



**House of Lords Science and Technology Sub-Committee
Inquiry into Waste Reduction
Written submission by EEF, the Manufacturers' Organisation**

Introduction

1. EEF is the representative voice of manufacturing, engineering and technology-based businesses with a membership of 6,000 companies employing around 800,000 people. Comprising 11 regional EEF Associations, the Engineering Construction Industries Association (ECIA) and UK Steel, EEF is one of the leading providers of business services in employment relations and employment law, health, safety and environment, manufacturing performance, education, training and skills.
2. Industry has a significant role to play in waste prevention and using waste as a resource wherever possible. Manufacturers are not only producers of waste, but will be providing the solutions to many of the challenges that are faced in reducing waste.
3. UK manufacturers already take responsibility for the environmental impact of their products. However, the international aspect of supply chains needs to be taken into account when developing policies. UK companies compete with developing economies where environmental standards are not always implemented with the same degree of enforcement, and may even be absent altogether. EEF believes that using voluntary agreements or supply chain pressures to facilitate change sends out the right signal to these markets.
4. In addition, retailers and consumers need to be educated about the environmental impact of products. Encouraging more sustainable product and process design can only address the issues to a certain degree as long as consumers continue to drive unsustainable consumption patterns.

Better design and the use of materials

What role can better design and materials play in minimising the creation of waste? Are there any barriers to how knowledge in this area can best be translated and applied?

5. Designing products that use less material overall and/or include less harmful substances plays an important role in reducing the amount or hazardousness of waste produced.
6. However, waste minimisation initiatives should always be considered against the backdrop of the wider sustainable consumption and production (SCP) agenda and look at impacts across the life-cycle of products and services, from design and production through to consumption and end-of-life management. Understanding the product life-cycle ensures that improvements at one point in the life-cycle do not create problems in others. For example, using one material over another might mean less waste is generated at the end of life, because it is easier to recycle, but it might use more energy during its lifetime. Only by evaluating the new end product is it possible to determine whether the result is a more or less sustainable option.
7. It is important that government keeps overall sustainability objectives in sight during the development of policy. Traditional regulation is less effective at this. The Restriction on Hazardous Substances (RoHS) Regulations, for example, have led to companies having to undertake complicated and costly assessments of their products, with little, if any, benefit to the environment. A voluntary sectoral or supply chain approach is a more welcome creative approach towards greater engagement with business.
8. To avoid negative unintended consequences, it is crucial that the evidence base is robust before decisions are finalised. Life Cycle Analysis (LCA) helps us to understand the environmental impacts of goods and services through all stages of a product's life. However, methodologies with regards to the use and interpretation of LCAs still vary greatly and different approaches can lead to different results. Moreover, LCAs will always be based on assumptions rather than irrefutable data, are costly to undertake and might lock industry into long term options, with little, if any, benefits to the environment. In light of this, and until an acceptable common European approach has been found, some flexibility needs to remain, with decisions based on life-cycle thinking, rather than strict assessments.
9. In the UK, the Market Transformation Programme¹ (MTP) is tasked with building up the evidence base that underpins development of sustainable product policy and the programme should be given adequate time and resources to achieve its full potential. Output from the research should be peer reviewed and communicated to industry in a simple and easy to understand manner, so that any changes to businesses processes, if necessary, can be adequately planned for.

¹ <http://www.mtprog.com/>

What factors influence the use of materials? In what way do considerations of sustainability feature in the selection of most commonly used materials?

10. There is a raft of factors that influence the use of materials, including availability and costs of the material, the particular skills set of the designer and customer demand. Key drivers here are market expectations with regards to aesthetics and engineering demands of a product.
11. Another driver is existing regulatory requirements. For example a particular type of material used for packaging might have less environmental impact compared to the use of another material. However the end product might not comply with food hygiene laws.
12. There is also the issue of the service demand of the product. For example with regards to standards for recyclates, where it is important that reliable quality standards exist. These would guarantee that the secondary material meets or exceed the standard of the material it replaces and does not have a detrimental effect on its engineering properties.
13. Similarly, many manufactured goods are built to Product Standards. These often specify materials to be used and as such present a barrier to using suitable alternatives.

