses or interest groups.

In current European discussions around the WEEE Recast Directive, emphasis should be on how the obligations can be amended to best reflect the original spirit and intention of the Directive. This will require deeper deliberation with decentralised institutions, buy-in from producers to shift their focus on increased and improved eco-design, as well as strengthening the education and role of consumers in reducing the environmental impact of WEEE. Although these steps will not be without complications, to compare with the problems encountered in the initial transposition, extant frameworks should provide a clearer standpoint for all key stakeholders in deliberating how improvements should realistically be taken forward.

Bibliography

- European Law & Policy
- Directive 2008/98/EC on waste and repealing certain Directives [2008] OJ L 312/3.
- Directive 2003/108/EC on waste electrical and electronic equipment [2002] OJ L 345/106.
- Directive 2002/96/EC amended by Directive 2003/108/EC on waste electrical and electronic equipment [2003] OJ L 37/24.
- Directive 2002/95/EC on the Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment [2002] OJ L 37/19.
- Directive 2000/53/EC on end-of-life vehicles [2000] OJ L 269/34.
- Directive 1994/62/EC on packaging and packaging waste [1995] OJ L 65/10.
- Directive 1975/442/EEC on waste [1975] OJ L 194/39.
- Decision 1600/2002/EC, Articles 5-8. Air pollution, waste prevention and recycling, protection of the marine environment, soil, sustainable use of pesticides, sustainable use of resources and the urban environment.
- European Council and the Representatives of the Governments of the MS, Resolution on a Community programme of policy and action in relation to the environment and sustainable development OJ C 138/1.
- European Commission, Communication on the sustainable consumption and production and sustainable industrial policy action plan COM (2008) 397/3.
- European Commission (a) *Communication on the sustainable consumption and production and Sustainable Industrial Policy Action Plan*, COM (2008) 397/3 at 2.
- European Commission (b) *Proposal for a Directive on waste electrical and electronic equipment (recast)* COM 2008/810/4.

- European Commission *Communication: on the review of the sustainable development strategy: A platform for action* COM (2005) 658 Final.
- European Commission *Communication on the sixth environment action programme Environment 2010: Our Future, Our Choice – The Sixth Environment Action Programme* COM (2002)
- European Commission *Communication: A sustainable Europe for a better world: A European Union strategy for sustainable development* COM (2001) 264 Final.
- Judgment of the Court (Sixth Chamber) of 1 March 2007 - *Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland*, Case C-139/06.

- <u>UK Law & Policy</u>
- The Waste Electrical and Electronic Equipment Regulations 2006, SI 2006/3289.
- *R (Horvath) v Secretary of State for Environment, Food and Rural Affairs* [2007] EWCA Civ 620
- BERR (December 2007) *WEEE Regulations 2006: Government Guidance Notes* (BERR, London) URN 07/1631.
- BERR (September 2007) *Transposition Guide: How to Implement European Directives effectively*. (London, BERR).
- BERR (August 6, 2007) *WEEE Letter to Lamp Producers*
- BERR (August 2, 2007) *WEEE Regulations: Mixing of WEEE collection streams*
- BERR (August 2007) WEEE re-use and refurbishment organisations.
- BERR (July 5, 2007) *Waste Electrical and Electronic Equipment Regulations 2007: the role of approved authorised treatment facilities.*

- Cabinet Office Better Regulation Executive *Code of practice on consultation* London, Cabinet Office, September 2005)

- DEFRA (2007) *Waste Strategy for England 2007* (DEFRA, London) CM 7086.

- DEFRA (November 2006) "Guidance on best available treatment recovery and recycling techniques (BATRRT) and treatment of waste electrical and electronic equipment (WEEE) (DEFRA, WAG, Scottish Executive).

- DTI (April 18, 2007) *Role of Local Authorities under WEEE: Letter to waste disposal authorities in England* (DTI, London).

- DTI (April 2007) *Letter on the role of distributors under the WEEE Regulations 2006*.

- DTI (February 2007) *Code of Practice for collection of WEEE from designated collection facilities* (DTI, London) URN 07/657.

- DTI (December 2006) *WEEE Consultation Response: Summary of responses and Government response to fourth consultation on implementation of Directives 2002/96/EC and 2003/108/EC on waste electrical and electronic equipment (WEEE)* (Department of Trade and Industry, London) URN 06/2196.

- DTI (b) (December 2006) *WEEE Consultation: Final regulatory Impact Assessment for the WEEE Regulations* URN06/2206.

