

Environment Bill: Future Wastes

Committee Stage briefing on the Environment Bill's provisions relating to plastic and electronic waste

October 2020

There is growing awareness about the impact on the environment of both plastic and electronic waste. Moving towards a more circular economy approach can help avoid the harmful effects of waste, encourage recycling, but also crucially avoid products becoming waste either through reuse or more efficient design. There should be shared responsibility for these changes, with government setting the agenda for UK manufacturing to lead the way, and to inform and include citizens in making better choices.

The Royal Society of Chemistry has done extensive work with our scientific community on the future of both plastic and electronic waste in the UK. While the Environment Bill contains a number of beneficial provisions to reduce the environmental harms of such waste, there is more that can be done to ensure it reflects the evidence and acts as a useful stepping stone as we move towards a circular economy.

The Environment Bill should:

1. Encourage the use of Life Cycle Analysis (LCA) of products
2. Encourage eco-design and allow authorities to set minimum standards for eco-design
3. Mandate tracking of e-waste and the Critical Raw Materials (CRMs) contained within, and include this information in the National Materials Datahub
4. Better labelling of products so CRM-containing electricals are not lost to landfill
5. The waste hierarchy should be included in implementation plans

1. Encourage the use of Life Cycle Analysis (LCA) of plastic products

The use of LCA ensures government and manufacturer decisions are based on an assessment of the full environmental impact of materials, including plastics and biodegradable plastics. This allows substitution to result in the least environmentally harmful product, considering its environmental impact from raw materials to eventual disposal. In order to achieve the most significant reduction in environmental harms, it is important that the Bill's provisions take into account the impact of materials across their whole life cycle. To this end, we propose three amendments:

Amendment: Schedule 9, page 174, line 32, **leave out** "(b) are made wholly or partly of plastic,"

Explanation: As currently drafted, this provision allows the relevant national authority to charge sellers of goods or services for items which are made wholly or partly of plastic, among other criteria. This disincentive for using materials containing plastic may lead to regrettable substitutions in the form of single use items that are made of other materials (than plastics) but potentially have a higher overall impact on the environment across their life cycle.

Amendment: Schedule 4, page 151, line 20, at end **insert** “; (c) sustaining a maximum level of, or promoting or securing a decrease of the overall environmental impact of products and materials throughout their life-cycle.”

Explanation: This would add a further responsibility on producers to design products that have a reduced impact on the environment throughout their lifecycle, as well as the Bill’s existing provisions to place responsibility on producers to reduce waste and increase reuse and recycling.

Amendment: Schedule 6, page 162, line 7, at end **insert** “and the expected total environmental impact the product will have throughout its life”

Explanation: The general power in Schedule 6 allows the national authority to require manufacturers or sellers to provide information about the resource efficiency of specified products. This requestable information should include a LCA of the product. This would ensure that the impact a product will have across its whole life is taken into account.

2. Encourage eco-design and allow authorities to set minimum standards for eco-design

A key aim of eco-design is to reduce to a minimum the overall environment impact of a product.¹ It refers to designing a product while taking into account the entire lifecycle, from raw materials, to the energy used in production and use, to its reparability and eventual disposal.

Good eco-design should be informed by LCA to ensure a less environmentally harmful product. However it also encompasses initiatives to improve the durability, reparability and reusability of products (including what is known as the ‘right to repair’), so that consumers don’t have to resort straight to recycling. In the Bill, measures to improve eco-design mainly sit under new ‘Producer Responsibility’ measures. We are concerned that the Bill does not set out clearly if and how eco-design will be encouraged, missing an important opportunity to reduce environmental harms via producer responsibility. It would therefore be helpful for the government to provide clarity on the following provisions:

Clarification: Schedule 4 (Section 47) ‘Producer Responsibility Obligations’, pages 151-157

- How will measures to make producers responsible for disposal be balanced with initiatives to encourage eco-design?