To what extent do product designers and engineers take into account the availability and the end of life impacts of raw materials?

14. Our members take their responsibility for the environmental impacts of their products seriously, including availability and end of life impacts of raw materials, and, where possible, strive to re-engineer processes and use resources more efficiently, and thereby reduce their costs.
15. However, UK manufacturers currently absorb the majority of the costs of decoupling waste from economic growth, which they find difficult to pass on to their retailers and consumers. This can lead to the unfortunate situation where manufacturers become less competitive as a result.
16. Consumers and retailers make the ultimate choice between imported products, (which may be cheaper, partly as a result of not having to internalise the costs of improving the environmental profile of their products), and domestic producers (which are subjected to internalising the cost of environmental improvement). Any effort to improve performance at the 'front-of-pipe' therefore needs to be supported by efforts to educate retailers and consumers on the environmental impacts of products. This would then incentivise product designers and engineers to do more.
17. Businesses are continuing to expand their use of recycled materials where possible, thereby replacing virgin materials. However, the current regulatory framework presents a barrier to greater resource efficiency, where a material cannot be re-used simply because it is classified as a 'waste', due to strict interpretation of EU law. The Environment Agency/WRAP waste protocols² are going some way to address this problem. However a more consistent approach across the EU will help more low risk materials to be used as a resource, and the

² http://www.environment-agency.gov.uk/subjects/waste/1019330/1334884/?lang=_e

UK government should continue to lobby EU institutions on this during the ongoing revisions of the EU Waste Framework Directive.

Can better designed products offset the increase in consumption?

18. EEF agrees that there is a role for better designed products to help offset increases in consumption. The overall aim of more sustainable consumption and production is to decouple economic growth from environmental degradation. This means making more with less. A life cycle approach to sustainability, however, will not always result in less waste by volume. A manufacturer, for example, might reduce costs by increasing resource efficiency, but then may well increase sales and produce more, including more waste. What is important is that the environmental impacts of the end product have been minimised as much as possible, whilst retaining the functionality of the product.
19. However, this needs to be coupled with sustained efforts to educate consumers and retailers so that they can make an informed choice and, more importantly, take responsibility for their actions. Promotion of more sustainable products including those that are more durable, easy to repair or remanufacture will go some way to offset the increase in consumption.

Are there any other gaps in knowledge and how are they being addressed?

20. Government is addressing this through its work on developing the SCP evidence base, including the Market Transformation Programme. We have not seen much output from this programme and would be keen to see how it is developing.

Business Framework

Does the current policy, regulatory and legal framework support and incentivise the development of better, more sustainable products and processes? How is the framework communicated to businesses and what is the level of awareness and understanding among businesses?

21. EEF believes that the current policy, regulatory and legal framework does not yet provide enough support and incentives to encourage the development of better, more sustainable products and processes. In its recently published Waste Strategy 2007, the government stated its commitment to focus efforts on waste prevention, however little additional support or incentives were introduced.
22. Currently, there is a plethora of government sponsored organisations delivering help and advice to business to identify ways of minimising waste under the Business Resource and Efficiency (BREW) Programme. This service is invaluable, but to the business community it appears somewhat confusing, particularly where remits appear to overlap. There is a need for a more strategic approach to this, linked with wider sustainability objectives. In addition, outputs from the different schemes must be closely monitored to ensure they deliver the desired outcomes in a cost-effective way.
23. Many companies, in particular SMEs, have little time and lack the resources to address these issues on their own, which suggests that programmes need to be

proactive and take the message directly to business. EEF is keen to facilitate such action.

24. Also, as more of our membership has become aware of waste and its issues there is a growing need for more in-depth technical knowledge specific to certain waste or materials. We would like to see the government programmes reflect this shift in their delivery of services.
25. We hope that the current work by BERR on simplifying business support³ to make it more coherent and accessible to business will help to overcome many of these problems.
26. However, government must ensure that the programmes are adequately funded, and continue its commitment to return revenue received from landfill tax back to business to fund this valuable work. EEF was disappointed to see no explicit mention of the future of the BREW funding in the recently published PBR and CSR07. We believe that the carrot and stick approach of using taxation to send a price signal to business and using the funds raised to help companies to change their practices is the most effective approach to behaviour change. We are therefore disappointed by the government's decision to remove the ring-fencing of the tax.