- DTI (2005) *Partial regulatory impact assessment on the proposed environment agencies fees (WEEE fees) for implementation in the UK of Directive 2002/96/EC of the European Parliament and of the Council on Waste Electrical and Electronic Equipment ("WEEE Directive")* (DTI, London) URN 05/2144.

- DEFRA, BERR & DIUS (2008). Written evidence to House of Lords Inquiry into Waste Reduction.

http://www.parliament.uk/documents/upload/st1BERRDefraDIUS.pdf accessed 24/11/2008

- H M Government (1994) *Sustainable Development: The UK Strategy*, CM 2426.
- House of Commons Environment Food and Rural Affairs Committee *Report: End of Life Vehicles Directive and Waste Electrical and Electronic Equipment Directive Fourth Report of Session 2003-04*.
- House of Lords Science and Technology Committee (2007) *6th Report of session 2007-08: Waste reduction* HL Paper 163-I.

- Books and Journals
- AEA Technology (2006) *Implementation of waste Electric and Electronic Equipment Directive in EU 25* (European Communities: Luxembourg).
- Arcadis & RPA (March 2008), *Study on RoHS and WEEE Directive – Final Report*, 06/11925/AL.
- Association of Cities and Regions for Recycling (2000) *The Management of Waste Electrical and Electronic Equipment: A Guide for Local Regional Authorities* (ACRR, Brussels).
- Bell, S and McGillivray, D (2006) *Environmental Law* (Oxford, Oxford University Press).
- Better Regulation Commission, Cabinet Office (2003) *Environmental Regulation: Getting the message across – Letter from Stephen Timms to Better Regulation Task Force accompanying Government Response*. Available online at: http://archive.cabinetoffice.gov.uk/brc/government_responses/envirregreponse.html accessed 14th January 2009.
- Better Regulation Taskforce (2003) *Environmental Regulation: Getting the message across*.

- Brezet, H (1997) "Dynamics in ecodesign practice" *Industry and Environment* 20(1-2): 21-24.

- Bryman, A., (2001) *Social Research Methods* (Oxford, Oxford University Press).

- Cooper, T (2000). "WEEE, WEEE, WEEE, WEEE, all the way home? An evaluation of proposed electrical and electronic waste legislation" *European Environment* 10: 121–130.

- Cooper, T (Date Unknown) "Longer lasting products" New Economics Foundation, Beyond Recycling: The Lo nger Life Option (New Economics Foundation, London) Available online at: http://www,aislingmagazine.com/aislingmagazine/articles/TAM19/Products.html Accessed 07/11/2008.

- Darby, L & Obara, L (2005) "Household recycling behaviour and attitudes towards the disposal of small electrical and electronic equipment" *Resource, Conservation and Recycling* 44: 17–35.

- Darby, L., Hines, F., and Williams, A., (2004) *Managing Waste Electronics in the USA: A Preliminary Analysis* BRASS working paper series: Cardiff.

- Directgov (2008) "Electrical goods and gadgets: greener choices". Available online at: http://www.direct.gov.uk/en/Environmentandgreenerliving/Greenershopping/DG_064423 Accessed 5/11/2008.

- ESRC (2007) "Research Ethics Framework". See, http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Images/ESRC_Re_Ethics_Frame_tcm6-11291.pdf accessed 07/11/2008.

- European Commission, *The review of Directive 2002/96/EC on waste electrical and electronic equipment (WEEE),* June 2006.

- Ezzy, D. (2002) *Qualitative Analysis: Practice and Innovation* (London, Routledge).

- Featherstone, M. (1991) *Consumer Culture and Postmodernism* (London, Sage Publications).

- Fontanna, A. and Frey, J. H. (2000) "The interview: From structured questions to negotiated text". In Denzin, N. K., and Lincoln, Y. S. *Handbook of Qualitative Research* (Thousand Oaks, Sage).

- Hines, F., Ponting, C., and Williams, A., (2006) *Interim Summary Report: WEEE and RoHS Implementation and Impact UK Survey*, Cardiff, BRASS.

- House of Commons Hansard Written Answers 26 February 2007, Column 1039W.

- House of Lords Hansard vol 69 Part 41 7 February 2007, Column 778.

- House of Lords Science and Technology Committee Inquiry (2007) – *Waste Reduction. Electronic Producers Environmental Policy Forum Submission*.