Clarification: Schedule 7, page 166, lines 14-25

¹ [EcoDesign Circle’s Sustainability Guide](#)

- Will the right to repair extend across all products?
- Will authorities be encouraged to set minimum standards for eco-design, how will these be enforced? Will minimum eco-design standards extend across a range of materials and products?
- How will the government ensure effective data wiping is built into electronic devices?

One of the main concerns preventing consumers from recycling their used electronics is data security, and at present, it's not clear that resetting devices to factory settings is enough to ensure the data is safely wiped. There should be regulations around data wiping to ensure safe reuse and reselling of electronics.

3. Mandate tracking of e-waste and the CRMs contained within, and include this information in the National Materials Datahub

Critical Raw Materials (CRMs) are those which have constraints on supply, but are essential for various innovation and industry activities. Without a localised list on critical materials, it is impossible to accurately introduce further measures to ensure appropriate use, and reuse, of materials and products containing them. We therefore recommend the following amendments and clarifications:

Amendment: The Bill should be amended to **insert** a requirement for the government, or a relevant authority, to establish regular assessment of criticality of materials on a national/regional/sector level. It is essential that this is done in close collaboration with the industry to allow for appropriate information sharing.

Explanation: As set out above, the establishment of regular assessment of material criticality would allow for the introduction of accurate measures to manage CRMs.

Amendment: Schedule 7, page 166, line 32, at end **insert** “; (e) The criticality of the materials from which the product is manufactured”

Explanation: The general power in Schedule 7 allows the national authority to require products to meet certain resource efficiency requirements. One of these potential product requirements should include an assessment of the criticality of the materials used, thus allowing appropriate material choice and substitution.

Clarification: Clause 55, page 39, lines 8-43

- Will this tracking system include CRMs specifically?
- Will this tracking system be linked to the National Materials Datahub?

Explanation: It is essential that we have a better grip of local scarcity and need, along with supply chain and recycling rates. Not knowing where critical materials are in the supply chain and waste streams limits the ability to extract CRMs from the urban mine and ensure they are not lost from our economy. Combining the national waste tracking system with the National Materials Datahub could create a powerful tool to identify the fates of CRMs in the UK, and viable secondary resources for their extraction.

4. Better labelling of products so CRM-containing electricals are not lost to landfill

Without accurate labelling, the content of a product is not known, which poses challenges for the consumer, supply chain, and eventually the waste management worker. For example, it can be difficult for consumers to know what devices contain which CRMs and in what quantities, so they are unable to make informed choices about sustainable purchases. Many consumers do not even know their devices contain critical elements.² Furthermore, waste management workers must be able to know the CRM content of a product in order to facilitate effective recycling. Moving forward it would be useful for a manufacturer to highlight via labelling the most efficient way of recycling various components, for instance.

Clarification: Schedule 7, page 167, lines 8-10

- This section of the Bill allows for regulations that would require labelling/marketing of products to evidence their compliance with resource efficiency. A labelling scheme should be globally harmonised, and be suitable for consumers, with separate clear labelling for waste management workers. How will this be ensured and implemented?

5. The waste hierarchy should be included in implementation plans

The waste hierarchy ranks product use and waste management options according to what is best for the environment.³ It has been simplified for public awareness as ‘Reduce, Reuse, Recycle’. Top priority is preventing waste in the first place (‘Reduce’), an example of this might be the attempt to limit single use plastics. Also crucial is ‘Reuse’, or ensuring that products are durable, and can be repaired and resold, allowing for several lifetimes prior to needing to be recycled. Keeping products in use for as long as possible is crucial for reducing their environmental impacts. The waste hierarchy should therefore be an important part of any waste management scheme.

Clarification: Schedule 4, page 151, lines 18-20

- Will regulations, made to ensure consideration of the waste hierarchy, be applied across all materials including plastics and electronic waste?
- How will the waste hierarchy be applied to prioritise reduction and reuse (over recycling)?

² An RSC survey of 2,353 UK adults found that 59% of those who don’t currently recycle electronic devices said they would be more likely to if they knew that some elements in mobile devices were conflict elements, toxic or extremely rare.

³ [Guidance on applying the Waste Hierarchy](#), Defra