How central is sustainable design to business thinking? What initiatives are in place to encourage this and are they meeting business needs?

27. Given estimates by Envirowise that 80% of the cost of a product over its life-cycle is in-built at the design phase and that manufacturing companies can save up to 1% of the turnover by implementing waste minimisation initiatives, it is no surprise that companies are increasingly focusing their attention in this area.
28. There is scope for encouraging more companies to address this issue, in particular SMEs. However, given that many companies have little time and lack the resources for this, government programmes need to be more proactive and take the messages directly to business. As mentioned above, government organisations use the argument of potential cost savings from waste minimisation initiatives, but these figures do not always take into account the 'hidden' costs, for example the administrative costs or man-hours, of implementing such measures. This can lead to scepticisms and provide a barrier to greater uptake by business.
29. 'Lean manufacturing' is about achieving maximum production output with minimum waste and is a widely used concept in the manufacturing sector. It advocates using less of everything - time, effort, workshop space, tools and raw materials, and therefore has a direct impact on the design of processes and products. This initiative would benefit from further resources to help encourage increased implementation. EEF is working with the Manufacturing Advisory Service (MAS) in the South East and London to better integrate environmental considerations with lean manufacturing and we would welcome the opportunity to work more closely with government on this issue.

³ <http://www.berr.gov.uk/bbf/small-business/streamlining-government/bssp/page38586.html>

What other measures can promote a focus on waste reduction among businesses?

30. Supply chain driven initiatives are an effective incentive to engage businesses on waste reduction. Sectoral sustainability strategies, sectoral agreements and Corporate Social Responsibility are already used by businesses to achieve environmental improvements up and down supply chains. These initiatives need further resources to encourage greater uptake in the UK and by international players.

Government Policy

What is and should be the role of Government in addressing the issue of waste reduction?

31. The Government's role is to set the policy framework that provides the right climate for businesses to play their part in delivering the necessary change and make the required investment for the future, whilst thriving in a competitive environment. Taxation and regulation have not proven to be effective in encouraging greater waste reduction. Instead more measures that positively encourage companies to change should be introduced.
32. EEF welcomes proposal in the Waste Strategy for material or sector-based agreements to engage business on waste reduction and resource efficiency. Government must ensure that these are adequately resourced and should continue its commitment to use all of the additional landfill tax receipts to fund business support in this area. As mentioned above, we are disappointed that there was no commitment to this in the latest PBR or CSR07.
33. In addition to removing the barriers to greater waste reduction mentioned above, government must show leadership by fully implementing its Sustainable Procurement Action Plan⁴ and use its own purchasing power to drive change. This would send an important signal to the market and increase demand for more sustainable products.

Consumer Behaviour

How can better product design be used to effect a change in consumption patterns and behaviour?

34. At the moment the consumer lacks the right information and has little choice about the environmental footprint of their purchased products. Driven by economic pressures consumers tend to focus on convenience and short-term benefits. The example of energy efficient light bulbs illustrates this well. Even though they will save the consumer money in the long run, the high up-front costs act as a disincentive. Similarly, in many cases it is cheaper and easier to replace whole equipment than it is to repair it.
35. Improving the design of the product to make it more environmentally friendly, whilst retaining its functionality, will help to effect change in consumption patterns. However, to change consumer behaviour this needs to be coupled with sustained

⁴ <http://www.sustainable-development.gov.uk/publications/pdf/SustainableProcurementActionPlan.pdf>

efforts to educate consumers about the environmental impacts of their activities and the benefits of more sustainable consumption patterns.

Conclusion

36. EEF welcomes this opportunity to contribute the views of the manufacturing sector to such an important and timely inquiry. The manufacturing sector is a key stakeholder in the broad debate concerning waste minimisation and resource efficiency. Manufacturers are not just producers of waste, but will be providing the solutions to many of the challenges which we face.

October 2007