- House of Lords Science and Technology Select Committee *Inquiry into Waste Reduction* Written Evidence submitted jointly by DEFRA, BERR and the Department for Innovation, Universities and Skills (DIUS).

- Huisman, J. and Magalini, F. eds. (2007). *Where are WEEE now? Lessons from WEEE: Will EPR work for the US?* IEEE International Symposium on Electronics and the Environment.

- International Panel for Sustainable Resource Management (2008) *Achieving Synergies in 2010-2011* Rome, Italy, United Nations Environment Programme, 8.

- Jacobs, G. (2008). "The implementation of the Regulation of Electrical and Electronic Products (WEEE and RoHS Directives) - An evaluation of the Belgian situation in light of the review of Directive 2002/96/EC and 2002/95/EC." *European Energy and Environmental Law Review* 17(4): 199-212.

- Johnson, J. C. and S. C. Weller (2001) "Elicitation Techniques for interviewing". In, Gubrium, J. F. and Holstein, J. A. *Handbook of Interview Research*" (CA, Thousand Oaks).

- Kahn, R. and Cannell, C., (1957) *The Dynamics of Interviewing* (New York, John Wiley).

- Kuehr, R & Williams, E (2003) *Computers and the Environment Understanding and Managing their impacts* (Netherlands, Kluwer Academic Press).

- Lee, R., G., (2008) "Marketing Products under the Extended Producer Responsibility Framework: A Battery of Issues", *Review of European Community & International Environmental Law* 17(3): 300 - 307

- Legislation News: DTI confirms 2006 start for producer responsibility (March 2005) www.letsrecycle.com accessed 25/11/2008.

- Lifset, R. J (1993) "Take it Back: Extended Producer Responsibility as a Form of Incentive Based Policy" *Journal of Resource Management and Technology*, 21(4): 163-175

- Mason, J. (2000) *Qualitative Researching* (London, Sage).

- McDonough, W & Braungurt, M (2002) *Cradle to cradle: remaking the way we make things* (New York, North Point Press).

- Miles, M. B & Huberman, A. M (1994) *Qualitative data analysis: An expanded sourcebook* (Newbury Park, CA, Sage).

- Oppenheim, A. N (1992) *Questionnaire Design: Interviewing and Attitude Measurement* (London, Pinter).

- Organisation for Economic Co-Operation and Development (2001) *Extended Producer Responsibility: a Guidance Manual for Governments* (Paris, OECD Publishing).

- Østergaard, P and Beckmann, S. C (2007) "Consumer Policy and Consumer Society: The Need for a Cultural Turn – A work in progress" (Paper for the Nordic Consumer Policy Research Conference, Helsinki October 3-5 2007).

- Ponting, C (2007) *A New Green History of the World: The Environment and the Collapse of Great Civilisations*. Michigan, Penguin Books

- Ross, A & Nash, H (2009) "European Union Environmental Law – Who legislates for whom in a devolved Great Britain" *Public Law* July (3) 564-594.

- Ross, A., Nash, H & Reid, C. T (2009) "The implementation of EU environmental law in Scotland*" Edinburgh Law Review* (13): 224-251

- Scottish Parliament European and External Relations Committee *Inquiry into the transposition of EU directives*: Oral Evidence, January 22, 2008, Renfrewshire Council, John Patterson.

- Scottish Parliament European and External Relations Committee *Inquiry into the transposition of EU directives*: Oral Evidence, Feb 19, 2008, SEPA at col.402 as amended in the oral evidence March 11, 2008 col.471.

- Thankappan, S., Marsden, T., Flynn, A., & Lee, R., (2004) *The battle for the consumers: building relationships in a new phase of contested accountability in the UK food chain*, BRASS working paper series, Number 17.

- The United Nations University (August 2007) *2008 Review of Directive 2002/96 on Waste Electrical and Electronic Equipment (WEEE) – Final Report* (European Commission: Luxembourg).

- Uitermark, J & Cohen, P (2006) "Amphetamine users in Amsterdam: Patterns of use and modes of self-regulation" *Addiction research & theory* 14(2): 159 -188.

- Veblen, T (1970) *The Theory of the leisure class: an economic study of institutions* (London, Unwin Books).

- Walther, G. et al. (2009). "Implementation of the WEEE-directive - economic effects and improvement potentials for reuse and recycling in Germany". *International Journal of Advanced Manufacturing Technology*: 1-14.

- Watson, E. and Crowhurst, G. (2007). “The implementation of the WEEE directive in the UK - A critical analysis”. *European Environmental Law Review* 16(6):163-175.

- West Sussex County Council *How WEEE has become Big for recycling in West Sussex*, 2007 Available at: http://www.westsussex.gov.uk/ccm/content/your-council/news-room/press-releases/2007/2007-08/how-weee-has-become-big-for-recycling-in-west-sussex.en;jsessionid=aZkp4QdSOJM8 Accessed 02/05/2009.

Appendix 1 – Phase 1 Survey Questions

WEEE and RoHS Implementation Questionnaire

Company Information

1. **Please tick the sectors which correspond with your company's activities/product groups:**

☐ Large household appliances
☐ Small household appliances
☐ IT & telecoms equipment
☐ Consumer equipment
☐ Lighting equipment
☐ Electrical and electronic tools
☐ Toys, leisure and sports equipment
☐ Medical devices
☐ Monitoring and control instruments
☐ Automatic dispensers
☐ Other, please specify _____

2. **Please indicate the applicable turnover range for your company:**

☐<£1M ☐ £1M - £3M ☐ £3M - £10M ☐ £10M – £50M ☐ £50M - £100M ☐ £100M+

3. **Number of employees: UK** _____ **Worldwide (if applicable)** _____

Effectiveness of the WEEE and RoHS Directives

4. **To what extent do you think the WEEE and RoHS Directives have been effective in terms of promoting the following? Please rate both WEEE and RoHS using a scale of 1 – 5, where:**

1 = Strongly disagree **2 = Disagree** **3 = Neither agree nor disagree** **4 = Agree** **5 = Strongly agree**

	WEEE	**RoHS**
Product eco-design		
Prevention of household electronic waste		
Improvement in end-of-life treatment standards of EEE		
Raising the levels of WEEE that is recycled		
Raising the levels of WEEE that is reused		
Raising consumer awareness of EEE life cycle impacts & associated WEEE management issues		
Raising consumer awareness of their role in management of WEEE		
Raising awareness of the life-cycle impacts of EEE and WEEE throughout the supply chain		
Reduction in life-cycle environmental impact of EEE		
Improvement in co-operation between suppliers and customers in the management of WEEE & broader life cycle environmental impacts (e.g. Production processes, design etc.)		
Improvement in co-operation between stakeholders (e.g. business, retailers, recyclers, local authorities, government) in the		

management of WEEE		
Hazardous materials substitution		

5. **We welcome your opinion on both the benefits and the weaknesses of the WEEE Directive – please elaborate below, and feel free to continue on a separate sheet if necessary.**

6. **We welcome your opinion on both the benefits and the weaknesses of the RoHS Directive – please elaborate below, and feel free to continue on a separate sheet if necessary.**

Experiences of the consultation process, and the planned transposition/implementation of the WEEE and RoHS Directives in the UK

7. **To what extent do you agree or disagree with the following statements relating to the UK WEEE & RoHS consultation process, planned transposition and implementation proposals to date?**
   Please rate both WEEE and RoHS using a scale of 1 – 5, where:

1 = Strongly disagree **2 = Disagree** **3 = Neither agree nor disagree** **4 = Agree** **5 = Strongly agree**

	WEEE	RoHS
Sufficient opportunity was provided for stakeholders to express opinions on the most appropriate means of implementing the Directives in the UK		
Sufficient recognition was given to stakeholder opinions in the design/delivery of implementing regulations		
The consultation process was carried out in a fair, equitable and timely manner		
The obligations & provisions of Directives were clearly communicated to relevant stakeholder groups		
Adequate guidance & information was provided to enable proportionate/timely investment decisions		
Obligations & provisions of the Directives were imposed across stakeholder groups in a fair & equitable manner		
Directives transposed/implemented without unnecessary additional obligations (i.e. gold plating of the Directives)		

8. **(a) Did your organisation need to make any financial or other investments (e.g. person hours/physical or capital assets) in order to comply with the provisions of the WEEE and RoHS Directives and associated regulations?**

WEEE ☐ No ☐ Yes (If yes, please indicate amount below)
☐ *£1 - £10,000* ☐ *£10,001 - £50,000* ☐ *£50,001 - £500,000* ☐ *£500,000 - £1M* ☐ *£1M +* ☐ *Unsu*

RoHS ☐ No ☐ Yes (If yes, please indicate the estimated amount below)
☐ *£1 - £10,000* ☐ *£10,001 - £50,000* ☐ *£50,001 - £500,000* ☐ *£500,000 - £1M* ☐ *£1M +* ☐ *Unsu*

(b) Has the delay in transposing the WEEE Directive into UK legislation had any financial impact on your organisation in terms of realising 'payback' (e.g. sunk costs or under utilisation of trained staff) on the initial investment?

WEEE ☐ No ☐ Yes (If yes, please indicate amount below)
☐ *£1 - £10,000* ☐ *£10,001 - £50,000* ☐ *£50,001 - £500,000* ☐ *£500,000 - £1M* ☐ *£1M +* ☐ *Unsu*

(c) Has the scope of the RoHS Directive or the UK transposition process resulted in any difficulties in making investment or strategic decisions for your organisation?

☐ No ☐ Yes (If yes, give details below)

9. What do you perceive as the main successes and criticisms of the UK WEEE consultation process, and the planned transposition and implementation proposals to date?

10. What do you perceive as the main successes and criticisms of the UK RoHS consultation process, and the planned transposition and implementation proposals to date?

<u>Eco-Design and Household WEEE Prevention</u>

11. Where does the responsibility for design decision making lie within your company?

☐ UK ☐ EU ☐ Elsewhere

12. (a) Does your organisation currently carry out, or plan to carry out, any of the following household WEEE Prevention or product eco-design activities?

	Current	Planned	N/A
Product service system			
Life Cycle Assessment			
Any other activity (please specify)			
Design for disassembly			
Design for remanufacturing			
Design for recycling			
Material/component coding			
Modular product design			
Periodic product/module/component upgrades			
Take back from upgrades			
Consumer awareness campaigns (please specify)			
Hazardous material/component reduction			
Product/component repair/reuse			
Product/component remanufacturing			
Consideration of secondary value of materials at design stage			
Functional sales (e.g. product lease/pay per use)			

12. (b) If you are planning any of the activities mentioned above, please indicate a proposed date for implementation: *(Optional)*

13. What are, or would be, your company's three main motivations to carry out WEEE prevention or eco- design activities?

	WEEE Prevention	Eco-design
Compliance with legislation		
Investor pressure		
Supply chain/customer pressure		
Consumer demands		
Cost savings/financial considerations		
Improvement of company image/environmental profile		
Other (please specify)		

14. What are, or would be, the three main barriers to your company carrying out WEEE prevention or eco- design activities?

	WEEE Prevention	Eco-design
Financial		
Loss of competitive advantage		
Technologically unfeasible		
Lack of legislative incentive		
Lack of decision making authority (e.g. decisions made at HQ level)		
Lack of consumer demand/market		
Other (please specify)		

<u>Product Take-back and End-of-Life Management</u>

15. (a) Does your company undertake product or component take-back activities?

☐ No ☐ Yes

(b) If yes, what is your company's favoured method for organising end-of-life product/component management? (Please tick)

☐ In-house
☐ Collaboration/strategic alliance with competitors
☐ Third party providers (e.g. WEEE compliance scheme or independent recycling company)
☐ Social enterprise/community waste organisation
☐ Other, please specify

_____

16. What <u>percentage</u> (approximately) of the products/components is:

	Above 70%	31 – 70%	0 – 30%	Unsure
Repaired/Reused				
Recycled				
Remanufactured				
Landfilled				
Other				

<u>The Social Economy (social enterprises, community waste groups or charities)</u>

17. Do you think that the social economy that take WEEE have a significant part to play in the UK WEEE management infrastructure?

☐ No ☐ Yes

(For either response, please elaborate below or continue on an additional sheet)

18. Do you think that these social economy organisations should be supported to continue their work?

☐ No ☐ Yes (If yes, please indicate who you think should be the main supporter)

☐ Central Government
☐ Local Government
☐ Waste management industry
☐ Waste producing companies
☐ Retailers
☐ Charitable donations Automatic dispensers
☐ Other, please specify: - _____

_____

Future Directions

19. Do you have any recommendations on the most appropriate strategic direction for WEEE management, WEEE prevention or eco-design of EEE in future legislation?

20. If you have any other comments or observations you would like to make on the issues surrounding the implementation of the WEEE and RoHS Directives in the UK, please add them below (or continue on a separate sheet):

THANK YOU VERY MUCH FOR YOUR TIME IN COMPLETING THIS SURVEY